

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

Brand: HALO COMMERCIAL

Report Number: P775848

Luminaire Tested: HCDJBL510CSD-HCD82TRH-1000lm-4000K

Issue Date: 2/13/2024

Test Information

Test Method: LM-79-2019
Report Number: P775848
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2312156B063-HCD82TRH)
Test Lab:
Issue Date: 2/13/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBL510CSD-HCD82TRH-1000lm-4000K
Description: 8 INCH ROUND NARROW HAZE TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 4000K CCT
Ballast/Driver: -

Summary

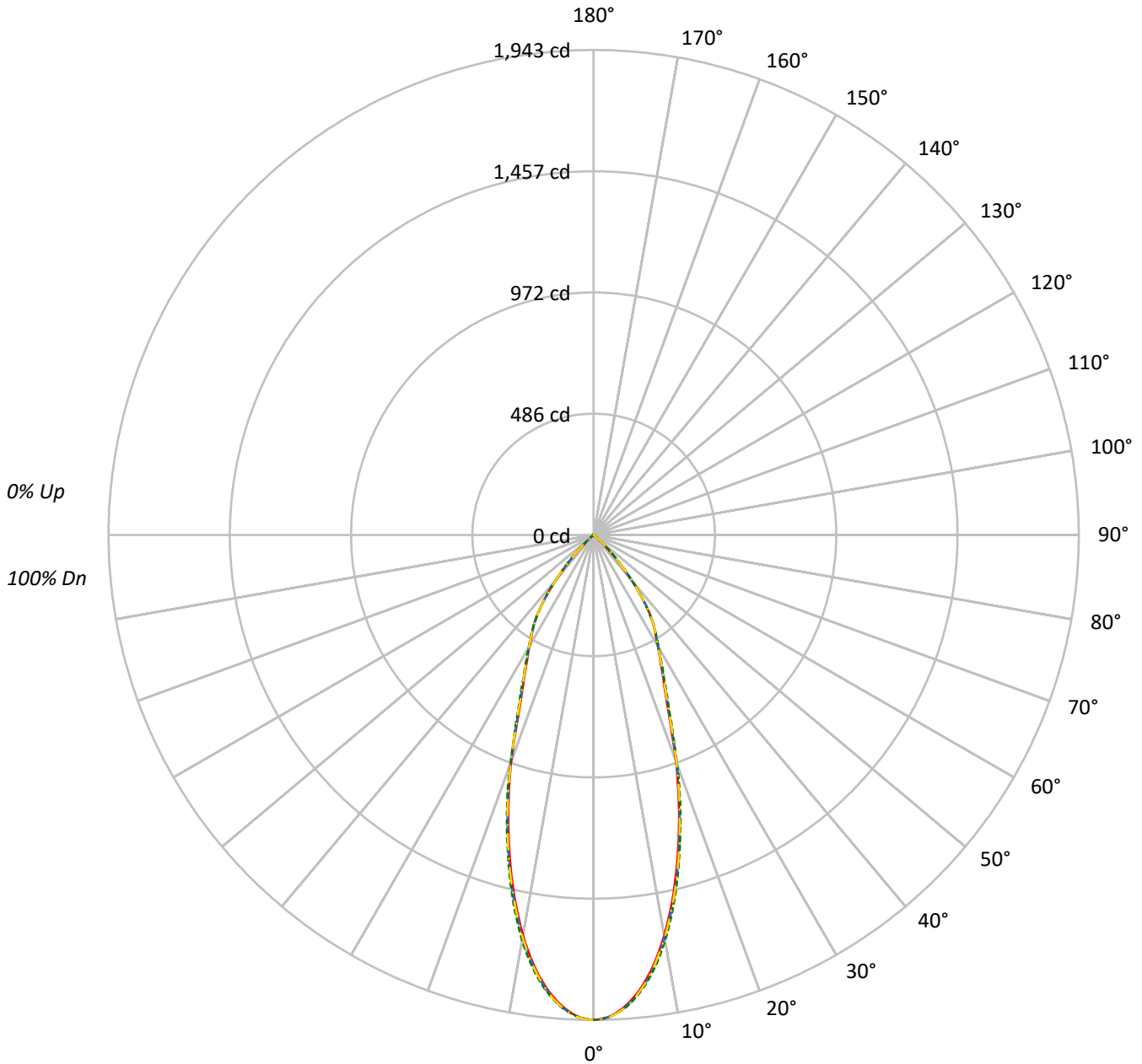
Lumens per Lamp: N/A
Luminaire Lumens: 1170.4 lumens
Efficiency: N/A
Efficacy: 117.0 lumens/watt
Spacing Criteria (0/90/45): 0.64 / 0.65 / 0.67
Luminous Opening: Circular (Dia: 0.67' x H: 0')
CIE Type: Direct

