

Family Correlated Photometric Data

The following photometric information is developed using correlated data. Finelite considers a family to be a group of luminaires where critical performance metrics such as photometric performance, thermal performance, and electrical performance can be accurately projected via a combination of LM79 tests at the luminaire level and well-documented specifications at the component level.

For more information, please download [Finelite's Family Correlated White Paper](#)

Additional links:

- [Solid-State Lighting: Early Lessons Learned on the Way to Market](#)
(U.S. Department of Energy)
- [Lighting Facts®](#)
- [Design Lights Consortium®](#)

IES INDOOR REPORT

PHOTOMETRIC FILENAME : HP-2-P-D-4FT-V-8TW-DAO-KPL2008-3.900.IES

DESCRIPTION INFORMATION (From Photometric File)

[TEST] KPL2008-3.900 Family Correlation File
[TESTLAB] Northern Lights Testing Laboratories
[ISSUEDATE] 8/25/2021
[ISSUEDATE] 5/18/2021
[MANUFAC] Finelite
[LUMCAT] HP-2-P-D-4ft-V-8TW-DAO
[LUMINAIRE] HP Series
[LAMPCAT] 160 LEDs with 80 CRI
[LAMP] Samsung
[BALLAST] Osram
[BALLASTCAT] OTi50W/120-277, 700mA
[MORE] extrapolated from KPL2008-3.IES
[OTHER]INPUT ELECTRICAL: 120.0 VOLTS, 39.6 WATTS
[OTHER]INPUT ELECTRICAL: 277.0 VOLTS, 39.6 WATTS
[ABSOLUTE]LUMENS]3742

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	3742
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	94
Total Luminaire Watts	39.6
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.48
Spacing Criterion (90-270)	1.20
Spacing Criterion (Diagonal)	1.36
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	0.17 ft
Luminous Width (90-270)	4.00 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	24200	25175	18213
55	20539	22857	16246
65	16958	19909	14363
75	14146	16817	12054
85	14117	16755	10025

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CANDELA TABULATION

	0	5	10	15	20	25	30	35	40	45
0.0	1421.99	1421.99	1421.99	1421.99	1421.99	1421.99	1421.99	1421.99	1421.99	1421.99
2.5	1470.40	1469.46	1468.00	1465.07	1460.99	1464.23	1465.07	1463.92	1460.89	1455.45
5.0	1525.61	1521.43	1520.80	1518.50	1512.96	1512.75	1511.18	1505.64	1499.26	1491.11
7.5	1572.25	1569.32	1567.96	1563.05	1556.46	1554.79	1551.96	1528.33	1535.02	1522.27
10.0	1610.94	1608.74	1607.91	1599.75	1595.25	1591.38	1584.80	1575.07	1562.63	1545.59
12.5	1648.58	1646.28	1643.56	1635.20	1626.83	1622.86	1613.34	1600.59	1585.42	1563.88
15.0	1669.91	1667.40	1664.58	1658.20	1649.52	1644.19	1633.84	1619.30	1594.31	1577.48
17.5	1678.07	1675.14	1672.11	1665.94	1657.99	1651.93	1641.58	1627.56	1609.06	1583.86
20.0	1670.75	1668.34	1665.42	1660.19	1653.18	1647.95	1638.23	1624.22	1605.50	1580.09
22.5	1651.72	1649.00	1646.49	1642.20	1636.03	1631.64	1622.13	1609.89	1591.70	1571.73
25.0	1618.68	1617.42	1616.58	1611.04	1609.16	1604.35	1596.93	1585.11	1569.01	1544.54
27.5	1583.12	1576.85	1575.07	1576.12	1569.53	1567.13	1561.17	1551.02	1535.44	1516.20
30.0	1530.84	1526.87	1524.78	1527.29	1523.31	1520.80	1517.04	1508.26	1496.13	1475.63
32.5	1473.12	1467.16	1469.36	1471.45	1469.25	1469.88	1466.74	1461.31	1452.63	1432.86
35.0	1403.69	1404.11	1407.35	1405.05	1405.99	1410.70	1413.41	1408.50	1400.13	1381.52
37.5	1331.54	1329.97	1332.48	1335.62	1338.13	1341.05	1348.79	1344.19	1338.34	1324.43
40.0	1253.74	1250.29	1256.25	1258.24	1262.94	1272.15	1278.42	1278.21	1274.66	1264.09
42.5	1166.74	1166.01	1173.12	1176.26	1185.46	1194.25	1205.33	1205.96	1202.40	1194.98
45.0	1082.05	1083.82	1086.86	1096.48	1104.63	1115.19	1123.66	1130.04	1130.88	1125.65
47.5	1001.74	998.50	1001.84	1015.12	1019.83	1031.33	1044.51	1056.11	1056.74	1058.41
50.0	910.56	907.73	911.29	923.21	933.98	948.83	961.17	971.00	975.91	979.47
52.5	826.28	826.38	830.36	842.59	853.67	864.44	877.83	894.14	903.55	904.49
55.0	744.93	742.94	749.32	756.22	770.54	784.14	802.86	817.49	826.70	829.00
57.5	662.11	662.84	671.21	678.32	689.82	703.52	723.59	736.87	748.06	748.80
60.0	588.29	589.02	594.77	604.08	613.07	630.64	642.87	658.66	670.27	674.76
62.5	514.25	521.57	524.61	529.00	544.37	554.09	570.20	582.54	596.76	600.31
65.0	453.19	452.25	456.85	466.68	474.62	486.02	498.47	509.34	521.36	532.03
67.5	392.33	393.17	393.38	404.46	413.14	422.03	430.81	444.72	453.29	463.85
70.0	335.66	334.92	337.96	346.01	352.18	361.69	371.21	381.25	392.43	399.02
72.5	279.82	282.33	281.39	288.39	295.19	303.03	308.36	318.30	329.49	333.15
75.0	231.51	232.34	234.23	238.41	244.37	249.29	258.17	265.07	271.14	275.22
77.5	184.66	186.65	189.47	189.68	195.85	201.39	208.61	214.05	218.96	220.32
80.0	144.72	146.39	147.54	149.42	152.88	157.16	161.66	165.95	168.04	170.55
82.5	108.12	109.48	109.59	111.78	113.77	115.54	118.89	122.13	124.75	126.11
85.0	77.80	77.01	76.73	79.64	79.70	81.13	90.97	91.88	91.35	92.34
87.5	46.70	47.62	48.79	47.59	48.23	49.92	50.67	49.42	52.75	51.85
90.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
92.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
97.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
102.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
105.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
107.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
110.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
112.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
115.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
117.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
120.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
122.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
125.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
127.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
130.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
132.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

