

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: P775666

Luminaire Tested: HCDJBL510CSD-HCD4TRC-1000lm-3000K

Issue Date: 2/7/2024

Test Information

Test Method: LM-79-2019
Report Number: P775666
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2310613A001)
Test Lab:
Issue Date: 2/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBL510CSD-HCD4TRC-1000lm-3000K
Description: 4 INCH ROUND MEDIUM SPECULAR CLEAR TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 3000K CCT
Ballast/Driver: -

Summary

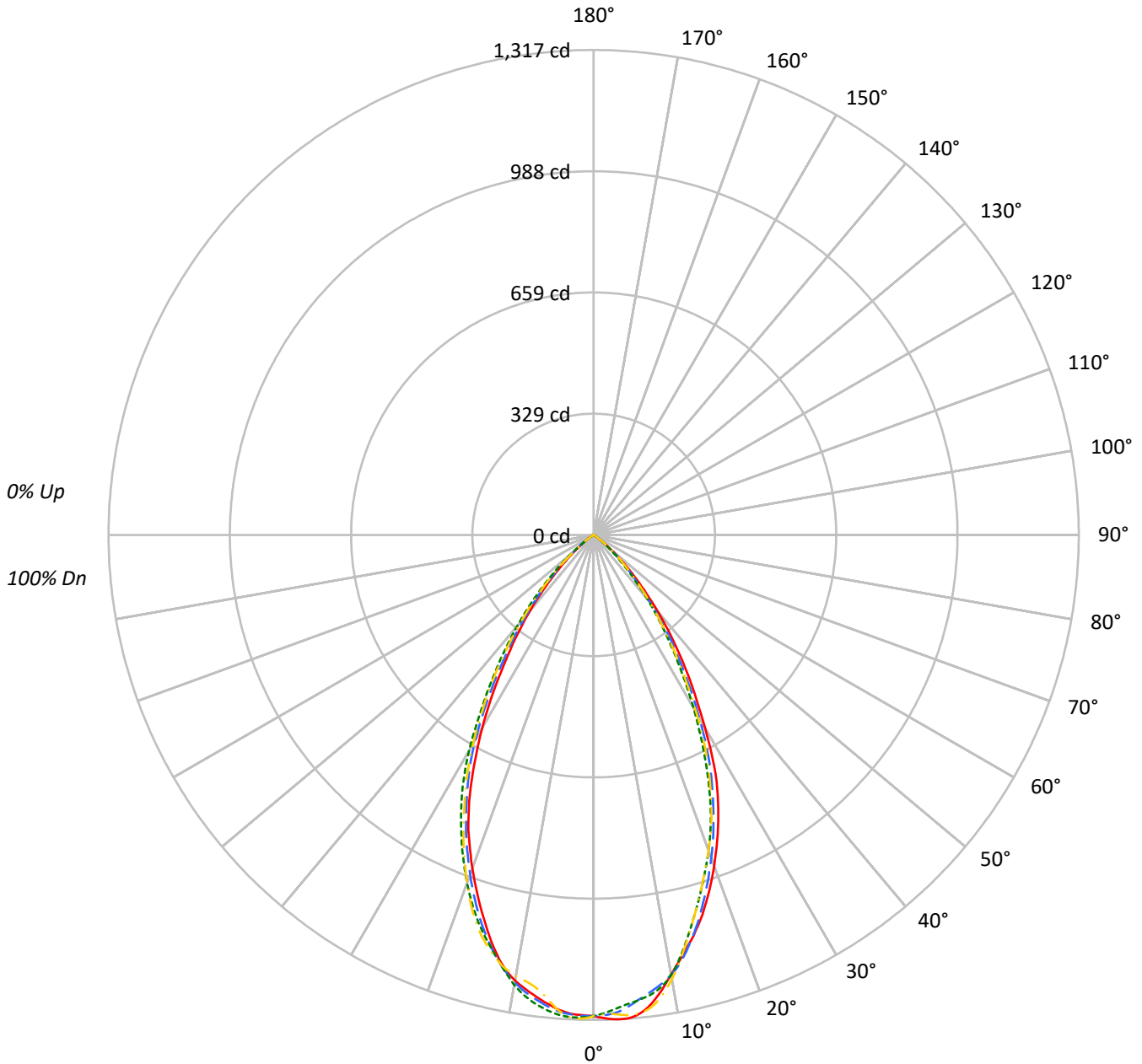
Lumens per Lamp: N/A
Luminaire Lumens: 1188.9 lumens
Efficiency: N/A
Efficacy: 118.9 lumens/watt
Spacing Criteria (0/90/45): 0.87 / 0.87 / 0.88
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 10
Input Voltage (V): NR
Input Current (Ain): 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