Input Watts (W): 10
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					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	50	30	10	50	30	10	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100								
1	114	111	109	107	111	109	107	105	105	103	102	101	100	99	98	97	96	94								
2	108	104	100	97	106	102	99	96	99	96	94	96	94	92	93	91	90	88								
3	103	97	93	89	101	96	92	88	93	90	87	91	88	85	89	86	84	82								
4	98	91	86	82	97	90	85	82	88	84	81	86	82	80	84	81	79	77								
5	94	86	80	76	92	85	80	76	83	79	75	82	78	75	80	77	74	72								
6	89	81	75	71	88	80	75	71	79	74	70	77	73	70	76	72	70	68								
7	85	76	71	67	84	76	70	67	75	70	66	73	69	66	72	68	65	64								
8	81	72	67	63	80	72	66	63	71	66	62	70	65	62	69	65	62	61								
9	78	69	63	59	77	68	63	59	67	62	59	66	62	59	66	62	59	57								
10	74	65	60	56	74	65	60	56	64	59	56	63	59	56	63	58	56	54								

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	59329	59329	59329	59329
5°	56951	57212	56951	57212
10°	50498	51130	50498	51130
15°	41273	41940	41273	41940
20°	31310	31703	31310	31703
25°	22577	23186	22577	23186
30°	18110	18388	18110	18388
35°	14823	14700	14823	14700
40°	9298	9497	9298	9497
45°	3545	4110	3545	4110
50°	527	746	527	746
55°	112	117	112	117
60°	73	73	73	73
65°	43	43	43	43
70°	27	36	27	36
75°	24	24	24	24
80°	18	18	18	18
85°	0	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 4110 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	170.7	14.6
10°-20°	362.1	30.9
20°-30°	318.0	27.2
30°-40°	240.2	20.5
40°-50°	75.7	6.5
50°-60°	2.9	0.2
60°-70°	0.7	0.1
70°-80°	0.2	0.0
80°-90°	0.0	0.0
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	850.8	72.7
0°-40°	1090.9	93.2
0°-60°	1169.5	99.9
0°-90°	1170.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1170.4	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1943	1943	1943	1943	1943	
5°	1858	1867	1858	1867	1858	170
15°	1306	1327	1306	1327	1306	359
25°	670	688	670	688	670	315
35°	398	394	398	394	398	240
45°	82	95	82	95	82	72
55°	2	2	2	2	2	2
65°	1	1	1	1	1	1
75°	0	0	0	0	0	0
85°	0	0	0	0	0	0
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	1943.3	1943.3	1943.3	1943.3	1943.3	1943.3	1943.3	1943.3	1943.3	1943.3	1943.3
0.5°	1941.5	1941.9	1942.9	1943.4	1941.5	1943.4	1942.9	1941.9	1941.5	1941.9	1942.9
1°	1938.8	1939.4	1940.4	1941.2	1939.3	1941.2	1940.4	1939.4	1938.8	1939.4	1940.4
1.5°	1934.4	1935.1	1936.4	1937.3	1935.4	1937.3	1936.4	1935.1	1934.4	1935.1	1936.4
2°	1928.5	1929.1	1930.9	1931.9	1930.1	1931.9	1930.9	1929.1	1928.5	1929.1	1930.9
2.5°	1920.5	1921.5	1923.6	1924.9	1923.2	1924.9	1923.6	1921.5	1920.5	1921.5	1923.6
3°	1911.3	1912.4	1914.9	1916.5	1914.9	1916.5	1914.9	1912.4	1911.3	1912.4	1914.9
3.5°	1900.4	1901.6	1904.5	1906.5	1905.3	1906.5	1904.5	1901.6	1900.4	1901.6	1904.5