IES INDOOR REPORT
PHOTOMETRIC FILENAME : HP-2-P-D-4FT-V-8TW-DAO-KPL2008-3.900.IES

CANDELA TABULATION - (Cont.)

135.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
137.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
140.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
142.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
145.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
147.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
150.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
152.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
155.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
157.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
160.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
162.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
165.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
167.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
170.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
172.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
175.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
177.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
180.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Vert. Angles	Horizontal Angles									
	<u>50</u>	<u>55</u>	<u>60</u>	<u>65</u>	<u>70</u>	<u>75</u>	<u>80</u>	<u>85</u>	<u>90</u>	<u>95</u>
0.0	1421.99	1421.99	1421.99	1421.99	1421.99	1421.99	1421.99	1421.99	1421.99	1421.99
2.5	1452.31	1451.37	1451.37	1452.73	1454.09	1456.18	1451.48	1437.26	1429.31	1424.29
5.0	1484.10	1478.98	1474.90	1470.72	1467.37	1465.70	1455.87	1436.73	1421.99	1412.06
7.5	1510.35	1501.67	1493.41	1484.83	1476.89	1469.98	1455.66	1432.24	1410.90	1394.49
10.0	1531.15	1518.61	1506.69	1493.93	1481.70	1469.25	1450.43	1422.09	1394.70	1372.42
12.5	1545.48	1529.69	1514.11	1497.17	1480.86	1463.82	1440.39	1407.35	1374.20	1347.33
15.0	1554.16	1534.50	1515.47	1494.66	1474.90	1453.36	1426.38	1388.42	1349.94	1318.78
17.5	1557.61	1533.56	1510.56	1485.77	1462.35	1436.42	1405.36	1365.73	1319.72	1285.43
20.0	1553.53	1527.39	1500.00	1471.76	1444.37	1415.40	1381.00	1338.02	1290.65	1248.62
22.5	1539.31	1512.75	1485.04	1451.06	1419.27	1387.17	1349.52	1307.39	1254.26	1211.29
25.0	1516.52	1489.33	1461.93	1427.43	1391.56	1355.38	1316.59	1269.95	1215.26	1168.63
27.5	1488.28	1460.36	1433.07	1396.27	1357.89	1320.25	1278.11	1230.63	1170.82	1125.02
30.0	1448.13	1422.30	1394.28	1359.15	1317.95	1278.00	1232.83	1186.40	1126.28	1076.29
32.5	1407.56	1379.22	1351.30	1316.69	1275.28	1233.25	1187.45	1138.72	1075.77	1028.51
35.0	1355.59	1327.36	1301.42	1269.01	1229.06	1184.83	1137.88	1091.35	1026.84	977.38
37.5	1300.90	1297.03	1246.11	1213.38	1173.85	1132.24	1083.82	1038.34	975.70	927.92
40.0	1242.55	1216.94	1190.06	1157.12	1120.32	1075.88	1029.45	983.13	926.24	873.96
42.5	1176.15	1151.27	1127.01	1095.53	1061.76	1020.46	973.30	930.01	869.15	822.72
45.0	1110.17	1086.44	1089.68	1034.26	998.60	958.97	911.71	871.87	814.36	766.26
47.5	1041.47	1021.19	995.88	968.91	935.44	895.71	853.26	813.31	758.10	713.03
50.0	970.58	947.99	925.30	897.59	866.85	831.19	791.77	755.38	701.32	658.66
52.5	897.70	877.93	854.09	828.89	801.18	768.04	731.65	694.11	646.53	604.91
55.0	824.08	809.34	786.86	760.51	735.41	704.88	671.73	637.01	589.23	553.26
57.5	745.76	736.14	713.35	692.64	669.43	641.82	610.35	580.44	535.90	498.99
60.0	672.88	663.68	645.48	623.42	602.51	576.58	553.78	525.34	485.29	440.63
62.5	599.37	591.84	576.99	558.48	538.41	517.81	494.49	471.28	424.29	402.02
65.0	531.72	523.67	513.42	495.43	474.62	458.21	436.35	418.26	383.82	357.22
67.5	464.48	457.58	447.96	433.11	415.13	397.04	383.44	363.99	335.56	307.96
70.0	399.96	391.91	388.36	374.45	358.56	344.02	329.49	314.64	285.74	263.14
72.5	336.81	329.59	323.63	314.32	303.03	290.38	282.54	265.81	240.83	218.11
75.0	276.99	275.01	269.57	262.46	250.54	240.08	229.31	222.20	197.27	178.21
77.5	222.83	220.01	217.29	211.64	202.96	195.54	186.86	178.39	158.52	140.31
80.0	170.65	169.40	166.16	163.02	157.79	149.95	146.08	143.88	120.37	105.08

IES INDOOR REPORT
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CANDELA TABULATION - (Cont.)