TEST NUMBER: P775666
CATALOG NUMBER: HCDJBL510CSD-HCD4TRC-1000lm-3000K

Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20				
RC	80					70					50					30				
RW	70	50	30	10	70	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	113	111	108	106	111	108	106	104	104	103	101	101	99	98	97	96	95	93		
2	108	103	98	95	105	101	97	94	98	95	92	95	92	90	92	90	88	86		
3	102	95	90	86	100	94	89	86	91	87	84	89	86	83	87	84	82	80		
4	97	89	83	79	95	88	82	78	85	81	77	83	80	76	82	78	76	74		
5	91	83	77	72	90	82	76	72	80	75	71	78	74	71	77	73	70	69		
6	87	78	71	67	85	77	71	67	75	70	66	74	69	66	72	68	65	64		
7	82	73	66	62	81	72	66	62	71	65	62	69	65	61	68	64	61	60		
8	78	68	62	58	77	68	62	58	67	61	57	66	61	57	65	60	57	56		
9	74	64	58	54	73	64	58	54	63	58	54	62	57	54	61	57	53	52		
10	71	61	55	51	70	60	54	51	59	54	50	59	54	50	58	53	50	49		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	164473	164473	164473	164473
5°	165594	160730	162398	164419
10°	154857	154934	157043	158576
15°	142966	138563	144921	147579
20°	128034	122154	128944	134543
25°	110935	102395	111032	118281
30°	87802	78617	87787	98236
35°	64818	56153	64035	74113
40°	44275	37030	43881	52900
45°	26038	20218	25629	33086
50°	11062	8987	11923	16055
55°	2238	2194	3774	4717
60°	352	428	403	554
65°	208	238	208	328
70°	110	147	147	184
75°	49	97	97	146
80°	0	72	72	72
85°	0	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 270°