4°	1887.7	1889.3	1892.6	1895.0	1894.0	1895.0	1892.6	1889.3	1887.7	1889.3	1892.6
4.5°	1873.7	1875.2	1879.2	1882.1	1881.1	1882.1	1879.2	1875.2	1873.7	1875.2	1879.2
5°	1858.3	1859.8	1864.2	1867.7	1866.8	1867.7	1864.2	1859.8	1858.3	1859.8	1864.2
5.5°	1841.2	1842.9	1847.5	1851.5	1851.1	1851.5	1847.5	1842.9	1841.2	1842.9	1847.5
6°	1822.6	1824.4	1829.5	1834.1	1834.2	1834.1	1829.5	1824.4	1822.6	1824.4	1829.5
6.5°	1803.2	1804.7	1810.2	1815.4	1815.7	1815.4	1810.2	1804.7	1803.2	1804.7	1810.2
7°	1782.0	1783.7	1789.4	1795.2	1796.4	1795.2	1789.4	1783.7	1782.0	1783.7	1789.4
7.5°	1759.7	1761.1	1767.1	1773.2	1774.8	1773.2	1767.1	1761.1	1759.7	1761.1	1767.1
8°	1735.8	1737.3	1743.6	1750.3	1752.4	1750.3	1743.6	1737.3	1735.8	1737.3	1743.6
8.5°	1711.0	1712.3	1718.6	1726.1	1728.5	1726.1	1718.6	1712.3	1711.0	1712.3	1718.6
9°	1684.4	1686.2	1692.8	1700.8	1703.5	1700.8	1692.8	1686.2	1684.4	1686.2	1692.8
9.5°	1657.3	1659.2	1665.5	1673.9	1677.0	1673.9	1665.5	1659.2	1657.3	1659.2	1665.5
10°	1628.9	1631.0	1637.5	1646.7	1649.3	1646.7	1637.5	1631.0	1628.9	1631.0	1637.5
10.5°	1599.6	1601.7	1608.4	1618.1	1620.6	1618.1	1608.4	1601.7	1599.6	1601.7	1608.4
11°	1568.3	1571.7	1578.5	1588.6	1590.8	1588.6	1578.5	1571.7	1568.3	1571.7	1578.5
11.5°	1538.1	1540.9	1547.7	1557.5	1560.1	1557.5	1547.7	1540.9	1538.1	1540.9	1547.7
12°	1506.1	1509.4	1516.4	1526.3	1528.7	1526.3	1516.4	1509.4	1506.1	1509.4	1516.4
12.5°	1474.0	1477.3	1484.5	1493.8	1495.9	1493.8	1484.5	1477.3	1474.0	1477.3	1484.5
13°	1441.0	1444.8	1452.4	1461.8	1463.5	1461.8	1452.4	1444.8	1441.0	1444.8	1452.4
13.5°	1408.0	1411.8	1419.7	1427.9	1430.4	1427.9	1419.7	1411.8	1408.0	1411.8	1419.7
14°	1374.2	1378.3	1386.3	1393.8	1396.4	1393.8	1386.3	1378.3	1374.2	1378.3	1386.3
14.5°	1340.0	1344.2	1352.4	1359.4	1361.7	1359.4	1352.4	1344.2	1340.0	1344.2	1352.4
15°	1305.8	1310.1	1318.2	1325.3	1326.9	1325.3	1318.2	1310.1	1305.8	1310.1	1318.2
15.5°	1271.4	1275.6	1283.7	1290.5	1292.9	1290.5	1283.7	1275.6	1271.4	1275.6	1283.7
16°	1237.3	1240.9	1249.0	1255.9	1258.7	1255.9	1249.0	1240.9	1237.3	1240.9	1249.0
16.5°	1203.5	1206.7	1214.8	1221.4	1224.4	1221.4	1214.8	1206.7	1203.5	1206.7	1214.8
17°	1168.9	1172.3	1179.7	1187.5	1189.8	1187.5	1179.7	1172.3	1168.9	1172.3	1179.7
17.5°	1134.3	1137.8	1145.1	1153.0	1155.7	1153.0	1145.1	1137.8	1134.3	1137.8	1145.1
18°	1100.4	1103.0	1110.9	1118.5	1121.3	1118.5	1110.9	1103.0	1100.4	1103.0	1110.9
18.5°	1066.4	1069.1	1076.1	1083.6	1086.5	1083.6	1076.1	1069.1	1066.4	1069.1	1076.1
19°	1032.4	1034.9	1041.9	1048.2	1051.5	1048.2	1041.9	1034.9	1032.4	1034.9	1041.9
19.5°	998.4	1001.1	1006.8	1012.1	1014.8	1012.1	1006.8	1001.1	998.4	1001.1	1006.8
20°	963.7	966.0	970.5	975.7	975.8	975.7	970.5	966.0	963.7	966.0	970.5
20.5°	928.6	930.1	934.9	939.7	939.1	939.7	934.9	930.1	928.6	930.1	934.9
21°	892.8	895.2	899.8	904.5	904.4	904.5	899.8	895.2	892.8	895.2	899.8



