

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: P775645

Luminaire Tested: HCDJBL510CSD-HCD42TRH-1000lm-2700K

Issue Date: 2/13/2024

Test Information

Test Method: LM-79-2019
Report Number: P775645
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2312156B050)
Test Lab:
Issue Date: 2/13/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBL510CSD-HCD42TRH-1000lm-2700K
Description: 4 INCH ROUND NARROW HAZE TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 2700K CCT
Ballast/Driver: -

Summary

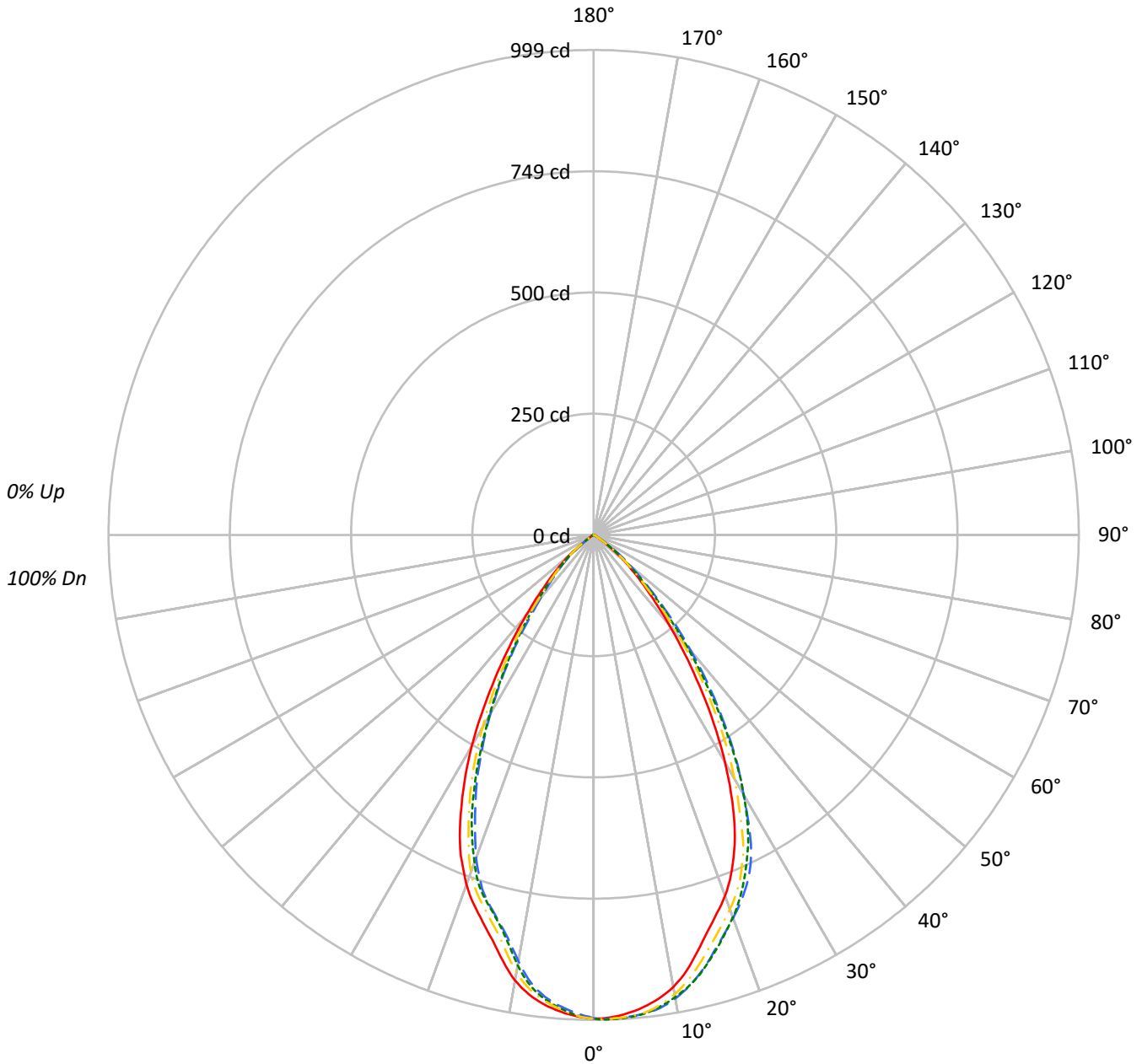
Lumens per Lamp: N/A
Luminaire Lumens: 1005.0 lumens
Efficiency: N/A
Efficacy: 100.5 lumens/watt
Spacing Criteria (0/90/45): 0.93 / 0.93 / 0.92
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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: P775645
CATALOG NUMBER: HCDJBL510CSD-HCD42TRH-1000lm-2700K

