

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: P775692

Luminaire Tested: HCDJBL5510CSD-HCD4TSQC-1000lm-3500K

Issue Date: 2/7/2024

Test Information

Test Method: LM-79-2019
Report Number: P775692
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-HCD4TSQC-1000lm-3500K
Description: 4 INCH SQUARE MEDIUM SPECULAR CLEAR TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 3500K CCT
Ballast/Driver: -

Summary

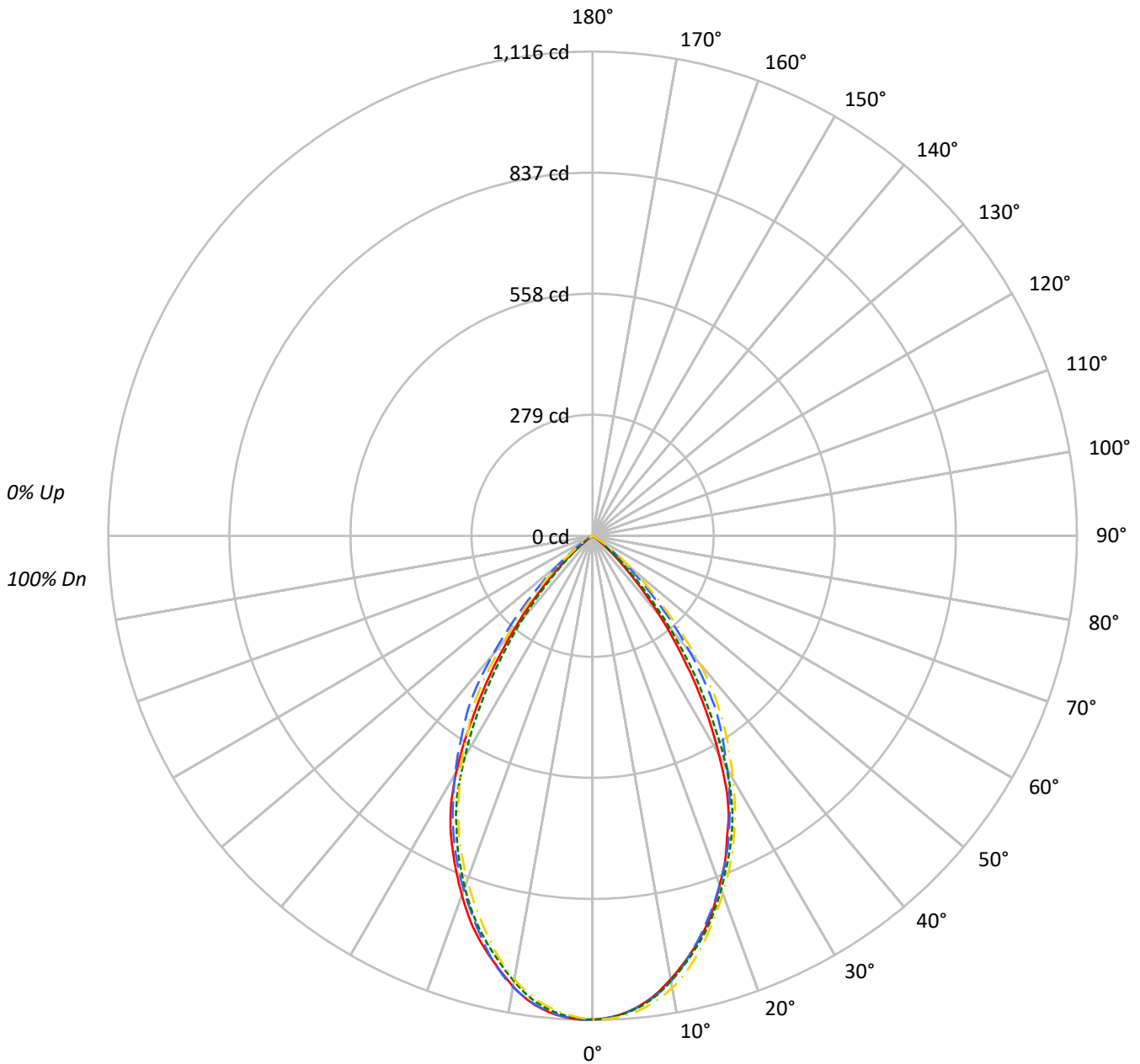
Lumens per Lamp: N/A
Luminaire Lumens: 1153.2 lumens
Efficiency: N/A
Efficacy: 115.3 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 0.93 / 0.98
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