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
22.5°	793.2	796.1	800.3	808.0	811.4	808.0	800.3	796.1	793.2	796.1	800.3
23°	764.5	766.7	771.8	778.3	782.0	778.3	771.8	766.7	764.5	766.7	771.8
23.5°	736.1	741.6	745.6	751.0	754.6	751.0	745.6	741.6	736.1	741.6	745.6
24°	713.9	716.0	721.5	727.3	732.1	727.3	721.5	716.0	713.9	716.0	721.5
24.5°	690.9	693.4	698.8	704.6	710.4	704.6	698.8	693.4	690.9	693.4	698.8
25°	670.2	672.8	677.9	682.9	688.3	682.9	677.9	672.8	670.2	672.8	677.9
25.5°	652.4	653.6	657.8	662.0	666.7	662.0	657.8	653.6	652.4	653.6	657.8
26°	634.9	635.9	638.6	642.6	645.5	642.6	638.6	635.9	634.9	635.9	638.6
26.5°	616.7	618.3	621.5	625.0	626.8	625.0	621.5	618.3	616.7	618.3	621.5
27°	599.1	601.0	605.2	609.0	610.8	609.0	605.2	601.0	599.1	601.0	605.2
27.5°	583.1	584.9	589.0	592.9	595.5	592.9	589.0	584.9	583.1	584.9	589.0
28°	568.3	569.7	573.1	576.8	578.9	576.8	573.1	569.7	568.3	569.7	573.1
28.5°	554.2	555.4	558.3	561.3	563.6	561.3	558.3	555.4	554.2	555.4	558.3
29°	540.5	541.6	544.3	547.2	548.7	547.2	544.3	541.6	540.5	541.6	544.3
29.5°	526.9	528.0	530.8	533.5	534.8	533.5	530.8	528.0	526.9	528.0	530.8
30°	513.7	514.8	517.4	520.0	521.6	520.0	517.4	514.8	513.7	514.8	517.4
30.5°	501.0	501.9	504.6	507.2	508.8	507.2	504.6	501.9	501.0	501.9	504.6
31°	488.5	489.9	492.3	495.0	496.4	495.0	492.3	489.9	488.5	489.9	492.3
31.5°	477.1	477.9	480.5	483.1	484.7	483.1	480.5	477.9	477.1	477.9	480.5
32°	465.7	466.8	469.2	471.6	473.1	471.6	469.2	466.8	465.7	466.8	469.2
32.5°	455.2	456.3	458.5	460.2	461.0	460.2	458.5	456.3	455.2	456.3	458.5
33°	445.4	446.0	447.3	448.2	448.1	448.2	447.3	446.0	445.4	446.0	447.3
33.5°	435.4	435.3	435.4	435.4	435.1	435.4	435.4	435.3	435.4	435.3	435.4
34°	424.1	423.4	422.5	423.7	421.4	423.7	422.5	423.4	424.1	423.4	422.5
34.5°	411.2	411.0	410.8	409.9	407.8	409.9	410.8	411.0	411.2	411.0	410.8
35°	397.7	396.8	396.8	396.0	394.4	396.0	396.8	396.8	397.7	396.8	396.8
35.5°	383.9	382.7	382.7	381.3	380.3	381.3	382.7	382.7	383.9	382.7	382.7
36°	368.6	368.0	368.3	365.9	365.7	365.9	368.3	368.0	368.6	368.0	368.3
36.5°	352.9	352.8	352.8	350.5	350.1	350.5	352.8	352.8	352.9	352.8	352.8
37°	336.6	336.6	336.7	334.9	334.2	334.9	336.7	336.6	336.6	336.6	336.7
37.5°	320.3	320.0	321.4	319.2	318.6	319.2	321.4	320.0	320.3	320.0	321.4
38°	303.7	303.0	303.4	302.8	302.9	302.8	303.4	303.0	303.7	303.0	303.4
38.5°	286.4	285.8	285.5	286.5	286.8	286.5	285.5	285.8	286.4	285.8	285.5
39°	268.8	268.5	268.0	270.1	270.2	270.1	268.0	268.5	268.8	268.5	268.0
39.5°	251.0	251.0	251.0	253.6	254.2	253.6	251.0	251.0	251.0	251.0	251.0
40°	233.3	233.9	234.9	237.2	238.3	237.2	234.9	233.9	233.3	233.9	234.9
40.5°	216.0	216.6	218.9	220.7	222.6	220.7	218.9	216.6	216.0	216.6	218.9
41°	198.9	199.8	202.9	204.8	206.8	204.8	202.9	199.8	198.9	199.8	202.9
41.5°	181.7	183.3	186.9	189.0	191.3	189.0	186.9	183.3	181.7	183.3	186.9