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					100			
1	113	110	108	105	111	108	106	104	104	102	100	100	99	97	97	96	95	93					93			
2	107	102	98	94	105	100	96	93	97	94	91	94	91	89	91	89	87	86					86			
3	101	95	89	85	99	93	88	84	90	86	83	88	85	82	86	83	80	79					79			
4	96	88	82	77	94	87	81	77	84	80	76	82	78	75	80	77	74	73					73			
5	90	82	75	71	89	81	75	70	79	74	70	77	73	69	76	72	69	67					67			
6	86	76	70	65	84	75	69	65	74	68	64	72	68	64	71	67	64	62					62			
7	81	71	65	60	80	70	64	60	69	64	60	68	63	59	67	62	59	58					58			
8	77	67	60	56	75	66	60	56	65	59	56	64	59	55	63	58	55	54					54			
9	73	63	56	52	72	62	56	52	61	56	52	60	55	52	59	55	51	50					50			
10	69	59	53	49	68	58	53	49	58	52	48	57	52	48	56	51	48	47					47			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	125346	125346	125346	125346
5°	124259	125636	123665	122604
10°	120788	123574	119076	115025
15°	112922	118772	110042	104779
20°	105949	112257	102574	96173
25°	95508	103423	90328	81053
30°	78588	89807	72848	62371
35°	58427	69719	52896	44969
40°	39921	48612	35666	30590
45°	25647	30381	22728	19453
50°	15428	17582	13235	10710
55°	5880	6955	4169	3247
60°	1988	2341	1661	1334
65°	953	1012	774	625
70°	442	515	368	331
75°	243	292	194	194
80°	145	145	72	72
85°	0	144	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°