82.5	126.21	126.21	123.49	120.04	118.37	115.86	113.35	106.13	87.39	72.98
85.0	92.51	91.19	90.20	88.81	86.99	79.26	72.00	68.28	55.25	43.28
87.5	52.69	48.66	50.30	46.36	45.29	42.27	40.24	38.31	26.06	15.13
90.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
92.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
97.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
102.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
105.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
107.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
110.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
112.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
115.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
117.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
120.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
122.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
125.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
127.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
130.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
132.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
135.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
137.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
140.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
142.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
145.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
147.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
150.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
152.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
155.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
157.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
160.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
162.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
165.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
167.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
170.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
172.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
175.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
177.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
180.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

**Vert.
Angles**

Horizontal Angles

	<u>100</u>	<u>105</u>	<u>110</u>	<u>115</u>	<u>120</u>	<u>125</u>	<u>130</u>	<u>135</u>	<u>140</u>	<u>145</u>
0.0	1421.99	1421.99	1421.99	1421.99	1421.99	1421.99	1421.99	1421.99	1421.99	1421.99
2.5	1428.89	1424.50	1412.26	1402.12	1393.55	1387.06	1380.06	1376.19	1373.78	1370.96
5.0	1411.95	1403.38	1387.59	1373.16	1360.30	1349.42	1340.85	1334.68	1331.75	1327.04
7.5	1389.78	1375.35	1357.58	1337.29	1323.38	1310.10	1300.80	1293.58	1289.29	1283.23
10.0	1363.85	1347.12	1324.22	1303.62	1288.04	1273.61	1261.90	1253.64	1247.78	1239.94
12.5	1333.94	1313.66	1288.25	1266.08	1249.66	1232.93	1222.69	1214.63	1207.21	1199.47
15.0	1302.99	1278.94	1253.32	1231.47	1213.07	1198.01	1183.37	1174.17	1167.27	1158.90
17.5	1266.50	1241.40	1214.11	1190.69	1174.27	1156.50	1142.69	1134.75	1124.92	1116.66
20.0	1228.12	1202.19	1174.69	1152.00	1133.39	1116.45	1103.90	1095.33	1085.91	1077.76
22.5	1185.25	1158.59	1132.34	1110.17	1092.40	1074.94	1064.37	1056.43	1047.12	1042.21
25.0	1142.38	1117.39	1092.08	1066.88	1047.96	1032.69	1022.23	1014.91	1007.80	1001.95
27.5	1098.04	1072.32	1048.90	1024.12	1005.40	991.70	983.86	976.12	970.68	964.51

IES INDOOR REPORT
PHOTOMETRIC FILENAME : HP-2-P-D-4FT-V-8TW-DAO-KPL2008-3.900.IES

CANDELA TABULATION - (Cont.)

30.0	1050.78	1027.88	1002.58	980.30	962.63	950.19	942.45	937.01	931.99	926.56
32.5	1003.20	980.30	956.57	935.86	917.98	908.78	902.30	897.38	890.48	885.88
35.0	955.94	934.19	906.90	890.90	873.02	864.13	860.37	855.66	850.75	847.09
37.5	903.13	882.22	859.53	842.38	832.03	823.14	817.49	813.31	809.02	805.16
40.0	852.73	832.87	811.74	796.37	784.87	778.91	775.35	771.59	767.09	765.11
42.5	800.24	781.42	763.96	750.05	740.12	735.52	732.59	729.55	726.94	726.84
45.0	750.15	732.48	715.75	700.59	694.94	688.88	688.04	685.64	686.58	685.43
47.5	697.24	681.04	666.50	655.31	648.20	646.32	644.23	641.30	641.61	640.88
50.0	644.33	629.90	617.04	606.69	602.93	600.31	600.31	598.95	598.95	598.53
52.5	593.20	580.24	569.15	561.41	556.50	557.02	554.51	553.78	554.30	553.26
55.0	542.59	531.40	521.47	513.94	511.74	510.80	508.50	508.82	509.34	510.80
57.5	492.50	482.88	473.89	466.89	466.78	465.84	462.60	463.54	465.94	466.57
60.0	435.26	428.75	415.37	412.75	412.56	413.29	414.85	411.97	413.62	415.55
62.5	394.47	387.44	381.18	378.08	376.53	375.90	376.47	377.94	378.36	380.48
65.0	346.49	338.89	336.57	332.85	332.79	332.21	333.14	334.73	337.89	340.06
67.5	302.57	297.33	291.97	291.18	287.14	286.87	288.12	290.90	295.29	296.45
70.0	257.22	253.06	249.96	247.88	246.64	246.66	247.80	249.24	251.09	253.40
72.5	216.78	210.85	210.68	206.31	205.11	205.29	207.52	208.77	210.45	212.26
75.0	174.78	171.82	169.46	168.75	165.62	168.02	167.58	168.68	169.84	169.69
77.5	137.30	134.72	132.52	131.16	130.32	130.15	129.62	129.90	130.36	130.99
80.0	100.62	100.29	97.51	96.16	96.22	95.68	95.38	93.08	94.31	92.32
82.5	69.11	68.85	65.05	63.33	62.15	61.08	60.41	60.93	60.26	61.71
85.0	40.85	38.70	36.84	35.06	33.75	32.54	30.31	29.90	28.67	27.55
87.5	13.43	11.75	10.38	9.23	8.18	7.16	6.21	5.25	4.42	3.67
90.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
92.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
97.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
102.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
105.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
107.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
110.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
112.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
115.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
117.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
120.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
122.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
125.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
127.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
130.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
132.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
135.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
137.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
140.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
142.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
145.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
147.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
150.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
152.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
155.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
157.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
160.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
162.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
165.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
167.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

IES INDOOR REPORT
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CANDELA TABULATION - (Cont.)