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									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	0																
RCR																																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100																			
1	113	110	108	105	111	108	106	104	104	102	101	100	99	98	97	96	95	93																			
2	107	102	98	94	105	100	96	93	97	94	91	94	91	89	91	89	87	86																			
3	101	95	89	85	99	93	88	84	90	86	83	88	85	82	86	83	80	79																			
4	96	88	82	77	94	87	81	77	84	80	76	82	78	75	80	77	74	73																			
5	90	82	75	71	89	81	75	70	79	74	70	77	73	69	75	72	69	67																			
6	85	76	70	65	84	75	69	65	74	68	64	72	68	64	71	67	64	62																			
7	81	71	65	60	79	70	64	60	69	64	60	68	63	59	67	62	59	57																			
8	77	66	60	56	75	66	60	56	65	59	55	64	59	55	63	58	55	53																			
9	73	62	56	52	71	62	56	52	61	55	52	60	55	51	59	55	51	50																			
10	69	59	53	48	68	58	52	48	57	52	48	57	52	48	56	51	48	47																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	110199	110199	110199	110199
5°	108606	108794	109519	108973
10°	104141	104582	105877	104693
15°	98133	98655	100057	98400
20°	90113	91154	92690	90617
25°	80541	82700	83998	80857
30°	66471	70420	71744	67224
35°	48905	52899	53913	50051
40°	31290	35393	36090	32541
45°	15824	19360	19961	16998
50°	5567	7412	7888	6305
55°	1034	1344	1516	1499
60°	395	376	336	455
65°	304	281	257	351
70°	231	231	202	260
75°	191	191	153	229
80°	114	114	114	171
85°	113	113	0	113

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 135°

Vertical Angle: 45°

Luminance: 32164 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	103.2	8.9
10°-20°	270.0	23.4
20°-30°	342.8	29.7
30°-40°	283.5	24.6
40°-50°	129.7	11.2
50°-60°	21.8	1.9
60°-70°	1.5	0.1
70°-80°	0.6	0.0
80°-90°	0.1	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°	716.0	62.1
0°-40°	999.5	86.7
0°-60°	1151.0	99.8
0°-90°	1153.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1153.2	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1115	1115	1115	1115	1115	
5°	1095	1096	1104	1098	1095	103
15°	959	964	978	962	959	268
25°	738	758	770	741	738	335
35°	405	438	447	415	405	252
45°	113	138	143	122	113	92
55°	6	8	9	9	6	10
65°	1	1	1	2	1	1
75°	0	0	0	1	0	1
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°	1114.9	1114.9	1114.9	1114.9	1114.9	1114.9	1114.9	1114.9	1114.9	1114.9	1114.9
0.5°	1114.7	1114.8	1114.8	1114.3	1114.7	1114.7	1114.7	1115.1	1115.7	1115.8	1115.6
1°	1113.6	1113.9	1114.0	1113.7	1114.2	1114.4	1114.7	1115.1	1115.7	1115.7	1115.4
1.5°	1112.4	1112.6	1112.8	1112.7	1113.1	1113.6	1114.3	1114.7	1115.4	1115.6	1114.9
2°	1110.7	1111.0	1111.3	1111.2	1111.8	1112.7	1113.6	1114.0	1114.8	1115.1	1114.3
2.5°	1108.7	1109.0	1109.4	1109.4	1110.0	1111.3	1112.7	1112.8	1113.7	1114.0	1113.5
3°	1106.7	1106.9	1107.1	1107.3	1108.1	1109.5	1111.3	1111.5	1112.4	1112.5	1111.8
3.5°	1104.2	1104.3	1104.7	1105.0	1105.7	1107.7	1109.7	1109.4	1110.8	1110.9	1109.9
4°	1101.5	1101.5	1101.7	1102.3	1103.0	1105.3	1107.6	1107.4	1108.8	1108.8	1107.8
4.5°	1098.2	1098.4	1098.8	1099.4	1100.1	1102.8	1105.2	1105.0	1106.6	1106.5	1105.3
5°	1094.6	1094.7	1095.4	1096.1	1096.5	1099.8	1102.6	1102.3	1103.8	1104.0	1102.4
5.5°	1090.6	1090.8	1091.7	1092.4	1092.9	1096.4	1099.7	1099.3	1100.8	1101.0	1099.4
6°	1086.1	1086.3	1087.7	1088.3	1088.8	1092.8	1096.2	1095.7	1097.5	1097.6	1095.8
6.5°	1081.4	1081.5	1083.1	1084.0	1084.3	1088.7	1092.6	1092.0	1094.0	1094.0	1092.4
7°	1076.2	1076.4	1078.2	1079.4	1079.6	1084.1	1088.8	1087.9	1089.8	1089.9	1088.3
7.5°	1070.8	1070.8	1073.2	1074.3	1074.1	1079.3	1084.4	1083.5	1085.1	1085.6	1083.9
8°	1064.9	1065.0	1067.2	1068.9	1068.4	1073.9	1079.8	1078.4	1079.9	1080.4	1079.1
8.5°	1058.5	1059.0	1061.6	1063.0	1062.1	1068.2	1074.8	1073.2	1074.3	1075.3	1073.8
9°	1051.4	1052.2	1055.1	1056.6	1055.6	1062.2	1069.4	1067.2	1068.1	1069.4	1068.5
9.5°	1044.4	1045.3	1048.6	1050.1	1048.9	1055.7	1063.8	1060.9	1061.8	1063.2	1062.6
10°	1037.6	1038.0	1041.6	1043.2	1042.0	1049.3	1057.8	1054.4	1054.9	1056.6	1056.0
10.5°	1030.2	1030.7	1034.4	1035.9	1034.7	1042.7	1051.3	1047.3	1047.8	1049.6	1049.2
11°	1022.8	1023.3	1026.8	1028.5	1027.5	1035.2	1044.1	1040.0	1040.1	1042.6	1042.3
11.5°	1015.1	1015.8	1018.7	1020.6	1019.7	1028.0	1037.3	1032.1	1032.1	1034.9	1034.8
12°	1007.8	1008.0	1010.4	1012.4	1012.0	1020.5	1029.7	1024.3	1024.5	1026.7	1026.5
12.5°	1000.1	1000.1	1001.3	1004.5	1004.5	1012.9	1021.6	1016.0	1017.2	1018.9	1018.8
13°	992.0	992.2	992.7	996.1	996.9	1005.2	1013.3	1007.6	1009.7	1011.0	1009.7
13.5°	983.9	983.9	983.7	987.5	988.8	997.4	1005.2	999.4	1001.9	1002.5	1000.5
14°	975.8	975.6	974.4	979.1	980.6	989.4	995.7	991.1	993.9	994.2	990.9
14.5°	967.4	967.1	965.1	970.4	972.4	981.4	986.5	982.7	985.9	986.0	981.4
15°	959.0	958.6	956.0	961.9	964.1	973.1	977.3	974.3	977.8	977.6	970.9
15.5°	950.5	949.8	946.0	953.0	955.6	964.6	967.6	965.4	969.2	968.9	960.6
16°	941.3	940.3	936.5	943.6	946.8	955.9	957.4	956.7	960.9	960.4	950.2
16.5°	932.1	931.7	926.7	934.3	937.7	947.5	947.6	947.7	952.0	951.4	940.2
17°	922.6	922.5	916.9	925.0	928.4	938.1	937.4	938.6	942.8	942.3	929.7
17.5°	912.6	912.9	907.0	915.5	918.6	928.9	927.4	929.0	933.1	933.2	919.5
18°	901.7	902.2	897.0	905.8	908.4	919.4	917.5	919.3	923.0	923.8	909.0
18.5°	890.4	892.4	887.1	895.6	898.3	909.8	907.7	909.1	912.8	913.6	899.0
19°	878.9	881.2	876.9	885.1	887.9	899.2	897.6	898.9	902.6	903.3	888.9
19.5°	868.0	869.7	866.6	874.2	877.3	889.3	887.7	888.6	892.1	892.7	878.8
20°	856.7	858.3	856.5	863.7	866.6	878.4	877.5	877.5	881.2	882.0	868.4
20.5°	845.7	847.0	846.4	852.6	855.7	867.6	867.3	866.6	870.2	871.0	858.0
21°	835.0	835.6	835.9	841.5	844.6	856.5	856.9	855.5	859.2	859.9	847.2