42°	165.4	167.1	171.3	173.8	176.0	173.8	171.3	167.1	165.4	167.1	171.3
42.5°	149.5	151.5	156.2	159.4	161.4	159.4	156.2	151.5	149.5	151.5	156.2
43°	134.1	136.9	141.7	145.3	147.0	145.3	141.7	136.9	134.1	136.9	141.7
43.5°	119.6	122.9	127.6	131.5	133.0	131.5	127.6	122.9	119.6	122.9	127.6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	82.1	83.8	88.1	93.3	95.2	93.3	88.1	83.8	82.1	83.8	88.1
45.5°	70.7	72.5	76.8	81.9	84.0	81.9	76.8	72.5	70.7	72.5	76.8
46°	59.8	62.0	66.4	71.6	75.0	71.6	66.4	62.0	59.8	62.0	66.4
46.5°	50.5	52.2	57.3	62.2	66.0	62.2	57.3	52.2	50.5	52.2	57.3
47°	42.3	44.2	48.6	53.2	56.9	53.2	48.6	44.2	42.3	44.2	48.6
47.5°	35.1	36.7	40.4	44.3	47.9	44.3	40.4	36.7	35.1	36.7	40.4
48°	29.1	30.0	33.2	36.3	38.9	36.3	33.2	30.0	29.1	30.0	33.2
48.5°	23.5	24.7	26.8	29.6	31.8	29.6	26.8	24.7	23.5	24.7	26.8
49°	18.4	19.6	21.9	23.6	25.5	23.6	21.9	19.6	18.4	19.6	21.9
49.5°	14.4	15.3	17.2	18.9	20.3	18.9	17.2	15.3	14.4	15.3	17.2
50°	11.1	11.8	13.1	14.6	15.7	14.6	13.1	11.8	11.1	11.8	13.1
50.5°	8.3	8.4	10.0	11.5	12.2	11.5	10.0	8.4	8.3	8.4	10.0
51°	5.8	6.2	7.5	9.0	10.3	9.0	7.5	6.2	5.8	6.2	7.5
51.5°	3.8	4.6	5.8	6.8	8.5	6.8	5.8	4.6	3.8	4.6	5.8
52°	3.3	3.5	4.3	5.3	6.6	5.3	4.3	3.5	3.3	3.5	4.3
52.5°	2.9	3.0	3.2	4.0	4.8	4.0	3.2	3.0	2.9	3.0	3.2
53°	2.7	2.8	2.8	3.0	3.0	3.0	2.8	2.8	2.7	2.8	2.8
53.5°	2.5	2.6	2.7	2.7	2.6	2.7	2.7	2.6	2.5	2.6	2.7
54°	2.4	2.4	2.5	2.5	2.4	2.5	2.5	2.4	2.4	2.4	2.5
54.5°	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.3	2.3
55°	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.2	2.2
55.5°	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.1
56°	1.9	1.9	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	2.0
56.5°	1.8	1.8	1.9	1.9	1.8	1.9	1.9	1.8	1.8	1.8	1.9
57°	1.7	1.7	1.8	1.8	1.7	1.8	1.8	1.7	1.7	1.7	1.8
57.5°	1.6	1.6	1.7	1.7	1.7	1.7	1.7	1.6	1.6	1.6	1.7
58°	1.5	1.5	1.6	1.6	1.6	1.6	1.6	1.5	1.5	1.5	1.6
58.5°	1.4	1.4	1.5	1.5	1.5	1.5	1.5	1.4	1.4	1.4	1.5
59°	1.3	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.3	1.4	1.4
59.5°	1.2	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.2	1.3	1.3
60°	1.2	1.2	1.3	1.3	1.2	1.3	1.3	1.2	1.2	1.2	1.3
60.5°	1.1	1.1	1.2	1.2	1.2	1.2	1.2	1.1	1.1	1.1	1.2
61°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
61.5°	0.9	0.9	1.1	1.1	1.1	1.1	1.1	0.9	0.9	0.9	1.1
62°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
62.5°	0.8	0.8	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.8	0.9
63°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
63.5°	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.8
64°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
64.5°	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.7	0.7
65°	0.6	0.6	0.7	0.7	0.6	0.7	0.7	0.6	0.6	0.6	0.7
65.5°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
66°	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.6	0.6