Vertical Angle: 45°

Luminance: 33798 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	92.3	9.2
10°-20°	240.5	23.9
20°-30°	301.8	30.0
30°-40°	230.4	22.9
40°-50°	109.8	10.9
50°-60°	26.3	2.6
60°-70°	3.3	0.3
70°-80°	0.6	0.1
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°	634.6	63.1
0°-40°	865.0	86.1
0°-60°	1001.1	99.6
0°-90°	1005.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1005.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	996	996	996	996	996	
5°	984	994	979	970	984	93
15°	867	912	845	804	867	244
25°	688	745	650	584	688	311
35°	380	454	344	293	380	238
45°	144	171	128	109	144	114
55°	27	32	19	15	27	29
65°	3	3	3	2	3	3
75°	0	1	0	0	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°	996.0	996.0	996.0	996.0	996.0	996.0	996.0	996.0	996.0	996.0	996.0
0.5°	996.3	996.1	996.0	995.8	997.9	997.7	997.3	996.6	995.5	993.8	993.0
1°	996.2	996.7	997.0	996.8	998.4	998.3	997.5	996.4	994.6	992.2	991.2
1.5°	995.6	996.7	997.3	997.5	998.6	998.4	997.4	996.0	993.7	990.1	988.6
2°	994.6	996.6	997.5	997.9	998.5	998.4	997.2	995.4	992.1	987.9	985.9
2.5°	993.4	996.0	997.3	997.9	998.2	998.1	996.8	994.6	990.5	985.4	983.2
3°	991.8	995.1	996.8	997.8	997.9	997.8	996.2	993.6	988.6	982.8	980.2
3.5°	990.0	994.4	996.2	997.4	997.3	997.3	995.6	992.5	986.6	979.9	977.0
4°	988.0	993.2	995.4	997.0	996.6	996.8	995.0	991.2	984.2	977.0	973.6
4.5°	985.8	991.8	994.7	996.2	995.8	996.0	994.1	989.7	981.8	973.7	970.1
5°	983.6	990.3	993.9	995.5	994.5	995.0	993.0	987.8	978.9	970.2	966.0
5.5°	981.0	988.8	992.8	994.7	993.3	993.8	991.6	985.6	976.0	966.5	961.6
6°	978.1	987.0	991.7	993.7	991.4	992.2	989.8	983.3	972.7	962.4	956.9
6.5°	975.0	985.0	990.3	992.2	989.5	990.1	987.6	980.5	969.1	957.8	951.3
7°	971.8	982.8	988.6	990.6	987.2	987.8	985.1	977.4	965.1	952.7	945.2
7.5°	968.4	980.1	986.6	988.7	984.4	984.9	981.8	973.7	960.8	946.8	938.4
8°	964.4	977.0	984.1	986.4	981.4	981.7	978.4	969.8	956.1	940.5	930.5
8.5°	960.2	973.5	981.0	983.6	978.0	978.2	974.4	965.6	950.7	933.4	922.2
9°	955.5	969.7	977.6	980.4	974.7	974.1	970.2	961.0	945.0	925.6	912.7
9.5°	950.6	965.6	973.8	977.0	970.8	970.2	965.5	956.1	938.6	916.9	902.8
10°	945.2	961.0	969.6	973.2	967.0	965.6	960.6	950.5	931.8	907.5	891.6
10.5°	939.2	956.0	965.1	969.3	962.8	961.0	955.3	944.6	924.3	897.3	881.1
11°	932.9	950.9	960.1	965.0	958.4	956.0	949.6	938.0	915.8	887.2	870.2
11.5°	926.0	945.3	955.2	960.5	953.9	950.7	943.3	931.2	907.0	876.9	859.4
12°	918.6	939.3	949.7	956.0	948.8	945.2	936.9	924.0	897.7	866.6	849.7
12.5°	910.7	932.7	943.8	950.8	943.5	939.0	930.2	916.2	888.4	857.3	840.7
13°	902.1	925.8	937.6	945.6	938.1	932.9	922.9	908.0	878.9	848.4	832.3
13.5°	893.1	918.5	931.0	939.9	932.2	926.1	915.5	899.6	869.8	839.7	824.6
14°	884.4	911.1	924.3	934.1	925.9	919.2	907.9	891.0	860.8	831.5	816.9
14.5°	875.7	903.3	917.4	928.0	918.8	911.9	900.1	882.3	852.6	823.9	809.3
15°	866.7	894.9	910.3	921.2	911.6	904.6	892.1	874.1	844.6	816.1	801.8
15.5°	858.3	887.0	903.0	914.7	904.7	897.1	884.3	866.1	836.9	808.8	794.8
16°	850.1	879.0	894.9	907.4	897.3	889.9	877.2	858.3	829.1	801.4	787.6
16.5°	842.7	871.2	887.5	900.4	890.4	882.5	870.1	850.7	821.7	794.2	780.2
17°	835.0	863.4	880.6	893.1	883.0	875.5	863.1	843.0	814.3	786.9	772.4
17.5°	827.5	856.2	873.7	886.1	875.6	868.3	855.8	835.6	807.0	779.0	764.1
18°	820.1	849.1	866.8	879.1	868.2	860.9	848.5	828.4	799.8	770.6	753.1
18.5°	813.0	841.9	860.2	872.0	860.4	853.8	841.4	821.2	792.0	760.0	742.1
19°	806.0	835.1	853.6	865.0	853.0	846.5	834.4	814.2	783.7	749.5	731.1
19.5°	798.7	828.0	846.6	857.6	845.4	839.6	827.4	807.0	774.9	738.9	720.1
20°	791.1	821.2	839.8	850.5	838.2	832.3	820.3	799.5	765.9	728.3	708.3
20.5°	783.0	814.4	833.1	843.5	830.6	824.8	812.9	791.6	755.7	717.7	694.8
21°	774.1	807.5	826.3	836.2	822.2	817.3	805.5	783.1	745.5	704.5	679.9