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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°	801.3	801.8	803.7	807.4	813.2	822.6	825.5	821.1	826.4	825.7	815.4
23°	788.2	790.6	792.4	795.9	802.5	811.2	814.9	809.4	815.7	814.2	804.3
23.5°	774.5	778.7	780.7	783.6	791.4	800.5	804.1	797.7	804.6	802.6	793.7
24°	761.3	765.9	769.0	772.6	780.4	788.4	793.0	786.0	793.0	790.9	782.0
24.5°	749.9	752.4	756.8	761.6	769.4	776.5	781.4	774.4	781.6	779.2	770.2
25°	738.5	738.3	744.6	750.4	758.3	764.6	769.8	762.6	770.2	767.4	758.5
25.5°	727.2	725.5	732.3	737.7	747.2	752.6	758.2	750.9	758.9	755.7	746.8
26°	715.3	713.7	720.1	724.9	734.7	740.7	746.6	739.3	747.5	744.0	735.6
26.5°	700.5	702.5	707.8	712.0	721.5	729.8	735.3	725.9	734.2	730.5	723.1
27°	686.2	690.8	695.8	700.6	708.8	718.7	722.8	713.8	721.3	719.1	710.3
27.5°	671.5	678.8	683.6	689.7	694.6	706.8	710.3	702.7	707.4	706.8	697.6
28°	653.8	663.6	671.7	678.7	680.4	692.9	697.3	690.5	693.0	693.0	684.3
28.5°	635.5	649.1	659.1	665.5	665.2	679.7	684.7	677.3	677.5	680.2	671.5
29°	617.7	634.6	646.7	652.5	649.8	665.9	672.1	664.7	661.8	666.1	658.5
29.5°	600.1	617.8	633.6	639.7	633.8	651.4	659.6	651.0	645.2	651.4	645.7
30°	582.4	600.2	620.5	626.1	617.0	636.4	647.4	636.7	628.6	636.5	632.7
30.5°	564.7	582.5	606.9	611.7	599.2	620.6	634.9	622.2	611.0	620.9	620.2
31°	547.0	565.1	594.1	596.9	581.4	605.1	621.8	607.1	592.4	605.3	607.9
31.5°	529.7	547.8	581.4	581.9	563.1	588.8	608.7	591.8	574.0	588.7	595.5
32°	512.6	531.0	570.1	566.4	544.7	572.2	595.4	575.6	555.6	572.1	582.6
32.5°	495.2	513.9	558.5	550.3	525.9	555.1	583.6	559.1	536.6	554.9	568.9
33°	477.3	497.1	547.1	534.0	508.0	537.2	572.0	542.3	518.3	537.6	556.2
33.5°	459.6	480.7	535.3	517.1	489.6	519.5	560.4	525.1	499.2	519.5	544.0
34°	441.9	464.1	523.0	500.0	472.2	501.8	548.0	507.4	481.6	501.0	531.6
34.5°	423.6	447.3	510.1	482.7	454.8	484.2	534.6	489.6	463.7	483.2	519.2
35°	405.3	430.4	498.7	465.5	438.4	466.9	523.3	472.7	446.8	466.4	508.1
35.5°	387.2	413.2	485.6	448.2	421.5	450.0	512.2	455.3	428.8	448.6	496.9
36°	368.7	396.2	470.1	431.3	405.0	433.4	498.6	438.5	412.0	431.7	483.3
36.5°	352.5	378.9	454.8	415.0	388.7	417.1	485.2	421.9	395.2	414.6	468.7
37°	336.2	362.8	440.0	398.9	371.9	401.1	472.4	405.4	378.8	399.2	455.5
37.5°	319.9	346.8	424.2	382.9	355.0	385.3	458.1	389.6	361.7	382.8	440.2
38°	303.6	330.7	408.4	366.2	338.5	369.8	443.8	373.9	344.4	367.4	424.3
38.5°	288.0	314.5	392.8	351.5	322.0	354.1	429.7	358.6	327.7	351.8	408.0
39°	272.8	298.6	377.3	336.7	305.8	339.4	414.1	343.2	311.9	336.5	391.5
39.5°	257.4	283.7	361.8	322.0	289.9	323.7	398.6	327.6	295.5	321.0	374.6
40°	242.5	269.2	346.4	307.3	274.3	308.2	383.1	312.5	279.7	305.9	358.3
40.5°	227.4	254.5	330.9	292.6	259.3	292.9	367.2	297.5	264.2	290.8	341.9
41°	212.8	240.7	315.5	278.1	244.7	278.4	351.0	282.5	249.8	276.1	325.9
41.5°	198.5	226.6	300.0	263.9	230.5	263.7	334.5	267.8	235.1	261.2	310.2
42°	184.6	213.1	284.6	249.6	216.2	249.7	318.3	253.7	221.2	247.3	294.8
42.5°	171.3	199.9	269.5	236.4	202.9	235.6	302.6	240.1	207.3	233.8	279.6
43°	158.7	186.7	254.2	223.4	189.2	223.0	287.1	226.8	193.4	220.4	265.2
43.5°	146.6	173.6	239.1	210.7	175.9	209.5	272.2	213.9	180.3	207.4	250.9