170.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
172.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
175.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
177.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
180.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Vert. Horizontal Angles
Angles

	150	155	160	165	170	175	180	185	190	195
0.0	1421.99	1421.99	1421.99	1421.99	1421.99	1421.99	1421.99	1421.99	1421.99	1421.99
2.5	1368.35	1363.54	1358.52	1360.40	1358.10	1358.62	1362.28	1358.62	1358.10	1360.40
5.0	1321.92	1315.44	1307.91	1306.13	1309.89	1306.65	1306.86	1306.65	1309.89	1306.13
7.5	1277.06	1250.40	1260.96	1260.54	1263.99	1260.64	1261.27	1260.64	1263.99	1260.54
10.0	1233.14	1225.82	1220.70	1218.71	1220.18	1217.98	1220.91	1217.98	1220.18	1218.71
12.5	1191.74	1184.00	1176.15	1177.83	1176.78	1175.74	1178.66	1175.74	1176.78	1177.83
15.0	1150.12	1140.92	1122.51	1136.52	1135.27	1134.54	1136.21	1134.54	1135.27	1136.52
17.5	1109.34	1101.60	1097.52	1098.25	1095.74	1095.33	1097.94	1095.33	1095.74	1098.25
20.0	1071.17	1065.00	1061.55	1059.46	1059.25	1057.68	1059.25	1057.68	1059.25	1059.46
22.5	1036.04	1027.99	1024.43	1009.16	1024.74	1022.34	1023.70	1022.34	1024.74	1009.16
25.0	996.62	990.45	987.52	989.51	987.00	988.35	988.56	988.35	987.00	989.51
27.5	959.60	953.85	950.82	951.86	952.80	950.92	953.01	950.92	952.80	951.86
30.0	919.86	914.85	913.70	917.15	900.94	915.26	917.46	915.26	900.94	917.15
32.5	881.59	877.72	877.10	879.82	878.25	879.40	881.28	879.40	878.25	879.82
35.0	843.22	838.83	841.54	842.17	841.65	842.90	842.38	842.90	841.65	842.17
37.5	804.32	801.91	801.50	803.80	803.27	789.89	805.16	789.89	803.27	803.80
40.0	763.43	762.18	763.64	765.73	763.96	766.47	767.51	766.47	763.96	765.73
42.5	724.74	724.33	726.00	727.15	725.37	728.20	726.94	728.20	725.37	727.15
45.0	682.92	682.08	685.53	687.94	688.98	689.09	658.35	689.09	688.98	687.94
47.5	640.67	641.72	644.44	645.59	648.41	648.62	651.23	648.62	648.41	645.59
50.0	599.27	600.94	602.72	604.91	607.11	607.32	608.57	607.32	607.11	604.91
52.5	554.82	557.13	560.47	564.86	566.12	552.11	567.79	552.11	566.12	564.86
55.0	512.37	515.30	520.32	521.78	521.78	524.50	523.46	524.50	521.78	521.78
57.5	468.45	470.44	476.61	477.76	479.54	479.33	481.00	479.33	479.54	477.76
60.0	416.77	427.63	427.40	427.60	415.12	429.97	438.13	429.97	415.12	427.60
62.5	384.52	389.44	390.15	391.83	393.19	393.96	393.54	393.96	393.19	391.83
65.0	343.24	346.20	346.47	347.95	350.51	350.98	349.46	350.98	350.51	347.95
67.5	297.95	299.95	303.17	290.70	305.09	305.34	302.45	305.34	305.09	290.70
70.0	255.48	257.09	258.54	259.34	259.98	260.04	263.88	260.04	259.98	259.34
72.5	213.69	213.83	214.92	216.54	216.71	215.67	217.52	215.67	216.71	216.54
75.0	170.69	171.89	155.47	172.37	171.86	175.00	175.00	175.00	171.86	172.37
77.5	131.94	131.88	131.91	131.72	131.45	132.91	131.36	132.91	131.45	131.72
80.0	91.91	91.65	92.49	91.88	91.82	92.67	92.39	92.67	91.82	91.88
82.5	58.96	45.54	58.60	59.25	57.57	54.92	55.78	54.92	57.57	59.25
85.0	26.47	24.38	24.45	23.58	22.91	22.47	20.37	22.47	22.91	23.58
87.5	2.95	1.85	1.90	1.61	1.41	1.27	1.28	1.27	1.41	1.61
90.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
92.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
97.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
102.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
105.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
107.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
110.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
112.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
115.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

IES INDOOR REPORT
PHOTOMETRIC FILENAME : HP-2-P-D-4FT-V-8TW-DAO-KPL2008-3.900.IES

CANDELA TABULATION - (Cont.)

117.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
120.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
122.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
125.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
127.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
130.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
132.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
135.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
137.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
140.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
142.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
145.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
147.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
150.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
152.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
155.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
157.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
160.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
162.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
165.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
167.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
170.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
172.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
175.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
177.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
180.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