Vertical Angle: 45°

Luminance: 33086 cd/sqm



TEST NUMBER: P775666

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	121.0	10.2
10°-20°	307.6	25.9
20°-30°	360.8	30.3
30°-40°	264.1	22.2
40°-50°	116.5	9.8
50°-60°	17.8	1.5
60°-70°	0.9	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°	789.4	66.4
0°-40°	1053.5	88.6
0°-60°	1187.8	99.9
0°-90°	1188.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1188.9	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1307	1307	1307	1307	1307	
5°	1311	1272	1286	1302	1311	122
15°	1097	1064	1112	1133	1097	306
25°	799	737	800	852	799	362
35°	422	366	417	482	422	264
45°	146	114	144	186	146	115
55°	10	10	17	22	10	15
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°	1306.9	1306.9	1306.9	1306.9	1306.9	1306.9	1306.9	1306.9	1306.9	1306.9	1306.9
0.5°	1309.4	1307.7	1305.9	1305.6	1303.7	1303.7	1304.7	1305.4	1306.1	1306.4	1306.6
1°	1311.5	1308.3	1305.1	1303.5	1300.9	1301.1	1302.9	1304.1	1305.1	1305.8	1306.5
1.5°	1313.5	1309.0	1304.0	1300.7	1297.5	1299.1	1301.6	1303.5	1304.4	1305.0	1306.1
2°	1315.2	1309.4	1302.4	1297.2	1293.6	1297.0	1301.6	1303.9	1303.7	1304.0	1305.3
2.5°	1316.5	1309.2	1299.8	1292.6	1289.6	1295.3	1302.6	1304.8	1302.4	1302.1	1304.3
3°	1317.3	1308.1	1296.5	1287.4	1285.5	1294.3	1304.1	1305.7	1300.5	1299.4	1302.8
3.5°	1317.2	1306.0	1292.1	1281.9	1281.8	1293.6	1306.0	1306.5	1297.6	1295.7	1301.0
4°	1316.1	1302.9	1286.9	1276.0	1278.4	1293.1	1307.5	1306.6	1294.1	1291.2	1298.6
4.5°	1314.1	1298.5	1280.9	1270.5	1275.3	1292.5	1308.1	1306.0	1290.1	1285.8	1295.3
5°	1310.8	1293.2	1274.8	1265.3	1272.3	1291.3	1307.5	1304.1	1285.5	1279.8	1291.4
5.5°	1306.0	1287.0	1268.8	1260.4	1269.4	1289.4	1305.5	1301.3	1280.5	1273.2	1286.9
6°	1300.0	1280.0	1262.9	1256.2	1266.3	1286.3	1302.0	1297.2	1275.4	1266.8	1282.1
6.5°	1292.2	1272.5	1257.1	1252.2	1262.9	1282.6	1297.2	1292.3	1270.0	1260.4	1277.1
7°	1283.1	1264.4	1251.8	1248.4	1258.7	1277.2	1291.0	1286.1	1264.7	1254.9	1271.9
7.5°	1272.9	1255.6	1246.0	1244.5	1253.9	1270.3	1283.6	1279.2	1259.1	1249.3	1266.5
8°	1261.7	1246.3	1240.3	1240.3	1248.2	1262.1	1274.0	1271.0	1253.3	1244.3	1260.8
8.5°	1250.0	1235.9	1234.3	1235.5	1241.3	1252.8	1263.4	1262.1	1247.5	1240.0	1255.0
9°	1237.1	1225.6	1227.8	1229.9	1232.9	1241.6	1251.5	1252.3	1241.5	1236.1	1248.4
9.5°	1224.3	1215.1	1220.8	1223.4	1223.5	1229.4	1239.0	1241.4	1235.6	1232.1	1241.4
10°	1211.8	1204.5	1213.0	1215.8	1212.4	1216.1	1224.8	1229.8	1228.9	1227.8	1233.7
10.5°	1199.8	1193.7	1204.4	1206.7	1200.4	1201.4	1210.3	1217.1	1221.4	1223.3	1225.8
11°	1188.1	1182.8	1194.8	1195.5	1187.5	1186.1	1194.6	1203.9	1212.8	1218.1	1217.0
11.5°	1176.8	1171.5	1183.8	1184.4	1172.6	1170.9	1178.8	1189.6	1203.6	1211.7	1207.8
12°	1165.5	1160.0	1171.8	1171.2	1157.4	1152.9	1161.3	1174.6	1193.1	1204.4	1198.0
12.5°	1154.4	1148.1	1159.6	1156.5	1142.0	1136.4	1145.2	1159.1	1181.7	1195.4	1187.2
13°	1143.5	1136.4	1146.3	1141.6	1126.5	1121.5	1128.4	1143.5	1168.5	1185.0	1176.1
13.5°	1132.7	1123.6	1133.0	1127.5	1110.7	1103.7	1112.0	1127.8	1155.3	1174.0	1164.6
14°	1121.3	1110.6	1119.2	1111.8	1094.6	1088.1	1095.6	1111.9	1141.7	1161.3	1152.6
14.5°	1109.3	1097.2	1105.3	1096.3	1078.8	1072.9	1080.1	1096.6	1127.3	1148.1	1140.2
15°	1097.3	1083.6	1090.6	1080.7	1063.5	1056.9	1063.5	1081.3	1112.3	1134.6	1127.0
15.5°	1084.6	1069.3	1075.8	1064.8	1048.1	1041.2	1048.3	1066.0	1097.7	1120.8	1113.7
16°	1071.7	1055.3	1060.5	1049.0	1032.8	1026.2	1032.2	1051.1	1082.7	1106.1	1100.3
16.5°	1057.6	1040.3	1045.1	1033.5	1017.3	1011.3	1016.9	1036.8	1068.1	1091.4	1086.5
17°	1044.1	1025.7	1029.3	1017.7	1002.6	996.0	1001.6	1021.5	1053.4	1076.6	1072.3
17.5°	1029.7	1010.3	1013.7	1002.0	987.4	981.3	987.0	1006.9	1037.8	1061.4	1057.5
18°	1015.3	995.2	997.7	986.4	972.1	966.0	970.9	992.5	1023.0	1046.1	1042.7
18.5°	1000.6	979.6	981.8	970.6	956.9	951.2	955.8	977.9	1008.5	1030.0	1027.4
19°	986.1	964.4	965.2	954.6	942.1	936.4	940.9	962.9	993.3	1014.7	1012.1
19.5°	971.0	948.8	949.7	938.9	927.1	922.3	926.8	948.7	978.2	998.6	996.5
20°	956.0	933.8	933.4	923.4	912.1	907.6	911.5	934.2	962.8	982.7	980.8
20.5°	940.8	918.3	917.5	907.7	897.2	893.1	896.7	919.3	947.6	966.6	965.0
21°	925.6	902.4	901.3	891.7	881.2	878.0	882.0	904.8	932.1	950.7	949.0