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CATALOG NUMBER: HCDJBL510CSD-HCD42TRH-1000lm-2700K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
22.5°	744.7	784.1	804.6	813.5	796.0	791.4	780.7	754.5	714.9	663.1	638.5
23°	734.1	775.6	796.7	804.8	786.3	782.6	772.0	743.9	703.2	650.3	624.5
23.5°	722.9	766.6	788.8	796.2	776.1	772.4	760.9	733.3	690.7	637.6	611.3
24°	711.5	756.7	780.2	787.1	766.0	761.6	749.7	722.7	677.8	624.7	598.1
24.5°	700.0	746.3	771.1	777.0	755.4	750.7	738.6	712.7	664.6	612.4	584.8
25°	687.8	735.3	761.4	767.1	744.8	739.9	727.5	700.4	650.5	599.6	571.1
25.5°	674.9	723.8	750.5	756.1	734.1	729.0	716.3	687.8	635.9	586.0	557.0
26°	661.3	711.7	739.3	744.9	723.5	718.2	701.6	674.5	621.1	572.0	542.6
26.5°	647.1	698.9	726.4	733.6	712.8	705.4	686.5	660.2	606.5	557.3	528.0
27°	632.6	685.7	713.0	722.1	700.9	692.2	670.3	644.9	592.2	541.7	512.8
27.5°	617.9	671.7	698.1	710.6	688.3	678.7	654.6	629.7	577.1	526.2	498.0
28°	602.6	657.0	682.1	697.6	675.2	664.7	638.9	613.7	562.5	510.6	483.2
28.5°	587.3	641.0	666.2	684.6	660.9	650.0	623.9	596.9	547.6	495.2	468.8
29°	571.5	624.6	649.7	671.1	647.5	634.2	609.2	580.4	532.7	479.7	454.0
29.5°	556.5	607.9	633.6	657.0	632.4	618.8	594.6	564.4	517.2	465.0	439.6
30°	540.8	591.3	618.1	641.9	618.0	602.5	579.9	547.8	501.3	450.6	425.6
30.5°	524.7	574.7	603.3	626.3	603.0	586.0	565.2	531.7	485.6	436.0	411.5
31°	508.8	558.7	588.8	610.7	588.4	570.4	550.2	515.3	469.7	421.8	397.0
31.5°	492.6	542.6	574.2	593.8	572.4	554.5	534.5	499.5	453.5	407.2	382.4
32°	476.4	526.9	559.4	577.8	556.8	539.4	518.7	483.5	437.0	392.2	367.8
32.5°	460.3	511.0	544.1	561.3	539.7	523.8	502.6	467.7	420.4	377.0	353.4
33°	444.1	495.3	528.7	545.2	522.9	508.2	486.2	452.1	404.7	361.9	339.0
33.5°	428.4	479.3	512.2	529.3	505.4	492.9	470.0	436.6	388.7	346.7	324.5
34°	412.0	463.2	496.0	513.5	488.4	477.3	454.1	421.1	373.3	331.3	310.6
34.5°	396.2	446.9	479.6	497.6	471.1	461.3	438.4	405.8	358.5	316.9	297.0
35°	380.3	431.0	463.0	481.8	453.8	445.2	423.2	391.2	344.3	302.5	283.9
35.5°	364.7	415.3	447.1	465.9	437.0	429.0	408.3	376.5	329.7	288.8	270.6
36°	350.5	400.0	431.9	449.9	420.4	413.1	393.4	362.0	315.9	275.1	257.6
36.5°	336.2	385.1	417.0	433.4	403.2	397.1	378.1	348.0	302.1	262.2	245.1
37°	321.9	370.4	401.7	418.1	386.9	381.0	363.1	334.0	288.9	249.8	232.5
37.5°	307.7	354.3	387.0	401.7	370.8	365.6	347.5	320.5	275.8	237.6	220.8
38°	293.4	341.1	371.9	386.0	355.7	350.6	332.4	306.5	263.7	225.7	209.1
38.5°	279.9	327.8	356.3	369.6	339.5	335.4	317.7	292.8	250.9	214.0	198.1
39°	267.2	314.6	341.6	355.0	325.0	320.5	303.3	279.3	239.3	203.0	187.9
39.5°	254.9	301.4	326.9	339.8	310.5	305.3	289.3	266.4	227.9	192.6	178.7
40°	243.0	287.8	312.1	324.7	295.9	290.4	275.4	253.2	217.1	182.9	169.8
40.5°	231.0	274.7	297.4	309.6	281.3	275.9	262.3	240.5	206.1	173.7	161.3
41°	219.7	261.2	283.1	294.5	267.8	261.8	249.8	228.5	195.9	165.3	153.7
41.5°	208.9	248.5	269.9	280.3	254.0	247.7	237.3	217.1	186.2	157.1	146.8
42°	198.4	235.7	256.8	266.3	241.4	234.0	224.7	205.7	176.9	149.9	139.8
42.5°	188.4	223.6	244.0	252.7	228.5	221.1	212.6	195.1	167.7	142.5	133.1
43°	179.0	212.1	231.7	239.1	216.2	208.6	200.7	184.7	159.0	135.6	126.6
43.5°	169.5	200.9	219.3	226.1	204.2	196.9	189.1	174.8	150.8	128.9	120.2