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	113.2	138.6	197.6	174.9	138.5	172.7	230.1	177.3	142.8	171.2	210.2
45.5°	102.9	127.6	185.0	163.6	127.1	160.8	216.8	165.8	131.3	159.8	197.5
46°	93.2	117.7	172.6	152.3	116.2	149.4	204.2	154.7	120.3	148.6	184.8
46.5°	84.0	108.1	161.1	141.5	106.0	138.4	191.8	143.5	109.8	137.7	172.5
47°	75.2	98.4	149.8	130.9	96.9	127.9	180.1	132.9	100.9	127.4	160.8
47.5°	67.1	89.4	139.0	120.9	87.8	117.4	168.2	123.0	92.0	117.5	149.5
48°	59.7	80.8	128.5	111.4	78.7	107.9	157.1	113.0	83.1	108.0	138.7
48.5°	52.8	72.7	118.5	102.2	69.7	99.5	146.0	103.8	74.3	99.8	128.5
49°	46.7	65.0	108.9	93.7	62.0	91.0	135.6	95.6	65.4	91.6	118.7
49.5°	41.1	58.0	99.8	85.7	54.9	82.6	125.2	87.4	58.1	83.5	109.2
50°	36.2	51.6	90.8	77.9	48.2	74.2	115.4	79.3	51.3	75.3	101.1
50.5°	32.4	45.6	82.8	70.0	42.1	65.8	106.1	71.1	45.1	67.1	93.1
51°	28.7	40.1	74.9	63.0	36.6	58.8	97.9	63.7	39.5	60.5	85.1
51.5°	25.0	35.3	67.8	56.3	31.5	52.4	89.6	57.0	34.2	54.1	77.0
52°	21.2	31.7	60.9	50.0	26.9	46.5	81.3	50.6	29.2	48.1	69.0
52.5°	18.3	28.1	54.8	44.1	22.7	40.7	73.0	44.8	24.8	42.4	62.3
53°	15.6	24.3	48.6	38.5	19.0	35.4	66.0	39.1	20.8	37.1	55.9
53.5°	13.1	20.8	43.5	34.2	15.5	30.7	59.5	34.0	17.2	32.1	50.1
54°	10.7	18.0	38.3	29.8	13.0	26.2	53.0	29.1	14.4	27.6	44.6
54.5°	8.2	15.4	34.4	25.6	10.4	22.2	47.0	24.9	11.6	23.6	39.5
55°	6.0	13.1	30.7	21.2	7.8	18.6	41.6	20.8	8.8	19.8	34.8
55.5°	4.4	10.7	26.8	17.0	5.3	15.1	36.5	17.2	6.0	16.4	30.6
56°	3.9	8.3	23.0	13.8	2.7	12.6	31.7	14.4	3.2	13.7	26.7
56.5°	3.5	6.2	19.2	10.9	2.5	10.0	27.2	11.7	2.3	11.0	23.1
57°	3.1	4.4	16.2	8.3	2.4	7.6	23.3	9.0	2.2	8.4	19.9
57.5°	2.7	3.8	13.8	5.7	2.3	5.1	19.7	6.3	2.1	5.7	17.1
58°	2.3	3.4	11.6	3.7	2.2	2.5	16.5	3.6	2.0	3.0	14.6
58.5°	2.2	3.0	9.7	3.3	2.1	2.2	13.8	2.2	1.9	2.2	12.3
59°	2.1	2.6	8.1	2.9	2.0	2.1	12.0	2.0	1.8	2.0	10.9
59.5°	2.1	2.1	6.7	2.5	1.9	2.0	10.3	1.9	1.7	2.0	9.4
60°	2.0	2.0	5.7	2.0	1.9	1.9	8.6	1.8	1.7	1.9	7.9
60.5°	1.9	2.0	4.8	2.0	1.8	1.9	6.8	1.8	1.6	1.8	6.4
61°	1.8	1.9	3.9	1.9	1.7	1.8	5.1	1.7	1.6	1.7	5.0
61.5°	1.8	1.8	3.4	1.8	1.7	1.7	4.1	1.6	1.5	1.7	4.0
62°	1.7	1.8	2.9	1.7	1.6	1.7	3.4	1.6	1.3	1.6	3.4
62.5°	1.6	1.7	2.4	1.7	1.6	1.6	2.8	1.5	1.3	1.6	2.8
63°	1.6	1.6	1.9	1.6	1.5	1.5	2.3	1.5	1.2	1.5	2.3
63.5°	1.5	1.6	1.7	1.6	1.3	1.5	1.9	1.3	1.2	1.3	2.0
64°	1.5	1.5	1.6	1.5	1.3	1.3	1.6	1.3	1.2	1.3	1.7
64.5°	1.3	1.5	1.5	1.5	1.2	1.3	1.5	1.2	1.1	1.2	1.5
65°	1.3	1.3	1.5	1.3	1.2	1.2	1.3	1.2	1.1	1.2	1.5
65.5°	1.2	1.3	1.3	1.3	1.2	1.2	1.2	1.1	1.0	1.2	1.3
66°	1.2	1.2	1.2	1.2	1.1	1.1	1.2	1.1	1.0	1.1	1.2