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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°	879.3	853.9	850.3	840.6	831.1	830.3	836.0	859.8	885.5	902.9	901.4
23°	863.7	836.9	832.9	823.0	813.2	812.8	819.0	843.6	870.0	887.0	885.8
23.5°	847.7	820.3	815.3	804.7	794.3	796.2	802.1	827.1	853.0	870.3	869.2
24°	831.4	803.3	797.9	786.1	775.3	778.2	784.4	809.4	835.5	853.5	851.9
24.5°	815.5	786.4	780.3	766.8	756.3	760.3	766.5	791.3	817.2	836.1	835.1
25°	798.9	768.9	762.7	747.9	737.4	742.3	748.7	773.2	799.6	818.6	819.0
25.5°	782.4	751.8	745.2	728.5	718.4	724.3	730.9	755.3	780.4	800.8	801.2
26°	765.5	734.6	727.5	708.9	698.5	704.4	713.0	737.2	761.1	782.9	784.5
26.5°	747.6	716.7	709.6	689.3	678.4	685.7	695.0	719.2	741.9	765.2	767.7
27°	728.2	698.0	691.4	670.0	658.6	665.4	675.9	699.7	722.6	747.3	751.0
27.5°	708.5	679.7	671.9	650.9	638.8	645.5	658.0	679.4	702.2	729.6	734.3
28°	688.3	660.2	652.3	631.8	618.7	625.7	638.0	658.8	681.8	711.8	717.4
28.5°	667.4	640.1	632.9	612.5	599.0	605.7	618.4	638.6	662.3	692.5	699.1
29°	646.1	620.0	613.1	593.7	579.5	585.6	598.7	618.1	642.9	673.2	680.4
29.5°	624.6	599.4	593.1	574.9	560.2	565.6	578.4	598.8	623.6	653.7	661.0
30°	604.2	578.9	573.7	556.3	541.0	545.5	557.7	578.4	604.1	633.9	641.3
30.5°	584.2	558.2	554.4	537.7	521.8	526.0	538.1	558.4	584.7	614.0	621.4
31°	564.6	537.0	535.1	518.4	503.2	506.3	518.1	539.4	565.1	594.8	601.3
31.5°	545.6	517.0	516.4	499.8	484.6	487.4	498.6	520.7	545.6	575.9	581.6
32°	526.7	497.8	498.0	481.3	466.3	469.9	479.3	501.8	526.9	556.9	561.8
32.5°	509.0	478.8	479.8	462.6	448.6	451.7	461.3	483.8	507.6	538.3	542.1
33°	491.9	460.3	462.0	444.0	430.9	434.3	442.9	465.7	488.6	519.6	522.8
33.5°	474.4	442.0	444.5	426.9	413.7	418.1	425.3	448.1	469.9	501.8	502.7
34°	456.7	424.6	427.0	409.9	397.2	400.2	408.1	430.9	451.7	484.0	483.4
34.5°	439.0	407.8	410.2	393.0	381.1	384.0	391.0	413.9	433.9	466.3	464.8
35°	421.9	391.1	393.1	376.9	365.5	369.3	374.6	397.2	416.8	448.9	446.8
35.5°	405.3	375.1	376.0	364.1	350.1	353.1	358.7	381.3	400.4	431.2	428.6
36°	388.3	365.7	364.8	348.5	335.4	336.6	343.3	365.1	385.0	413.9	411.1
36.5°	372.3	349.1	347.7	332.9	320.9	322.4	328.4	350.0	369.5	396.6	394.1
37°	357.3	332.3	330.6	317.3	306.5	307.4	313.6	334.5	354.3	379.7	378.0
37.5°	342.4	315.6	313.3	301.8	292.5	292.8	299.8	319.1	339.8	363.4	361.7
38°	327.5	298.9	296.2	287.4	278.5	278.9	286.1	305.2	324.7	346.9	346.3
38.5°	312.5	284.8	280.6	273.2	264.7	265.3	272.6	291.3	310.5	331.6	331.0
39°	297.6	271.2	266.8	258.8	251.3	252.5	259.6	276.4	295.8	316.2	316.0
39.5°	283.3	257.7	252.8	245.0	238.0	239.8	246.4	263.0	281.5	301.3	300.9
40°	269.5	244.1	239.4	231.3	225.4	227.3	233.8	250.0	267.1	286.3	286.6
40.5°	255.7	231.2	225.6	217.6	212.2	215.4	221.8	236.7	253.9	272.0	272.5
41°	241.9	218.8	213.3	204.6	200.3	203.5	210.1	224.0	240.1	257.8	258.7
41.5°	228.8	206.5	201.0	192.2	188.0	192.2	198.8	211.7	226.8	244.0	245.0
42°	215.8	194.5	189.0	180.0	176.4	181.3	187.8	199.8	214.1	230.4	232.0
42.5°	203.3	182.9	177.0	168.3	164.9	170.6	177.3	188.3	201.9	217.4	219.0
43°	191.2	171.2	166.3	157.3	153.9	160.2	167.4	176.9	190.0	204.4	206.6
43.5°	179.5	160.0	155.5	146.5	143.4	150.1	157.4	166.2	178.1	192.0	194.4