TEST NUMBER: P775848

CATALOG NUMBER: HCDJBL510CSD-HCD82TRH-1000lm-4000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
68°	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.5
68.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
69°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
69.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
70°	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.4
70.5°	0.3	0.3	0.3	0.4	0.3	0.4	0.3	0.3	0.3	0.3	0.3
71°	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
71.5°	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
72°	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
72.5°	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.3
73°	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3
73.5°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
74°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
74.5°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
75°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
75.5°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
76°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
76.5°	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2
77°	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1
77.5°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
78°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
78.5°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
79°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
79.5°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
80°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
80.5°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
81°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
81.5°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
82°	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1
82.5°	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1
83°	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
83.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
84°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
84.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
86°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
86.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
88°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
88.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P775848
CATALOG NUMBER: HCDJBL510CSD-HCD82TRH-1000lm-4000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P775848

CATALOG NUMBER: HCDJBL510CSD-HCD82TRH-1000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	1943.3	1943.3	1943.3	1943.3	1943.3	1943.3
0.5°	1943.4	1941.5	1943.4	1942.9	1941.9	1941.5
1°	1941.2	1939.3	1941.2	1940.4	1939.4	1938.8
1.5°	1937.3	1935.4	1937.3	1936.4	1935.1	1934.4
2°	1931.9	1930.1	1931.9	1930.9	1929.1	1928.5
2.5°	1924.9	1923.2	1924.9	1923.6	1921.5	1920.5
3°	1916.5	1914.9	1916.5	1914.9	1912.4	1911.3
3.5°	1906.5	1905.3	1906.5	1904.5	1901.6	1900.4
4°	1895.0	1894.0	1895.0	1892.6	1889.3	1887.7
4.5°	1882.1	1881.1	1882.1	1879.2	1875.2	1873.7
5°	1867.7	1866.8	1867.7	1864.2	1859.8	1858.3
5.5°	1851.5	1851.1	1851.5	1847.5	1842.9	1841.2
6°	1834.1	1834.2	1834.1	1829.5	1824.4	1822.6
6.5°	1815.4	1815.7	1815.4	1810.2	1804.7	1803.2
7°	1795.2	1796.4	1795.2	1789.4	1783.7	1782.0
7.5°	1773.2	1774.8	1773.2	1767.1	1761.1	1759.7
8°	1750.3	1752.4	1750.3	1743.6	1737.3	1735.8
8.5°	1726.1	1728.5	1726.1	1718.6	1712.3	1711.0
9°	1700.8	1703.5	1700.8	1692.8	1686.2	1684.4
9.5°	1673.9	1677.0	1673.9	1665.5	1659.2	1657.3
10°	1646.7	1649.3	1646.7	1637.5	1631.0	1628.9
10.5°	1618.1	1620.6	1618.1	1608.4	1601.7	1599.6
11°	1588.6	1590.8	1588.6	1578.5	1571.7	1568.3
11.5°	1557.5	1560.1	1557.5	1547.7	1540.9	1538.1
12°	1526.3	1528.7	1526.3	1516.4	1509.4	1506.1
12.5°	1493.8	1495.9	1493.8	1484.5	1477.3	1474.0
13°	1461.8	1463.5	1461.8	1452.4	1444.8	1441.0
13.5°	1427.9	1430.4	1427.9	1419.7	1411.8	1408.0
14°	1393.8	1396.4	1393.8	1386.3	1378.3	1374.2
14.5°	1359.4	1361.7	1359.4	1352.4	1344.2	1340.0
15°	1325.3	1326.9	1325.3	1318.2	1310.1	1305.8
15.5°	1290.5	1292.9	1290.5	1283.7	1275.6	1271.4
16°	1255.9	1258.7	1255.9	1249.0	1240.9	1237.3
16.5°	1221.4	1224.4	1221.4	1214.8	1206.7	1203.5
17°	1187.5	1189.8	1187.5	1179.7	1172.3	1168.9
17.5°	1153.0	1155.7	1153.0	1145.1	1137.8	1134.3
18°	1118.5	1121.3	1118.5	1110.9	1103.0	1100.4
18.5°	1083.6	1086.5	1083.6	1076.1	1069.1	1066.4
19°	1048.2	1051.5	1048.2	1041.9	1034.9	1032.4
19.5°	1012.1	1014.8	1012.1	1006.8	1001.1	998.4
20°	975.7	975.8	975.7	970.5	966.0	963.7
20.5°	939.7	939.1	939.7	934.9	930.1	928.6
21°	904.5	904.4	904.5	899.8	895.2	892.8