TEST NUMBER: P775692

CATALOG NUMBER: HCDJBL510CSD-HCD4TSQC-1000lm-3500K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	1.0	1.1	1.1	1.1	1.0	1.0	1.1	1.0	0.9	1.0	1.1
68°	1.0	1.0	1.1	1.0	0.9	1.0	1.0	0.9	0.8	1.0	1.0
68.5°	0.9	1.0	1.0	1.0	0.9	0.9	1.0	0.9	0.8	0.9	1.0
69°	0.9	0.9	1.0	0.9	0.9	0.9	0.9	0.8	0.8	0.9	1.0
69.5°	0.9	0.9	0.9	0.9	0.8	0.9	0.9	0.8	0.7	0.8	0.9
70°	0.8	0.9	0.9	0.9	0.8	0.8	0.9	0.8	0.7	0.8	0.9
70.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.8	0.8
71°	0.7	0.8	0.8	0.8	0.7	0.8	0.8	0.7	0.7	0.7	0.8
71.5°	0.7	0.8	0.8	0.8	0.7	0.7	0.7	0.7	0.6	0.7	0.8
72°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.6	0.7	0.7
72.5°	0.6	0.7	0.7	0.7	0.6	0.7	0.7	0.6	0.6	0.6	0.7
73°	0.6	0.6	0.7	0.7	0.6	0.6	0.6	0.6	0.5	0.6	0.7
73.5°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.6	0.6
74°	0.5	0.6	0.6	0.6	0.5	0.6	0.6	0.5	0.5	0.6	0.6
74.5°	0.5	0.5	0.6	0.6	0.5	0.5	0.6	0.5	0.5	0.5	0.6
75°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.5	0.5
75.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.5	0.5
76°	0.4	0.5	0.5	0.5	0.4	0.5	0.5	0.4	0.4	0.4	0.5
76.5°	0.4	0.4	0.5	0.5	0.4	0.4	0.5	0.4	0.4	0.4	0.5
77°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.4	0.4
77.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.4	0.4
78°	0.3	0.3	0.4	0.4	0.3	0.4	0.4	0.3	0.3	0.3	0.4
78.5°	0.3	0.3	0.4	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.4
79°	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.3
79.5°	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.3
80°	0.2	0.2	0.3	0.3	0.2	0.3	0.3	0.2	0.2	0.2	0.3
80.5°	0.2	0.2	0.3	0.3	0.2	0.3	0.3	0.2	0.2	0.2	0.3
81°	0.2	0.2	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2
81.5°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2
82°	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2
82.5°	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2
83°	0.1	0.1	0.2	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.2
83.5°	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1
84°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
84.5°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1
85°	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1
85.5°	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1
86°	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1
86.5°	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.1
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: P775692
CATALOG NUMBER: HCDJBL510CSD-HCD4TSQC-1000lm-3500K