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	146.3	129.0	125.6	116.4	113.6	122.5	129.6	136.1	144.0	157.5	161.0
45.5°	135.8	119.2	116.5	107.4	104.8	114.1	120.9	126.6	133.4	147.0	150.4
46°	125.6	110.1	107.8	98.7	97.4	105.8	112.6	117.6	123.3	136.8	140.0
46.5°	115.5	101.4	99.5	90.6	89.9	98.5	104.5	109.1	113.2	127.1	130.2
47°	105.7	92.9	91.6	83.1	82.4	91.1	97.4	100.8	104.0	117.6	121.2
47.5°	96.3	84.8	83.9	75.9	74.9	83.8	90.3	93.5	96.6	108.6	112.1
48°	87.8	77.1	76.7	69.4	67.6	76.4	83.2	86.1	89.1	100.9	103.2
48.5°	79.2	69.7	69.8	63.3	61.6	69.2	76.0	78.8	81.7	93.3	95.3
49°	71.1	62.9	63.3	57.4	56.1	63.0	68.9	71.4	74.1	85.5	87.5
49.5°	63.7	56.3	57.2	52.1	50.9	57.0	62.4	65.0	66.8	77.9	79.6
50°	56.5	50.1	51.1	47.1	45.9	51.2	56.4	58.8	60.9	70.2	71.9
50.5°	50.1	44.2	45.6	42.3	41.2	45.8	50.6	53.2	55.5	63.7	65.1
51°	44.0	38.7	40.4	37.6	36.8	40.6	45.2	48.0	50.3	57.6	58.8
51.5°	38.2	34.3	35.3	33.7	32.7	35.8	39.9	42.9	45.4	52.0	52.5
52°	33.7	29.9	31.1	29.8	28.6	31.3	35.2	38.1	40.8	46.6	46.6
52.5°	29.3	25.5	27.0	25.9	24.6	27.0	30.4	33.5	36.4	41.5	41.0
53°	24.9	21.1	23.0	21.9	20.9	23.0	26.1	29.2	32.4	36.7	35.9
53.5°	20.5	16.7	18.9	18.2	17.5	19.3	22.1	25.0	28.1	32.3	31.0
54°	16.1	13.6	15.5	14.9	14.5	15.9	18.4	21.2	24.1	28.0	26.5
54.5°	13.0	10.8	12.6	12.0	12.2	13.5	15.1	17.7	20.4	23.8	22.5
55°	10.2	8.1	9.8	9.3	10.0	11.0	12.7	14.6	17.2	20.1	18.6
55.5°	7.5	5.6	7.1	6.7	7.8	8.6	10.3	12.2	14.8	16.7	15.2
56°	5.1	3.8	4.9	4.7	5.5	6.1	8.0	9.9	12.5	14.1	12.9
56.5°	3.4	3.3	3.4	3.4	3.4	3.8	5.6	7.6	10.0	11.5	10.4
57°	3.0	2.9	3.1	3.1	2.9	2.9	3.3	5.3	7.6	9.0	8.1
57.5°	2.6	2.3	2.7	2.8	2.6	2.6	2.6	3.0	5.2	6.4	5.7
58°	2.1	1.9	2.3	2.4	2.3	2.2	2.2	2.3	2.8	3.9	3.4
58.5°	1.8	1.7	2.0	2.1	2.1	2.1	2.0	2.0	2.2	2.8	2.6
59°	1.6	1.6	1.8	1.9	1.9	1.9	1.8	1.8	1.9	2.2	2.2
59.5°	1.5	1.5	1.7	1.8	1.8	1.8	1.7	1.7	1.7	1.9	2.0
60°	1.4	1.3	1.5	1.6	1.7	1.6	1.6	1.5	1.6	1.7	1.8
60.5°	1.3	1.2	1.4	1.5	1.6	1.5	1.4	1.4	1.5	1.6	1.7
61°	1.2	1.2	1.3	1.4	1.4	1.4	1.3	1.3	1.3	1.5	1.5
61.5°	1.1	1.1	1.2	1.3	1.4	1.3	1.2	1.2	1.2	1.3	1.4
62°	1.0	1.0	1.1	1.2	1.3	1.2	1.2	1.1	1.1	1.2	1.3
62.5°	0.9	0.9	1.1	1.2	1.2	1.1	1.1	1.1	1.1	1.2	1.2
63°	0.9	0.9	1.0	1.1	1.1	1.1	1.0	1.0	1.0	1.1	1.1
63.5°	0.8	0.8	0.9	1.0	1.0	1.0	0.9	0.9	0.9	1.0	1.1
64°	0.8	0.8	0.9	0.9	1.0	0.9	0.9	0.9	0.9	0.9	1.0
64.5°	0.7	0.7	0.8	0.9	0.9	0.9	0.8	0.8	0.8	0.9	0.9
65°	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.8	0.9
65.5°	0.6	0.6	0.7	0.8	0.8	0.8	0.7	0.7	0.7	0.8	0.8
66°	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.6	0.6	0.7	0.7