TEST NUMBER: P775848

CATALOG NUMBER: HCDJBL510CSD-HCD82TRH-1000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	808.0	811.4	808.0	800.3	796.1	793.2
23°	778.3	782.0	778.3	771.8	766.7	764.5
23.5°	751.0	754.6	751.0	745.6	741.6	736.1
24°	727.3	732.1	727.3	721.5	716.0	713.9
24.5°	704.6	710.4	704.6	698.8	693.4	690.9
25°	682.9	688.3	682.9	677.9	672.8	670.2
25.5°	662.0	666.7	662.0	657.8	653.6	652.4
26°	642.6	645.5	642.6	638.6	635.9	634.9
26.5°	625.0	626.8	625.0	621.5	618.3	616.7
27°	609.0	610.8	609.0	605.2	601.0	599.1
27.5°	592.9	595.5	592.9	589.0	584.9	583.1
28°	576.8	578.9	576.8	573.1	569.7	568.3
28.5°	561.3	563.6	561.3	558.3	555.4	554.2
29°	547.2	548.7	547.2	544.3	541.6	540.5
29.5°	533.5	534.8	533.5	530.8	528.0	526.9
30°	520.0	521.6	520.0	517.4	514.8	513.7
30.5°	507.2	508.8	507.2	504.6	501.9	501.0
31°	495.0	496.4	495.0	492.3	489.9	488.5
31.5°	483.1	484.7	483.1	480.5	477.9	477.1
32°	471.6	473.1	471.6	469.2	466.8	465.7
32.5°	460.2	461.0	460.2	458.5	456.3	455.2
33°	448.2	448.1	448.2	447.3	446.0	445.4
33.5°	435.4	435.1	435.4	435.4	435.3	435.4
34°	423.7	421.4	423.7	422.5	423.4	424.1
34.5°	409.9	407.8	409.9	410.8	411.0	411.2
35°	396.0	394.4	396.0	396.8	396.8	397.7
35.5°	381.3	380.3	381.3	382.7	382.7	383.9
36°	365.9	365.7	365.9	368.3	368.0	368.6
36.5°	350.5	350.1	350.5	352.8	352.8	352.9
37°	334.9	334.2	334.9	336.7	336.6	336.6
37.5°	319.2	318.6	319.2	321.4	320.0	320.3
38°	302.8	302.9	302.8	303.4	303.0	303.7
38.5°	286.5	286.8	286.5	285.5	285.8	286.4
39°	270.1	270.2	270.1	268.0	268.5	268.8
39.5°	253.6	254.2	253.6	251.0	251.0	251.0
40°	237.2	238.3	237.2	234.9	233.9	233.3
40.5°	220.7	222.6	220.7	218.9	216.6	216.0
41°	204.8	206.8	204.8	202.9	199.8	198.9
41.5°	189.0	191.3	189.0	186.9	183.3	181.7
42°	173.8	176.0	173.8	171.3	167.1	165.4
42.5°	159.4	161.4	159.4	156.2	151.5	149.5
43°	145.3	147.0	145.3	141.7	136.9	134.1
43.5°	131.5	133.0	131.5	127.6	122.9	119.6



TEST NUMBER: P775848

CATALOG NUMBER: HCDJBL510CSD-HCD82TRH-1000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	93.3	95.2	93.3	88.1	83.8	82.1
45.5°	81.9	84.0	81.9	76.8	72.5	70.7
46°	71.6	75.0	71.6	66.4	62.0	59.8
46.5°	62.2	66.0	62.2	57.3	52.2	50.5
47°	53.2	56.9	53.2	48.6	44.2	42.3
47.5°	44.3	47.9	44.3	40.4	36.7	35.1
48°	36.3	38.9	36.3	33.2	30.0	29.1
48.5°	29.6	31.8	29.6	26.8	24.7	23.5
49°	23.6	25.5	23.6	21.9	19.6	18.4
49.5°	18.9	20.3	18.9	17.2	15.3	14.4
50°	14.6	15.7	14.6	13.1	11.8	11.1
50.5°	11.5	12.2	11.5	10.0	8.4	8.3
51°	9.0	10.3	9.0	7.5	6.2	5.8
51.5°	6.8	8.5	6.8	5.8	4.6	3.8
52°	5.3	6.6	5.3	4.3	3.5	3.3
52.5°	4.0	4.8	4.0	3.2	3.0	2.9
53°	3.0	3.0	3.0	2.8	2.8	2.7
53.5°	2.7	2.6	2.7	2.7	2.6	2.5
54°	2.5	2.4	2.5	2.5	2.4	2.4
54.5°	2.3	2.3	2.3	2.3	2.3	2.2
55°	2.2	2.2	2.2	2.2	2.2	2.1
55.5°	2.1	2.1	2.1	2.1	2.0	2.0
56°	2.0	2.0	2.0	2.0	1.9	1.9
56.5°	1.9	1.8	1.9	1.9	1.8	1.8
57°	1.8	1.7	1.8	1.8	1.7	1.7
57.5°	1.7	1.7	1.7	1.7	1.6	1.6
58°	1.6	1.6	1.6	1.6	1.5	1.5
58.5°	1.5	1.5	1.5	1.5	1.4	1.4
59°	1.4	1.4	1.4	1.4	1.4	1.3
59.5°	1.3	1.3	1.3	1.3	1.3	1.2
60°	1.3	1.2	1.3	1.3	1.2	1.2
60.5°	1.2	1.2	1.2	1.2	1.1	1.1
61°	1.1	1.1	1.1	1.1	1.1	1.1
61.5°	1.1	1.1	1.1	1.1	0.9	0.9
62°	0.9	0.9	0.9	0.9	0.9	0.9
62.5°	0.9	0.9	0.9	0.9	0.8	0.8
63°	0.8	0.8	0.8	0.8	0.8	0.8
63.5°	0.8	0.8	0.8	0.8	0.7	0.7
64°	0.7	0.7	0.7	0.7	0.7	0.7
64.5°	0.7	0.7	0.7	0.7	0.7	0.6
65°	0.7	0.6	0.7	0.7	0.6	0.6
65.5°	0.6	0.6	0.6	0.6	0.6	0.6
66°	0.6	0.6	0.6	0.6	0.6	0.5