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	144.1	169.8	183.7	189.9	170.7	164.5	157.0	147.4	127.7	110.0	102.5
45.5°	136.3	160.3	172.6	179.1	160.5	154.9	147.8	139.0	120.7	104.1	96.9
46°	128.5	151.1	162.0	168.5	150.4	145.8	138.9	131.1	113.9	98.3	91.9
46.5°	121.3	142.8	152.8	158.8	141.2	137.1	130.7	123.4	107.4	92.8	86.9
47°	114.4	134.6	143.9	149.3	132.2	128.7	122.8	116.0	100.9	87.6	81.8
47.5°	107.8	126.7	135.3	140.4	124.0	120.8	115.6	109.0	95.1	82.5	76.8
48°	101.4	119.2	127.2	132.0	116.2	113.4	108.6	102.4	89.6	77.3	71.8
48.5°	95.1	112.1	119.8	123.7	108.7	106.3	102.0	96.1	84.2	72.2	66.2
49°	89.3	105.2	112.6	116.4	101.9	99.6	95.7	90.5	78.7	66.3	60.0
49.5°	84.2	98.7	105.8	108.9	95.3	94.0	90.2	84.9	73.2	59.9	53.7
50°	78.8	92.6	99.2	102.3	89.8	88.4	84.7	79.4	67.6	53.6	47.4
50.5°	73.7	86.9	93.0	95.4	84.3	82.7	79.1	73.8	61.0	47.3	41.8
51°	68.3	81.3	87.2	89.5	78.7	77.1	73.6	68.2	54.4	41.4	36.4
51.5°	62.3	76.0	81.7	83.8	73.2	71.5	68.0	61.8	48.0	36.1	31.6
52°	55.9	70.5	76.1	78.3	67.6	65.8	61.5	55.2	42.0	31.6	27.7
52.5°	49.7	64.5	70.5	73.1	61.5	59.5	54.8	48.6	36.6	27.6	24.3
53°	43.5	57.9	64.4	67.3	54.9	52.8	48.2	42.5	31.9	24.3	21.4
53.5°	37.9	51.4	57.7	61.2	48.6	46.3	42.2	36.9	27.9	21.4	18.9
54°	34.2	45.0	50.8	54.4	42.3	40.4	36.5	32.2	24.5	19.0	16.8
54.5°	30.5	39.3	44.4	48.0	36.6	35.0	31.6	28.1	21.6	16.8	15.0
55°	26.8	34.0	38.7	41.5	31.7	30.3	27.5	24.6	19.0	15.0	13.4
55.5°	23.1	30.6	33.9	36.2	27.4	26.3	24.1	21.5	16.9	13.4	12.0
56°	19.5	27.1	30.3	32.6	23.8	22.8	21.1	19.0	15.0	12.0	10.8
56.5°	17.2	23.6	26.8	29.0	20.8	20.1	18.6	16.8	13.4	10.8	9.7
57°	15.2	20.2	23.3	25.4	18.3	17.7	16.4	14.9	12.0	9.8	8.9
57.5°	13.6	17.9	19.8	21.9	16.1	15.6	14.6	13.3	10.8	9.0	8.2
58°	12.1	15.9	17.5	18.3	14.3	13.9	13.0	11.9	9.7	8.2	7.4
58.5°	10.9	14.1	15.5	16.1	12.7	12.4	11.6	10.6	8.9	7.4	6.7
59°	9.8	12.6	13.8	14.3	11.3	11.0	10.4	9.6	8.2	6.7	5.9
59.5°	8.8	11.3	12.3	12.7	10.1	9.9	9.6	8.8	7.4	5.9	5.4
60°	7.9	10.1	11.0	11.3	9.3	9.1	8.8	8.1	6.6	5.4	4.9
60.5°	7.2	9.1	9.9	10.1	8.5	8.3	8.0	7.3	5.9	4.9	4.4
61°	6.5	8.2	8.9	9.1	7.7	7.5	7.2	6.5	5.3	4.4	4.1
61.5°	5.9	7.4	8.0	8.2	6.9	6.7	6.4	5.8	4.8	4.1	3.7
62°	5.3	6.7	7.2	7.4	6.0	5.9	5.6	5.2	4.4	3.7	3.4
62.5°	4.9	6.1	6.6	6.7	5.5	5.4	5.1	4.8	4.0	3.4	3.1
63°	4.4	5.5	6.0	6.1	5.0	4.9	4.6	4.3	3.7	3.1	2.8
63.5°	4.0	5.0	5.4	5.5	4.5	4.4	4.2	3.9	3.3	2.8	2.6
64°	3.7	4.6	4.9	5.0	4.1	4.0	3.8	3.6	3.1	2.6	2.4
64.5°	3.4	4.2	4.5	4.5	3.7	3.7	3.5	3.3	2.8	2.4	2.2
65°	3.2	3.8	4.1	4.1	3.4	3.4	3.2	3.0	2.6	2.2	2.0
65.5°	2.9	3.5	3.7	3.8	3.1	3.1	2.9	2.7	2.4	2.0	1.8
66°	2.6	3.2	3.4	3.5	2.9	2.8	2.7	2.5	2.1	1.8	1.7