**Vert.
Angles**

Horizontal Angles

	<u>200</u>	<u>205</u>	<u>210</u>	<u>215</u>	<u>220</u>	<u>225</u>	<u>230</u>	<u>235</u>	<u>240</u>	<u>245</u>
0.0	1421.99	1421.99	1421.99	1421.99	1421.99	1421.99	1421.99	1421.99	1421.99	1421.99
2.5	1358.52	1363.54	1368.35	1370.96	1373.78	1376.19	1380.06	1387.06	1393.55	1402.12
5.0	1307.91	1315.44	1321.92	1327.04	1331.75	1334.68	1340.85	1349.42	1360.30	1373.16
7.5	1260.96	1250.40	1277.06	1283.23	1289.29	1293.58	1300.80	1310.10	1323.38	1337.29
10.0	1220.70	1225.82	1233.14	1239.94	1247.78	1253.64	1261.90	1273.61	1288.04	1303.62
12.5	1176.15	1184.00	1191.74	1199.47	1207.21	1214.63	1222.69	1232.93	1249.66	1266.08
15.0	1122.51	1140.92	1150.12	1158.90	1167.27	1174.17	1183.37	1198.01	1213.07	1231.47
17.5	1097.52	1101.60	1109.34	1116.66	1124.92	1134.75	1142.69	1156.50	1174.27	1190.69
20.0	1061.55	1065.00	1071.17	1077.76	1085.91	1095.33	1103.90	1116.45	1133.39	1152.00
22.5	1024.43	1027.99	1036.04	1042.21	1047.12	1056.43	1064.37	1074.94	1092.40	1110.17
25.0	987.52	990.45	996.62	1001.95	1007.80	1014.91	1022.23	1032.69	1047.96	1066.88
27.5	950.82	953.85	959.60	964.51	970.68	976.12	983.86	991.70	1005.40	1024.12
30.0	913.70	914.85	919.86	926.56	931.99	937.01	942.45	950.19	962.63	980.30
32.5	877.10	877.72	881.59	885.88	890.48	897.38	902.30	908.78	917.98	935.86
35.0	841.54	838.83	843.22	847.09	850.75	855.66	860.37	864.13	873.02	890.90
37.5	801.50	801.91	804.32	805.16	809.02	813.31	817.49	823.14	832.03	842.38
40.0	763.64	762.18	763.43	765.11	767.09	771.59	775.35	778.91	784.87	796.37
42.5	726.00	724.33	724.74	726.84	726.94	729.55	732.59	735.52	740.12	750.05
45.0	685.53	682.08	682.92	685.43	686.58	685.64	688.04	688.88	694.94	700.59
47.5	644.44	641.72	640.67	640.88	641.61	641.30	644.23	646.32	648.20	655.31
50.0	602.72	600.94	599.27	598.53	598.95	598.95	600.31	600.31	602.93	606.69
52.5	560.47	557.13	554.82	553.26	554.30	553.78	554.51	557.02	556.50	561.41
55.0	520.32	515.30	512.37	510.80	509.34	508.82	508.50	510.80	511.74	513.94
57.5	476.61	470.44	468.45	466.57	465.94	463.54	462.60	465.84	466.78	466.89
60.0	427.40	427.63	416.77	415.55	413.62	411.97	414.85	413.29	412.56	412.75
62.5	390.15	389.44	384.52	380.48	378.36	377.94	376.47	375.90	376.53	378.08

IES INDOOR REPORT
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CANDELA TABULATION - (Cont.)

65.0	346.47	346.20	343.24	340.06	337.89	334.73	333.14	332.21	332.79	332.85
67.5	303.17	299.95	297.95	296.45	295.29	290.90	288.12	286.87	287.14	291.18
70.0	258.54	257.09	255.48	253.40	251.09	249.24	247.80	246.66	246.64	247.88
72.5	214.92	213.83	213.69	212.26	210.45	208.77	207.52	205.29	205.11	206.31
75.0	155.47	171.89	170.69	169.69	169.84	168.68	167.58	168.02	165.62	168.75
77.5	131.91	131.88	131.94	130.99	130.36	129.90	129.62	130.15	130.32	131.16
80.0	92.49	91.65	91.91	92.32	94.31	93.08	95.38	95.68	96.22	96.16
82.5	58.60	45.54	58.96	61.71	60.26	60.93	60.41	61.08	62.15	63.33
85.0	24.45	24.38	26.47	27.55	28.67	29.90	30.31	32.54	33.75	35.06
87.5	1.90	1.85	2.95	3.67	4.42	5.25	6.21	7.16	8.18	9.23
90.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
92.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
97.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
102.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
105.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
107.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
110.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
112.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
115.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
117.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
120.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
122.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
125.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
127.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
130.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
132.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
135.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
137.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
140.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
142.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
145.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
147.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
150.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
152.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
155.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
157.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
160.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
162.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
165.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
167.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
170.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
172.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
175.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
177.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
180.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

**Vert.
Angles**

Horizontal Angles

	<u>250</u>	<u>255</u>	<u>260</u>	<u>265</u>	<u>270</u>	<u>275</u>	<u>280</u>	<u>285</u>	<u>290</u>	<u>295</u>
0.0	1421.99	1421.99	1421.99	1421.99	1421.99	1421.99	1421.99	1421.99	1421.99	1421.99
2.5	1412.26	1424.50	1428.89	1424.29	1429.31	1437.26	1451.48	1456.18	1454.09	1452.73
5.0	1387.59	1403.38	1411.95	1412.06	1421.99	1436.73	1455.87	1465.70	1467.37	1470.72
7.5	1357.58	1375.35	1389.78	1394.49	1410.90	1432.24	1455.66	1469.98	1476.89	1484.83
10.0	1324.22	1347.12	1363.85	1372.42	1394.70	1422.09	1450.43	1469.25	1481.70	1493.93

IES INDOOR REPORT
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CANDELA TABULATION - (Cont.)