TEST NUMBER: P775666

CATALOG NUMBER: HCDJBL510CSD-HCD4TRC-1000lm-3000K

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	0.6	0.6	0.6	0.6	0.5	0.5	0.6	0.6
68°	0.4	0.4	0.5	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.6
68.5°	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
69°	0.4	0.4	0.4	0.5	0.5	0.5	0.4	0.4	0.4	0.5	0.5
69.5°	0.3	0.3	0.4	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.5
70°	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
70.5°	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.4	0.4
71°	0.3	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.3	0.4	0.4
71.5°	0.2	0.2	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.4
72°	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
72.5°	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
73°	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.3
73.5°	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.3
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°	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
75°	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
75.5°	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
76°	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2
76.5°	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2
77°	0.1	0.1	0.1	0.1	0.1	0.1	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	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
79.5°	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
80°	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
80.5°	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1
81°	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1
81.5°	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1
82°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
83°	0.0	0.0	0.0	0.0	0.0	0.0	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: P775666
CATALOG NUMBER: HCDJBL510CSD-HCD4TRC-1000lm-3000K

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: P775666

CATALOG NUMBER: HCDJBL510CSD-HCD4TRC-1000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	1306.9	1306.9	1306.9	1306.9	1306.9	1306.9
0.5°	1308.2	1308.1	1309.0	1310.0	1310.1	1309.4
1°	1308.9	1309.6	1311.1	1312.6	1312.8	1311.5
1.5°	1309.3	1310.7	1312.5	1314.1	1314.9	1313.5
2°	1309.6	1311.3	1312.6	1314.6	1316.4	1315.2
2.5°	1309.8	1311.2	1311.4	1313.6	1316.9	1316.5
3°	1309.7	1310.5	1308.5	1310.4	1316.3	1317.3
3.5°	1309.6	1309.3	1303.9	1305.6	1314.3	1317.2
4°	1309.5	1307.4	1298.0	1298.4	1310.9	1316.1
4.5°	1309.0	1304.8	1290.5	1289.8	1306.1	1314.1
5°	1308.2	1301.5	1281.6	1280.2	1299.8	1310.8
5.5°	1307.3	1297.7	1272.6	1269.9	1292.5	1306.0
6°	1305.8	1293.3	1263.6	1260.2	1285.3	1300.0
6.5°	1303.4	1288.7	1254.8	1251.2	1277.9	1292.2
7°	1299.8	1283.7	1247.2	1243.5	1269.0	1283.1
7.5°	1295.1	1278.4	1241.1	1236.9	1260.7	1272.9
8°	1288.5	1272.3	1235.9	1231.5	1251.9	1261.7
8.5°	1280.5	1265.9	1231.5	1227.4	1242.8	1250.0
9°	1271.5	1258.5	1227.5	1223.5	1233.5	1237.1
9.5°	1261.1	1250.1	1224.5	1219.8	1224.4	1224.3
10°	1249.2	1240.9	1220.5	1216.0	1214.9	1211.8
10.5°	1237.5	1230.7	1216.2	1212.0	1205.5	1199.8
11°	1225.1	1220.1	1211.4	1207.3	1195.8	1188.1
11.5°	1212.1	1209.0	1205.8	1201.9	1186.4	1176.8
12°	1200.0	1197.9	1198.9	1195.4	1176.9	1165.5
12.5°	1188.2	1186.8	1191.5	1187.8	1167.4	1154.4
13°	1176.2	1175.7	1183.6	1180.2	1158.3	1143.5
13.5°	1164.3	1165.0	1175.0	1171.6	1148.4	1132.7
14°	1152.7	1154.2	1165.9	1162.6	1138.2	1121.3
14.5°	1141.1	1143.7	1156.6	1153.3	1127.6	1109.3
15°	1129.2	1132.7	1146.2	1143.3	1116.6	1097.3
15.5°	1117.5	1122.0	1135.5	1133.1	1104.7	1084.6
16°	1104.9	1110.6	1124.1	1121.8	1092.5	1071.7
16.5°	1092.4	1098.9	1112.6	1109.5	1080.1	1057.6
17°	1078.6	1086.6	1100.4	1096.9	1066.9	1044.1
17.5°	1065.3	1074.1	1087.1	1083.2	1053.3	1029.7
18°	1051.0	1061.0	1072.9	1068.8	1039.3	1015.3
18.5°	1036.8	1047.4	1058.7	1053.6	1024.3	1000.6
19°	1021.8	1033.1	1043.6	1037.7	1009.8	986.1
19.5°	1007.0	1019.4	1028.4	1021.5	994.9	971.0
20°	991.6	1004.6	1013.2	1005.5	979.7	956.0
20.5°	976.7	990.4	996.7	989.0	964.3	940.8
21°	961.2	975.2	981.0	972.3	948.9	925.6