TEST NUMBER: P775645

CATALOG NUMBER: HCDJBL510CSD-HCD42TRH-1000lm-2700K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	2.0	2.4	2.6	2.6	2.2	2.2	2.0	1.9	1.6	1.4	1.3
68°	1.8	2.2	2.4	2.4	2.0	2.0	1.9	1.8	1.5	1.3	1.2
68.5°	1.6	2.0	2.2	2.2	1.8	1.8	1.7	1.6	1.4	1.2	1.1
69°	1.5	1.9	2.0	2.0	1.7	1.7	1.6	1.5	1.3	1.1	1.0
69.5°	1.4	1.7	1.8	1.9	1.6	1.5	1.4	1.4	1.1	1.0	0.9
70°	1.2	1.6	1.7	1.7	1.4	1.4	1.3	1.2	1.0	0.9	0.8
70.5°	1.1	1.4	1.5	1.6	1.3	1.3	1.2	1.1	1.0	0.8	0.8
71°	1.0	1.3	1.4	1.4	1.2	1.2	1.1	1.0	0.9	0.8	0.7
71.5°	0.9	1.2	1.3	1.3	1.1	1.1	1.0	1.0	0.8	0.7	0.7
72°	0.9	1.1	1.2	1.2	1.0	1.0	0.9	0.9	0.7	0.6	0.6
72.5°	0.8	1.0	1.1	1.1	0.9	0.9	0.9	0.8	0.7	0.6	0.5
73°	0.7	0.9	1.0	1.0	0.9	0.8	0.8	0.7	0.6	0.5	0.5
73.5°	0.7	0.8	0.9	0.9	0.8	0.8	0.7	0.7	0.5	0.5	0.5
74°	0.6	0.8	0.8	0.9	0.7	0.7	0.7	0.6	0.5	0.4	0.4
74.5°	0.5	0.7	0.8	0.8	0.7	0.6	0.6	0.6	0.5	0.4	0.4
75°	0.5	0.6	0.7	0.7	0.6	0.6	0.6	0.5	0.4	0.3	0.3
75.5°	0.4	0.6	0.6	0.7	0.6	0.5	0.5	0.5	0.4	0.3	0.3
76°	0.4	0.5	0.6	0.6	0.5	0.5	0.5	0.4	0.3	0.3	0.3
76.5°	0.4	0.5	0.5	0.6	0.5	0.5	0.4	0.4	0.3	0.2	0.2
77°	0.3	0.4	0.5	0.5	0.4	0.4	0.4	0.3	0.3	0.2	0.2
77.5°	0.3	0.4	0.4	0.5	0.4	0.4	0.3	0.3	0.2	0.2	0.2
78°	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.2
78.5°	0.2	0.3	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2
79°	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.1	0.1
79.5°	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.1
80°	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1
80.5°	0.1	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1
81°	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1
81.5°	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1
82°	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.0	0.1
82.5°	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0
83°	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0
83.5°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0
84°	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0
84.5°	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0
85.5°	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
86°	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
86.5°	0.0	0.0	0.0	0.1	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: P775645
CATALOG NUMBER: HCDJBL510CSD-HCD42TRH-1000lm-2700K