12.5	1288.25	1313.66	1333.94	1347.33	1374.20	1407.35	1440.39	1463.82	1480.86	1497.17
15.0	1253.32	1278.94	1302.99	1318.78	1349.94	1388.42	1426.38	1453.36	1474.90	1494.66
17.5	1214.11	1241.40	1266.50	1285.43	1319.72	1365.73	1405.36	1436.42	1462.35	1485.77
20.0	1174.69	1202.19	1228.12	1248.62	1290.65	1338.02	1381.00	1415.40	1444.37	1471.76
22.5	1132.34	1158.59	1185.25	1211.29	1254.26	1307.39	1349.52	1387.17	1419.27	1451.06
25.0	1092.08	1117.39	1142.38	1168.63	1215.26	1269.95	1316.59	1355.38	1391.56	1427.43
27.5	1048.90	1072.32	1098.04	1125.02	1170.82	1230.63	1278.11	1320.25	1357.89	1396.27
30.0	1002.58	1027.88	1050.78	1076.29	1126.28	1186.40	1232.83	1278.00	1317.95	1359.15
32.5	956.57	980.30	1003.20	1028.51	1075.77	1138.72	1187.45	1233.25	1275.28	1316.69
35.0	906.90	934.19	955.94	977.38	1026.84	1091.35	1137.88	1184.83	1229.06	1269.01
37.5	859.53	882.22	903.13	927.92	975.70	1038.34	1083.82	1132.24	1173.85	1213.38
40.0	811.74	832.87	852.73	873.96	926.24	983.13	1029.45	1075.88	1120.32	1157.12
42.5	763.96	781.42	800.24	822.72	869.15	930.01	973.30	1020.46	1061.76	1095.53
45.0	715.75	732.48	750.15	766.26	814.36	871.87	911.71	958.97	998.60	1034.26
47.5	666.50	681.04	697.24	713.03	758.10	813.31	853.26	895.71	935.44	968.91
50.0	617.04	629.90	644.33	658.66	701.32	755.38	791.77	831.19	866.85	897.59
52.5	569.15	580.24	593.20	604.91	646.53	694.11	731.65	768.04	801.18	828.89
55.0	521.47	531.40	542.59	553.26	589.23	637.01	671.73	704.88	735.41	760.51
57.5	473.89	482.88	492.50	498.99	535.90	580.44	610.35	641.82	669.43	692.64
60.0	415.37	428.75	435.26	440.63	485.29	525.34	553.78	576.58	602.51	623.42
62.5	381.18	387.44	394.47	402.02	424.29	471.28	494.49	517.81	538.41	558.48
65.0	336.57	338.89	346.49	357.22	383.82	418.26	436.35	458.21	474.62	495.43
67.5	291.97	297.33	302.57	307.96	335.56	363.99	383.44	397.04	415.13	433.11
70.0	249.96	253.06	257.22	263.14	285.74	314.64	329.49	344.02	358.56	374.45
72.5	210.68	210.85	216.78	218.11	240.83	265.81	282.54	290.38	303.03	314.32
75.0	169.46	171.82	174.78	178.21	197.27	222.20	229.31	240.08	250.54	262.46
77.5	132.52	134.72	137.30	140.31	158.52	178.39	186.86	195.54	202.96	211.64
80.0	97.51	100.29	100.62	105.08	120.37	143.88	146.08	149.95	157.79	163.02
82.5	65.05	68.85	69.11	72.98	87.39	106.13	113.35	115.86	118.37	120.04
85.0	36.84	38.70	40.85	43.28	55.25	68.28	72.00	79.26	86.99	88.81
87.5	10.38	11.75	13.43	15.13	26.06	38.31	40.24	42.27	45.29	46.36
90.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
92.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
97.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
102.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
105.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
107.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
110.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
112.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
115.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
117.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
120.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
122.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
125.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
127.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
130.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
132.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
135.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
137.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
140.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
142.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
145.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
147.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
150.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

IES INDOOR REPORT
PHOTOMETRIC FILENAME : HP-2-P-D-4FT-V-8TW-DAO-KPL2008-3.900.IES

CANDELA TABULATION - (Cont.)

152.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
155.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
157.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
160.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
162.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
165.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
167.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
170.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
172.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
175.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
177.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
180.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Vert. Angles	Horizontal Angles									
	<u>300</u>	<u>305</u>	<u>310</u>	<u>315</u>	<u>320</u>	<u>325</u>	<u>330</u>	<u>335</u>	<u>340</u>	<u>345</u>
0.0	1421.99	1421.99	1421.99	1421.99	1421.99	1421.99	1421.99	1421.99	1421.99	1421.99
2.5	1451.37	1451.37	1452.31	1455.45	1460.89	1463.92	1465.07	1464.23	1460.99	1465.07
5.0	1474.90	1478.98	1484.10	1491.11	1499.26	1505.64	1511.18	1512.75	1512.96	1518.50
7.5	1493.41	1501.67	1510.35	1522.27	1535.02	1528.33	1551.96	1554.79	1556.46	1563.05
10.0	1506.69	1518.61	1531.15	1545.59	1562.63	1575.07	1584.80	1591.38	1595.25	1599.75
12.5	1514.11	1529.69	1545.48	1563.88	1585.42	1600.59	1613.34	1622.86	1626.83	1635.20
15.0	1515.47	1534.50	1554.16	1577.48	1594.31	1619.30	1633.84	1644.19	1649.52	1658.20
17.5	1510.56	1533.56	1557.61	1583.86	1609.06	1627.56	1641.58	1651.93	1657.99	1665.94
20.0	1500.00	1527.39	1553.53	1580.09	1605.50	1624.22	1638.23	1647.95	1653.18	1660.19
22.5	1485.04	1512.75	1539.31	1571.73	1591.70	1609.89	1622.13	1631.64	1636.03	1642.20
25.0	1461.93	1489.33	1516.52	1544.54	1569.01	1585.11	1596.93	1604.35	1609.16	1611.04
27.5	1433.07	1460.36	1488.28	1516.20	1535.44	1551.02	1561.17	1567.13	1569.53	1576.12
30.0	1394.28	1422.30	1448.13	1475.63	1496.13	1508.26	1517.04	1520.80	1523.31	1527.29
32.5	1351.30	1379.22	1407.56	1432.86	1452.63	1461.31	1466.74	1469.88	1469.25	1471.45
35.0	1301.42	1327.36	1355.59	1381.52	1400.13	1408.50	1413.41	1410.70	1405.99	1405.05
37.5	1246.11	1297.03	1300.90	1324.43	1338.34	1344.19	1348.79	1341.05	1338.13	1335.62
40.0	1190.06	1216.94	1242.55	1264.09	1274.66	1278.21	1278.42	1272.15	1262.94	1258.24
42.5	1127.01	1151.27	1176.15	1194.98	1202.40	1205.96	1205.33	1194.25	1185.46	1176.26
45.0	1089.68	1086.44	1110.17	1125.65	1130.88	1130.04	1123.66	1115.19	1104.63	1096.48
47.5	995.88	1021.19	1041.47	1058.41	1056.74	1056.11	1044.51	1031.33	1019.83	1015.12
50.0	925.30	947.99	970.58	979.47	975.91	971.00	961.17	948.83	933.98	923.21
52.5	854.09	877.93	897.70	904.49	903.55	894.14	877.83	864.44	853.67	842.59
55.0	786.86	809.34	824.08	829.00	826.70	817.49	802.86	784.14	770.54	756.22
57.5	713.35	736.14	745.76	748.80	748.06	736.87	723.59	703.52	689.82	678.32
60.0	645.48	663.68	672.88	674.76	670.27	658.66	642.87	630.64	613.07	604.08
62.5	576.99	591.84	599.37	600.31	596.76	582.54	570.20	554.09	544.37	529.00
65.0	513.42	523.67	531.72	532.03	521.36	509.34	498.47	486.02	474.62	466.68
67.5	447.96	457.58	464.48	463.85	453.29	444.72	430.81	422.03	413.14	404.46
70.0	388.36	391.91	399.96	399.02	392.43	381.25	371.21	361.69	352.18	346.01
72.5	323.63	329.59	336.81	333.15	329.49	318.30	308.36	303.03	295.19	288.39
75.0	269.57	275.01	276.99	275.22	271.14	265.07	258.17	249.29	244.37	238.41
77.5	217.29	220.01	222.83	220.32	218.96	214.05	208.61	201.39	195.85	189.68
80.0	166.16	169.40	170.65	170.55	168.04	165.95	161.66	157.16	152.88	149.42
82.5	123.49	126.21	126.21	126.11	124.75	122.13	118.89	115.54	113.77	111.78
85.0	90.20	91.19	92.51	92.34	91.35	91.88	90.97	81.13	79.70	79.64
87.5	50.30	48.66	52.69	51.85	52.75	49.42	50.67	49.92	48.23	47.59
90.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
92.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
97.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