TEST NUMBER: P775666

CATALOG NUMBER: HCDJBL510CSD-HCD4TRC-1000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	915.8	930.5	932.9	921.0	901.2	879.3
23°	900.0	915.3	916.0	903.9	885.1	863.7
23.5°	884.2	899.5	898.9	886.2	868.0	847.7
24°	868.9	883.9	882.0	867.9	851.4	831.4
24.5°	853.3	868.0	864.6	849.9	834.1	815.5
25°	837.0	851.8	846.5	832.1	817.6	798.9
25.5°	821.3	835.7	829.4	814.6	799.7	782.4
26°	805.6	819.4	812.4	797.5	783.0	765.5
26.5°	789.0	803.2	795.2	780.1	765.7	747.6
27°	772.2	786.6	778.2	763.1	748.1	728.2
27.5°	755.6	769.7	760.8	745.9	729.1	708.5
28°	738.8	751.9	743.1	728.3	711.8	688.3
28.5°	722.2	733.4	725.6	710.4	692.9	667.4
29°	703.5	715.0	707.7	692.7	673.4	646.1
29.5°	684.2	695.8	690.1	674.2	654.1	624.6
30°	663.9	676.0	671.5	655.5	634.2	604.2
30.5°	643.2	655.8	652.1	636.2	613.4	584.2
31°	624.0	634.9	633.0	616.9	593.4	564.6
31.5°	602.7	613.9	613.5	597.7	572.8	545.6
32°	580.5	593.7	594.3	579.1	553.2	526.7
32.5°	561.2	573.8	574.6	560.3	533.8	509.0
33°	541.0	554.6	556.2	542.4	514.6	491.9
33.5°	520.9	535.0	536.1	524.3	496.5	474.4
34°	502.0	517.5	517.8	506.0	479.1	456.7
34.5°	483.9	499.8	500.1	488.2	462.0	439.0
35°	466.4	482.4	481.7	470.7	445.1	421.9
35.5°	449.3	465.2	464.1	453.1	428.9	405.3
36°	432.3	448.4	447.1	435.8	412.5	388.3
36.5°	415.4	431.8	430.1	418.2	396.8	372.3
37°	398.8	415.2	412.9	400.8	381.1	357.3
37.5°	382.3	398.8	397.0	384.5	364.4	342.4
38°	366.1	382.1	380.3	368.6	349.3	327.5
38.5°	350.1	366.2	362.7	353.0	334.4	312.5
39°	334.3	351.5	348.0	337.4	319.4	297.6
39.5°	319.2	336.7	333.3	321.9	304.4	283.3
40°	304.5	322.0	318.7	306.3	289.5	269.5
40.5°	290.1	307.3	304.1	290.8	275.4	255.7
41°	277.0	292.6	289.4	276.2	261.5	241.9
41.5°	262.9	278.6	274.8	261.9	247.9	228.8
42°	249.8	265.0	260.4	248.0	234.5	215.8
42.5°	236.8	251.1	246.5	234.7	221.6	203.3
43°	224.8	237.5	232.6	221.6	208.6	191.2
43.5°	212.0	224.1	219.1	208.3	195.8	179.5



TEST NUMBER: P775666

CATALOG NUMBER: HCDJBL510CSD-HCD4TRC-1000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	177.2	185.9	181.3	171.7	159.0	146.3
45.5°	165.4	173.8	169.1	160.1	147.6	135.8
46°	154.7	162.2	157.5	148.8	136.7	125.6
46.5°	143.9	150.9	146.5	138.0	125.9	115.5
47°	133.7	139.8	135.4	127.5	115.7	105.7
47.5°	123.4	129.1	124.9	117.3	105.7	96.3
48°	113.8	118.9	114.5	107.4	96.6	87.8
48.5°	104.4	109.0	104.9	98.3	87.9	79.2
49°	95.9	99.7	95.7	89.1	79.4	71.1
49.5°	87.6	90.7	87.0	80.5	71.4	63.7
50°	79.1	82.0	78.0	72.2	64.2	56.5
50.5°	70.7	73.8	70.2	64.4	57.0	50.1
51°	63.5	66.1	62.7	57.3	50.3	44.0
51.5°	56.6	58.9	55.8	50.4	44.3	38.2
52°	50.0	52.2	49.0	43.9	38.4	33.7
52.5°	44.0	45.9	43.0	38.2	33.9	29.3
53°	38.5	39.9	37.2	33.7	29.3	24.9
53.5°	33.2	34.7	32.8	29.1	24.8	20.5
54°	28.2	30.3	28.4	24.6	20.2	16.1
54.5°	23.9	25.9	24.0	20.1	15.7	13.0
55°	19.8	21.5	19.6	15.6	12.8	10.2
55.5°	16.1	17.0	15.2	12.6	9.9	7.5
56°	13.7	13.9	12.2	9.9	7.2	5.1
56.5°	11.2	11.1	9.7	7.1	4.8	3.4
57°	8.8	8.4	6.9	4.9	3.3	3.0
57.5°	6.3	6.0	4.8	3.4	3.0	2.6
58°	3.9	4.2	3.5	3.0	2.6	2.1
58.5°	3.0	3.7	3.2	2.7	2.1	1.8
59°	2.6	3.3	2.8	2.2	1.8	1.6
59.5°	2.3	2.8	2.4	1.9	1.6	1.5
60°	2.1	2.2	2.0	1.7	1.5	1.4
60.5°	1.9	2.0	1.9	1.6	1.4	1.3
61°	1.8	1.9	1.7	1.5	1.3	1.2
61.5°	1.6	1.7	1.6	1.4	1.2	1.1
62°	1.5	1.6	1.5	1.3	1.1	1.0
62.5°	1.4	1.5	1.4	1.2	1.0	0.9
63°	1.3	1.4	1.3	1.1	1.0	0.9
63.5°	1.2	1.3	1.2	1.0	0.9	0.8
64°	1.1	1.2	1.1	0.9	0.8	0.8
64.5°	1.1	1.1	1.0	0.9	0.8	0.7
65°	1.0	1.1	1.0	0.8	0.7	0.7
65.5°	0.9	1.0	0.9	0.8	0.7	0.6
66°	0.9	0.9	0.8	0.7	0.6	0.6