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: P775692

CATALOG NUMBER: HCDJBL510CSD-HCD4TSQC-1000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	1114.9	1114.9	1114.9	1114.9	1114.9	1114.9
0.5°	1114.7	1114.7	1114.1	1113.5	1114.2	1114.7
1°	1114.3	1114.2	1113.3	1112.4	1113.4	1113.6
1.5°	1113.6	1113.5	1112.3	1111.2	1112.0	1112.4
2°	1112.6	1112.3	1111.0	1109.4	1110.6	1110.7
2.5°	1111.2	1110.8	1109.1	1107.6	1108.7	1108.7
3°	1109.5	1109.0	1106.9	1105.1	1106.7	1106.7
3.5°	1107.7	1106.8	1104.5	1102.7	1104.4	1104.2
4°	1105.4	1104.5	1101.9	1099.7	1101.7	1101.5
4.5°	1102.7	1101.5	1098.7	1096.7	1098.6	1098.2
5°	1099.8	1098.3	1095.4	1093.0	1095.3	1094.6
5.5°	1096.4	1094.8	1091.6	1089.2	1091.4	1090.6
6°	1092.6	1090.9	1087.5	1085.3	1087.2	1086.1
6.5°	1088.4	1086.4	1083.0	1080.5	1082.6	1081.4
7°	1083.8	1081.5	1077.9	1075.4	1077.6	1076.2
7.5°	1078.6	1076.4	1072.7	1070.1	1072.4	1070.8
8°	1073.4	1070.6	1066.7	1064.3	1066.7	1064.9
8.5°	1067.5	1064.3	1060.5	1058.2	1060.9	1058.5
9°	1061.1	1057.4	1053.9	1051.8	1054.3	1051.4
9.5°	1054.4	1050.4	1046.8	1045.1	1047.5	1044.4
10°	1047.4	1043.1	1039.3	1037.3	1040.3	1037.6
10.5°	1040.1	1035.3	1031.4	1030.5	1033.2	1030.2
11°	1032.4	1027.7	1023.6	1022.4	1025.8	1022.8
11.5°	1024.8	1019.4	1015.4	1013.8	1018.1	1015.1
12°	1016.5	1011.2	1007.0	1004.7	1010.2	1007.8
12.5°	1008.4	1003.2	998.4	995.9	1002.2	1000.1
13°	1000.1	995.0	989.6	986.4	994.2	992.0
13.5°	991.7	987.0	981.2	976.9	985.9	983.9
14°	983.2	978.7	972.2	966.9	977.3	975.8
14.5°	974.6	970.5	963.7	957.1	968.8	967.4
15°	966.1	961.6	954.7	947.0	960.0	959.0
15.5°	957.4	952.8	945.5	936.9	950.9	950.5
16°	948.4	944.0	936.1	926.8	941.9	941.3
16.5°	939.2	934.8	926.9	916.7	932.7	932.1
17°	929.6	925.2	917.2	906.5	923.0	922.6
17.5°	920.2	915.7	907.4	896.4	913.4	912.6
18°	910.3	905.2	897.1	886.2	903.4	901.7
18.5°	900.3	894.4	886.9	875.9	893.1	890.4
19°	889.9	883.9	876.1	865.6	882.1	878.9
19.5°	879.0	872.9	865.1	855.3	870.7	868.0
20°	868.1	861.5	854.1	844.3	859.1	856.7
20.5°	856.7	850.4	842.5	833.7	847.5	845.7
21°	845.4	838.9	831.1	822.9	835.5	835.0