IES INDOOR REPORT
PHOTOMETRIC FILENAME : HP-2-P-D-4FT-V-8TW-DAO-KPL2008-3.900.IES

CANDELA TABULATION - (Cont.)

100.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
102.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
105.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
107.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
110.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
112.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
115.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
117.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
120.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
122.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
125.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
127.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
130.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
132.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
135.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
137.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
140.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
142.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
145.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
147.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
150.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
152.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
155.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
157.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
160.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
162.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
165.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
167.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
170.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
172.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
175.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
177.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
180.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

**Vert.
Angles**

Horizontal Angles

	<u>350</u>	<u>355</u>	<u>360</u>
0.0	1421.99	1421.99	1421.99
2.5	1468.00	1469.46	1470.40
5.0	1520.80	1521.43	1525.61
7.5	1567.96	1569.32	1572.25
10.0	1607.91	1608.74	1610.94
12.5	1643.56	1646.28	1648.58
15.0	1664.58	1667.40	1669.91
17.5	1672.11	1675.14	1678.07
20.0	1665.42	1668.34	1670.75
22.5	1646.49	1649.00	1651.72
25.0	1616.58	1617.42	1618.68
27.5	1575.07	1576.85	1583.12
30.0	1524.78	1526.87	1530.84
32.5	1469.36	1467.16	1473.12
35.0	1407.35	1404.11	1403.69
37.5	1332.48	1329.97	1331.54
40.0	1256.25	1250.29	1253.74
42.5	1173.12	1166.01	1166.74
45.0	1086.86	1083.82	1082.05

IES INDOOR REPORT
PHOTOMETRIC FILENAME : HP-2-P-D-4FT-V-8TW-DAO-KPL2008-3.900.IES

CANDELA TABULATION - (Cont.)

47.5	1001.84	998.50	1001.74
50.0	911.29	907.73	910.56
52.5	830.36	826.38	826.28
55.0	749.32	742.94	744.93
57.5	671.21	662.84	662.11
60.0	594.77	589.02	588.29
62.5	524.61	521.57	514.25
65.0	456.85	452.25	453.19
67.5	393.38	393.17	392.33
70.0	337.96	334.92	335.66
72.5	281.39	282.33	279.82
75.0	234.23	232.34	231.51
77.5	189.47	186.65	184.66
80.0	147.54	146.39	144.72
82.5	109.59	109.48	108.12
85.0	76.73	77.01	77.80
87.5	48.79	47.62	46.70
90.0	0.00	0.00	0.00
92.5	0.00	0.00	0.00
95.0	0.00	0.00	0.00
97.5	0.00	0.00	0.00
100.0	0.00	0.00	0.00
102.5	0.00	0.00	0.00
105.0	0.00	0.00	0.00
107.5	0.00	0.00	0.00
110.0	0.00	0.00	0.00
112.5	0.00	0.00	0.00
115.0	0.00	0.00	0.00
117.5	0.00	0.00	0.00
120.0	0.00	0.00	0.00
122.5	0.00	0.00	0.00
125.0	0.00	0.00	0.00
127.5	0.00	0.00	0.00
130.0	0.00	0.00	0.00
132.5	0.00	0.00	0.00
135.0	0.00	0.00	0.00
137.5	0.00	0.00	0.00
140.0	0.00	0.00	0.00
142.5	0.00	0.00	0.00
145.0	0.00	0.00	0.00
147.5	0.00	0.00	0.00
150.0	0.00	0.00	0.00
152.5	0.00	0.00	0.00
155.0	0.00	0.00	0.00
157.5	0.00	0.00	0.00
160.0	0.00	0.00	0.00
162.5	0.00	0.00	0.00
165.0	0.00	0.00	0.00
167.5	0.00	0.00	0.00
170.0	0.00	0.00	0.00
172.5	0.00	0.00	0.00
175.0	0.00	0.00	0.00
177.5	0.00	0.00	0.00
180.0	0.00	0.00	0.00