TEST NUMBER: P775666

CATALOG NUMBER: HCDJBL510CSD-HCD4TRC-1000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	0.7	0.8	0.7	0.6	0.5	0.5
68°	0.7	0.7	0.6	0.5	0.5	0.4
68.5°	0.6	0.7	0.6	0.5	0.4	0.4
69°	0.6	0.6	0.6	0.5	0.4	0.4
69.5°	0.5	0.6	0.5	0.4	0.4	0.3
70°	0.5	0.5	0.5	0.4	0.3	0.3
70.5°	0.5	0.5	0.5	0.4	0.3	0.3
71°	0.4	0.5	0.4	0.4	0.3	0.3
71.5°	0.4	0.4	0.4	0.3	0.3	0.2
72°	0.4	0.4	0.4	0.3	0.3	0.2
72.5°	0.4	0.4	0.3	0.3	0.2	0.2
73°	0.3	0.3	0.3	0.3	0.2	0.2
73.5°	0.3	0.3	0.3	0.2	0.2	0.2
74°	0.3	0.3	0.3	0.2	0.2	0.2
74.5°	0.3	0.3	0.3	0.2	0.2	0.1
75°	0.2	0.3	0.2	0.2	0.2	0.1
75.5°	0.2	0.2	0.2	0.2	0.1	0.1
76°	0.2	0.2	0.2	0.2	0.1	0.1
76.5°	0.2	0.2	0.2	0.1	0.1	0.1
77°	0.2	0.2	0.2	0.1	0.1	0.1
77.5°	0.2	0.2	0.2	0.1	0.1	0.1
78°	0.2	0.2	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	0.0
80°	0.1	0.1	0.1	0.1	0.0	0.0
80.5°	0.1	0.1	0.1	0.1	0.0	0.0
81°	0.1	0.1	0.1	0.1	0.0	0.0
81.5°	0.1	0.1	0.1	0.0	0.0	0.0
82°	0.1	0.1	0.1	0.0	0.0	0.0
82.5°	0.1	0.1	0.1	0.0	0.0	0.0
83°	0.1	0.1	0.0	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: P775666

CATALOG NUMBER: HCDJBL510CSD-HCD4TRC-1000lm-3000K

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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Scaled Data Report





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

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21.5°	910.4	886.5	884.7	874.9	865.1	862.9	868.0	890.2	916.4	934.4	933.3
22°	895.1	870.2	868.0	857.8	848.4	846.8	852.3	875.4	901.0	918.8	917.4



44°	168.1	149.3	145.1	135.8	133.3	140.6	147.8	155.8	166.3	180.0	183.0
44.5°	156.9	139.0	135.2	125.8	123.2	131.4	138.5	145.6	155.0	168.6	171.7



66.5°	0.5	0.5	0.6	0.7	0.7	0.7	0.6	0.6	0.6	0.7	0.7
67°	0.5	0.5	0.6	0.6	0.7	0.6	0.6	0.6	0.6	0.6	0.7



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°	946.0	960.5	965.1	955.4	933.2	910.4
22°	930.6	945.3	948.8	938.6	917.7	895.1



44°	200.0	211.2	206.1	195.8	183.0	168.1
44.5°	188.3	198.4	193.7	183.6	171.2	156.9

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Scaled Data Report



66.5°	0.8	0.9	0.8	0.7	0.6	0.5
67°	0.8	0.8	0.7	0.6	0.5	0.5

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Scaled Data Report



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)