TEST NUMBER: P775848

CATALOG NUMBER: HCDJBL510CSD-HCD82TRH-1000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	0.5	0.5	0.5	0.5	0.5	0.5
68°	0.5	0.5	0.5	0.5	0.4	0.4
68.5°	0.4	0.4	0.4	0.4	0.4	0.4
69°	0.4	0.4	0.4	0.4	0.4	0.4
69.5°	0.4	0.4	0.4	0.4	0.4	0.4
70°	0.4	0.4	0.4	0.4	0.3	0.3
70.5°	0.4	0.3	0.4	0.3	0.3	0.3
71°	0.3	0.3	0.3	0.3	0.3	0.3
71.5°	0.3	0.3	0.3	0.3	0.3	0.3
72°	0.3	0.3	0.3	0.3	0.3	0.3
72.5°	0.3	0.3	0.3	0.3	0.3	0.2
73°	0.3	0.3	0.3	0.3	0.2	0.2
73.5°	0.2	0.2	0.2	0.2	0.2	0.2
74°	0.2	0.2	0.2	0.2	0.2	0.2
74.5°	0.2	0.2	0.2	0.2	0.2	0.2
75°	0.2	0.2	0.2	0.2	0.2	0.2
75.5°	0.2	0.2	0.2	0.2	0.2	0.2
76°	0.2	0.2	0.2	0.2	0.2	0.2
76.5°	0.2	0.2	0.2	0.2	0.1	0.1
77°	0.2	0.2	0.2	0.1	0.1	0.1
77.5°	0.1	0.1	0.1	0.1	0.1	0.1
78°	0.1	0.1	0.1	0.1	0.1	0.1
78.5°	0.1	0.1	0.1	0.1	0.1	0.1
79°	0.1	0.1	0.1	0.1	0.1	0.1
79.5°	0.1	0.1	0.1	0.1	0.1	0.1
80°	0.1	0.1	0.1	0.1	0.1	0.1
80.5°	0.1	0.1	0.1	0.1	0.1	0.1
81°	0.1	0.1	0.1	0.1	0.1	0.1
81.5°	0.1	0.1	0.1	0.1	0.1	0.1
82°	0.1	0.1	0.1	0.1	0.1	0.0
82.5°	0.1	0.1	0.1	0.1	0.0	0.0
83°	0.1	0.1	0.1	0.0	0.0	0.0
83.5°	0.0	0.0	0.0	0.0	0.0	0.0
84°	0.0	0.0	0.0	0.0	0.0	0.0
84.5°	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0
85.5°	0.0	0.0	0.0	0.0	0.0	0.0
86°	0.0	0.0	0.0	0.0	0.0	0.0
86.5°	0.0	0.0	0.0	0.0	0.0	0.0
87°	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0
88°	0.0	0.0	0.0	0.0	0.0	0.0
88.5°	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P775848

CATALOG NUMBER: HCDJBL510CSD-HCD82TRH-1000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
90°	0.0	0.0	0.0	0.0	0.0	0.0

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report



Report Generated By 670245859 / DESKTOP-T8S5UU9

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— 0°-180° - - 45°-225° - - - - 90°-270° - · - 135°-315°

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21.5°	855.7	860.8	866.0	870.8	872.1	870.8	866.0	860.8	855.7	860.8	866.0
22°	823.4	826.8	832.8	837.7	840.3	837.7	832.8	826.8	823.4	826.8	832.8



44°	106.4	109.4	114.1	118.1	119.7	118.1	114.1	109.4	106.4	109.4	114.1
44.5°	94.0	96.3	100.8	105.1	106.9	105.1	100.8	96.3	94.0	96.3	100.8



66.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
67°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5



89°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
89.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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21.5°	870.8	872.1	870.8	866.0	860.8	855.7
22°	837.7	840.3	837.7	832.8	826.8	823.4



44°	118.1	119.7	118.1	114.1	109.4	106.4
44.5°	105.1	106.9	105.1	100.8	96.3	94.0

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66.5°	0.5	0.5	0.5	0.5	0.5	0.5
67°	0.5	0.5	0.5	0.5	0.5	0.5

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89°	0.0	0.0	0.0	0.0	0.0	0.0
89.5°	0.0	0.0	0.0	0.0	0.0	0.0

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Scaled Data Report



(END OF REPORT)