IES INDOOR REPORT
PHOTOMETRIC FILENAME : HP-2-P-D-4FT-V-8TW-DAO-KPL2008-3.900.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	523.59	N.A.	14.00
0-30	1108.55	N.A.	29.60
0-40	1794.64	N.A.	48.00
0-60	3044.64	N.A.	81.40
0-80	3677.85	N.A.	98.30
0-90	3742.14	N.A.	100.00
10-90	3607.21	N.A.	96.40
20-40	1271.05	N.A.	34.00
20-50	1948.67	N.A.	52.10
40-70	1658.35	N.A.	44.30
60-80	633.21	N.A.	16.90
70-80	224.85	N.A.	6.00
80-90	64.29	N.A.	1.70
90-110	0.00	N.A.	0.00
90-120	0.00	N.A.	0.00
90-130	0.00	N.A.	0.00
90-150	0.00	N.A.	0.00
90-180	0.00	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	3742.14	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	134.93
10-20	388.67
20-30	584.96
30-40	686.09
40-50	677.62
50-60	572.37
60-70	408.36
70-80	224.85
80-90	64.29
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

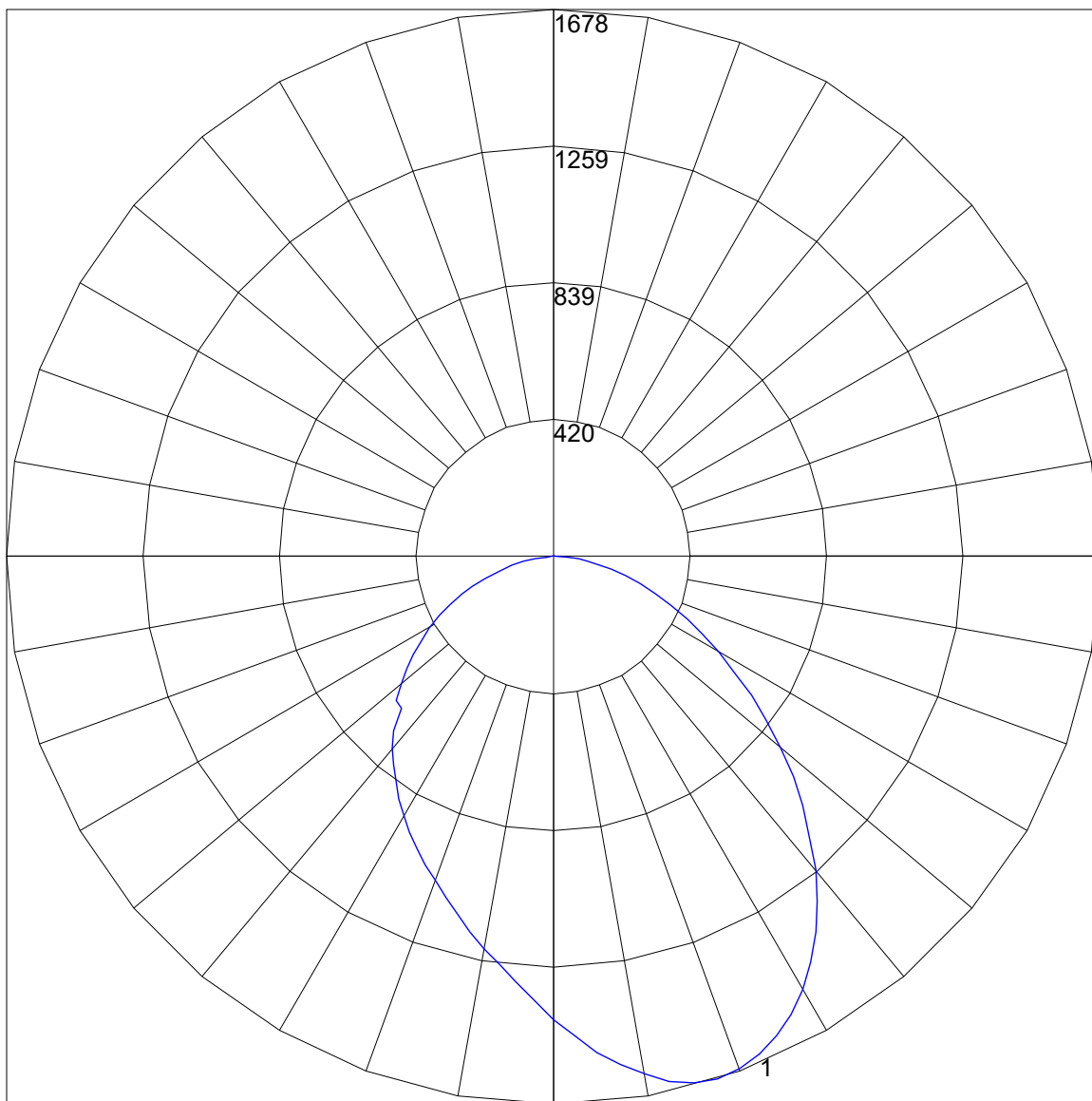
IES INDOOR REPORT
PHOTOMETRIC FILENAME : HP-2-P-D-4FT-V-8TW-DAO-KPL2008-3.900.IES

COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

Effective Floor Cavity Reflectance 0.20

RC	80				70				50			30			10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	109	105	100	97	106	102	98	95	98	95	92	94	92	89	91	89	87	85
2	100	92	85	79	97	90	84	78	86	81	77	83	79	75	80	76	73	71
3	91	81	73	66	89	79	72	66	76	70	65	73	68	64	71	66	63	60
4	84	72	63	57	81	70	62	56	68	61	55	66	60	55	64	58	54	52
5	77	64	56	49	75	63	55	49	61	54	48	59	53	48	57	52	47	45
6	71	58	49	43	69	57	49	43	55	48	42	54	47	42	52	46	42	40
7	66	53	44	38	64	52	44	38	50	43	38	49	42	37	48	42	37	35
8	62	48	40	34	60	48	40	34	46	39	34	45	38	34	44	38	33	31
9	58	44	36	31	56	44	36	31	43	35	30	42	35	30	40	35	30	28
10	54	41	33	28	53	40	33	28	39	33	28	38	32	28	38	32	27	26

POLAR GRAPH



Maximum Candela = 1678.07 Located At Horizontal Angle = 0, Vertical Angle = 17.5
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)