TEST NUMBER: P775692

CATALOG NUMBER: HCDJBL510CSD-HCD4TSQC-1000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	810.7	804.6	795.4	790.3	800.0	801.3
23°	798.5	793.2	783.3	779.1	788.2	788.2
23.5°	786.6	781.5	771.1	767.7	776.7	774.5
24°	774.6	768.3	759.2	755.8	764.5	761.3
24.5°	762.5	754.5	747.0	743.3	751.6	749.9
25°	750.6	741.4	734.3	730.8	737.9	738.5
25.5°	738.6	730.1	721.0	718.4	724.1	727.2
26°	724.7	719.0	707.0	705.8	710.1	715.3
26.5°	710.7	705.2	693.9	692.6	698.0	700.5
27°	697.7	690.3	682.1	680.0	686.2	686.2
27.5°	685.6	676.8	670.3	666.7	674.7	671.5
28°	673.9	659.6	656.4	653.8	662.6	653.8
28.5°	660.5	642.0	641.3	641.0	648.9	635.5
29°	644.9	624.1	627.8	628.7	634.1	617.7
29.5°	631.3	606.5	611.3	616.3	620.4	600.1
30°	614.5	589.0	594.0	603.8	604.3	582.4
30.5°	598.0	571.8	576.3	591.0	587.8	564.7
31°	580.2	554.5	559.1	577.8	570.7	547.0
31.5°	563.1	537.2	542.1	563.4	553.4	529.7
32°	546.4	520.3	525.4	549.3	536.4	512.6
32.5°	530.1	503.5	508.4	536.0	519.6	495.2
33°	512.9	486.4	492.5	523.8	503.5	477.3
33.5°	497.0	468.8	476.4	513.5	487.2	459.6
34°	480.5	450.9	460.4	503.4	471.0	441.9
34.5°	465.0	432.9	443.7	490.2	454.5	423.6
35°	448.2	414.8	427.8	477.9	438.7	405.3
35.5°	432.2	397.1	411.0	465.4	422.4	387.2
36°	415.5	379.5	394.5	449.2	406.4	368.7
36.5°	399.6	363.0	377.7	434.0	390.0	352.5
37°	382.4	346.6	361.9	417.9	374.1	336.2
37.5°	365.7	330.2	346.0	400.6	358.4	319.9
38°	349.2	313.7	330.3	383.2	342.5	303.6
38.5°	333.1	297.4	314.5	365.6	326.8	288.0
39°	317.3	282.3	298.8	350.1	311.0	272.8
39.5°	302.2	267.4	284.0	334.6	295.3	257.4
40°	287.2	252.2	270.1	319.1	281.0	242.5
40.5°	272.9	236.9	255.9	303.7	266.7	227.4
41°	259.0	222.8	242.3	289.1	253.0	212.8
41.5°	245.3	207.5	228.8	274.9	239.1	198.5
42°	231.9	194.3	215.4	261.0	226.0	184.6
42.5°	218.4	180.8	202.2	247.6	212.9	171.3
43°	205.2	168.3	189.2	234.2	200.5	158.7
43.5°	192.5	155.3	176.6	221.1	187.8	146.6



TEST NUMBER: P775692

CATALOG NUMBER: HCDJBL510CSD-HCD4TSQC-1000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	156.2	121.6	141.9	183.2	152.0	113.2
45.5°	145.0	110.9	131.4	171.5	141.1	102.9
46°	134.4	101.1	121.3	159.9	130.4	93.2
46.5°	124.1	91.6	111.6	149.2	120.5	84.0
47°	114.3	82.5	102.3	138.7	110.8	75.2
47.5°	105.0	73.8	93.0	128.9	101.2	67.1
48°	96.5	66.3	84.4	119.3	92.5	59.7
48.5°	88.0	59.0	76.4	110.5	83.9	52.8
49°	79.5	52.4	68.7	102.1	75.8	46.7
49.5°	71.1	46.5	61.6	94.2	68.0	41.1
50°	63.7	41.0	54.9	86.2	61.3	36.2
50.5°	56.9	36.1	48.8	78.9	54.8	32.4
51°	50.9	32.4	43.3	71.8	48.6	28.7
51.5°	45.1	28.8	38.4	65.4	42.8	25.0
52°	39.7	25.3	34.8	59.3	37.9	21.2
52.5°	34.9	21.7	31.2	53.4	34.2	18.3
53°	30.7	18.8	27.6	47.8	30.5	15.6
53.5°	26.9	16.1	23.9	42.8	26.7	13.1
54°	23.5	13.5	20.3	38.1	23.0	10.7
54.5°	20.5	11.1	17.7	34.4	19.3	8.2
55°	17.8	8.7	15.1	30.8	16.6	6.0
55.5°	15.2	6.4	12.7	27.0	14.2	4.4
56°	13.3	4.8	10.3	23.4	11.8	3.9
56.5°	11.3	3.4	8.1	19.7	9.6	3.5
57°	9.3	3.2	5.9	16.9	7.6	3.1
57.5°	7.4	3.0	4.2	14.5	5.6	2.7
58°	5.4	2.9	3.8	12.3	3.9	2.3
58.5°	3.4	2.7	3.4	10.4	3.5	2.2
59°	2.7	2.6	3.1	8.7	3.1	2.1
59.5°	2.5	2.5	2.7	7.3	2.6	2.1
60°	2.4	2.3	2.4	6.0	2.2	2.0
60.5°	2.3	2.2	2.3	5.0	2.1	1.9
61°	2.2	2.1	2.2	4.1	2.0	1.8
61.5°	2.1	2.0	2.1	3.6	1.9	1.8
62°	2.0	2.0	2.0	3.1	1.8	1.7
62.5°	1.9	1.9	1.9	2.6	1.8	1.6
63°	1.8	1.8	1.8	2.1	1.7	1.6
63.5°	1.7	1.7	1.7	1.8	1.6	1.5
64°	1.7	1.6	1.7	1.6	1.6	1.5
64.5°	1.6	1.6	1.6	1.6	1.5	1.3
65°	1.5	1.5	1.5	1.5	1.5	1.3
65.5°	1.5	1.5	1.5	1.5	1.3	1.2
66°	1.3	1.3	1.3	1.3	1.3	1.2



TEST NUMBER: P775692

CATALOG NUMBER: HCDJBL510CSD-HCD4TSQC-1000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	1.2	1.1	1.2	1.1	1.1	1.0
68°	1.1	1.1	1.1	1.1	1.1	1.0
68.5°	1.1	1.0	1.1	1.0	1.0	0.9
69°	1.0	1.0	1.0	1.0	1.0	0.9
69.5°	1.0	1.0	1.0	1.0	0.9	0.9
70°	0.9	0.9	0.9	0.9	0.9	0.8
70.5°	0.9	0.9	0.9	0.9	0.9	0.8
71°	0.8	0.8	0.8	0.8	0.8	0.7
71.5°	0.8	0.8	0.8	0.8	0.8	0.7
72°	0.8	0.8	0.8	0.8	0.7	0.7
72.5°	0.7	0.7	0.7	0.7	0.7	0.6
73°	0.7	0.7	0.7	0.7	0.7	0.6
73.5°	0.7	0.7	0.7	0.7	0.6	0.6
74°	0.6	0.6	0.6	0.6	0.6	0.5
74.5°	0.6	0.6	0.6	0.6	0.6	0.5
75°	0.6	0.6	0.6	0.6	0.5	0.5
75.5°	0.5	0.5	0.5	0.5	0.5	0.5
76°	0.5	0.5	0.5	0.5	0.5	0.4
76.5°	0.5	0.5	0.5	0.5	0.5	0.4
77°	0.5	0.4	0.5	0.5	0.4	0.4
77.5°	0.4	0.4	0.4	0.4	0.4	0.4
78°	0.4	0.4	0.4	0.4	0.4	0.3
78.5°	0.4	0.4	0.4	0.4	0.3	0.3
79°	0.3	0.3	0.4	0.4	0.3	0.3
79.5°	0.3	0.3	0.3	0.3	0.3	0.3
80°	0.3	0.3	0.3	0.3	0.3	0.2
80.5°	0.3	0.3	0.3	0.3	0.2	0.2
81°	0.3	0.3	0.3	0.3	0.2	0.2
81.5°	0.2	0.2	0.2	0.2	0.2	0.2
82°	0.2	0.2	0.2	0.2	0.2	0.2
82.5°	0.2	0.2	0.2	0.2	0.1	0.1
83°	0.2	0.2	0.2	0.2	0.1	0.1
83.5°	0.2	0.2	0.2	0.2	0.1	0.1
84°	0.1	0.1	0.1	0.1	0.1	0.1
84.5°	0.1	0.1	0.1	0.1	0.1	0.1
85°	0.1	0.1	0.1	0.1	0.0	0.1
85.5°	0.1	0.1	0.1	0.1	0.0	0.0
86°	0.1	0.1	0.1	0.1	0.0	0.0
86.5°	0.1	0.1	0.1	0.1	0.0	0.0
87°	0.0	0.1	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: P775692

CATALOG NUMBER: HCDJBL510CSD-HCD4TSQC-1000lm-3500K

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

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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°	824.4	824.3	825.0	830.1	833.7	845.5	846.6	844.2	848.2	848.6	836.8
22°	813.3	812.6	814.4	818.9	823.6	834.0	835.9	833.2	837.3	837.1	826.2



44°	134.9	161.5	224.6	198.2	163.1	197.1	257.4	201.1	167.5	194.8	237.3
44.5°	123.6	149.8	210.6	186.6	150.4	184.6	243.4	189.1	155.1	182.9	223.5



66.5°	1.1	1.2	1.2	1.2	1.1	1.1	1.1	1.0	1.0	1.1	1.2
67°	1.1	1.1	1.1	1.1	1.0	1.1	1.1	1.0	0.9	1.0	1.1



89°	0.0	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	0.0

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21.5°	834.0	827.1	819.3	812.0	823.8	824.4
22°	822.3	815.9	807.5	801.3	812.0	813.3



44°	180.1	143.8	164.6	208.0	175.2	134.9
44.5°	167.7	132.6	153.2	195.6	163.2	123.6



66.5°	1.3	1.2	1.3	1.2	1.2	1.1
67°	1.2	1.2	1.2	1.2	1.2	1.1

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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)