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: P775645

CATALOG NUMBER: HCDJBL510CSD-HCD42TRH-1000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	996.0	996.0	996.0	996.0	996.0	996.0
0.5°	992.4	995.9	996.0	995.9	995.8	996.3
1°	990.1	994.4	994.6	994.7	994.8	996.2
1.5°	987.5	992.5	992.6	993.0	993.6	995.6
2°	984.7	990.1	990.5	990.9	991.8	994.6
2.5°	981.6	987.5	987.8	988.5	989.6	993.4
3°	978.2	984.5	985.0	985.8	987.3	991.8
3.5°	974.8	981.4	981.9	982.9	984.8	990.0
4°	971.0	978.0	978.5	979.8	982.0	988.0
4.5°	967.2	974.4	974.8	976.4	979.0	985.8
5°	962.6	970.5	971.2	972.9	976.0	983.6
5.5°	957.7	966.3	967.1	969.2	972.7	981.0
6°	952.4	961.8	962.8	965.2	969.1	978.1
6.5°	945.8	956.7	957.7	960.8	965.2	975.0
7°	939.1	950.9	952.4	956.1	961.1	971.8
7.5°	930.8	944.7	946.3	951.0	956.8	968.4
8°	922.6	937.2	939.8	945.2	951.8	964.4
8.5°	912.8	929.2	932.3	938.7	946.3	960.2
9°	902.7	920.3	924.0	931.6	940.5	955.5
9.5°	891.5	910.6	914.7	923.7	934.1	950.6
10°	880.4	900.1	904.9	914.9	927.1	945.2
10.5°	869.3	888.8	894.3	905.4	919.0	939.2
11°	858.5	877.5	883.5	895.3	910.5	932.9
11.5°	847.7	866.1	871.9	884.7	901.5	926.0
12°	839.1	855.3	861.4	874.0	891.6	918.6
12.5°	830.6	845.3	850.8	863.3	881.4	910.7
13°	822.6	836.0	841.7	853.8	871.7	902.1
13.5°	815.0	827.4	833.2	844.4	862.2	893.1
14°	807.2	819.3	825.1	836.1	853.0	884.4
14.5°	800.6	811.9	817.7	828.3	844.4	875.7
15°	793.1	804.2	810.2	820.5	836.2	866.7
15.5°	786.5	797.1	803.0	812.9	828.4	858.3
16°	779.8	790.4	795.7	805.4	820.5	850.1
16.5°	772.2	783.5	788.9	798.3	812.8	842.7
17°	764.1	777.0	781.9	791.0	805.9	835.0
17.5°	753.5	769.7	774.9	783.8	798.5	827.5
18°	743.0	761.2	766.7	776.6	791.3	820.1
18.5°	732.5	751.7	757.8	768.3	783.7	813.0
19°	722.0	741.4	748.5	759.7	775.8	806.0
19.5°	711.4	730.1	738.0	749.6	767.1	798.7
20°	698.6	718.1	726.6	739.1	757.9	791.1
20.5°	684.8	705.7	714.9	727.6	747.8	783.0
21°	671.2	693.4	702.1	715.1	736.9	774.1



TEST NUMBER: P775645

CATALOG NUMBER: HCDJBL510CSD-HCD42TRH-1000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	629.2	656.2	661.3	673.8	699.8	744.7
23°	614.5	643.0	646.8	659.5	686.7	734.1
23.5°	600.9	629.2	632.3	645.8	673.1	722.9
24°	585.5	614.4	618.2	631.8	659.8	711.5
24.5°	571.5	599.8	603.3	617.8	646.1	700.0
25°	556.7	583.7	588.9	604.4	633.1	687.8
25.5°	542.2	568.6	574.5	590.4	619.8	674.9
26°	527.5	553.3	559.7	576.6	606.7	661.3
26.5°	513.2	538.0	545.5	562.1	593.2	647.1
27°	498.3	521.8	530.3	547.5	579.0	632.6
27.5°	483.9	506.3	515.4	532.7	564.7	617.9
28°	469.0	490.6	500.4	516.6	549.9	602.6
28.5°	454.2	474.7	485.7	502.2	534.7	587.3
29°	438.6	459.4	470.5	486.9	519.4	571.5
29.5°	423.1	444.0	455.8	472.1	503.2	556.5
30°	408.3	429.2	440.9	457.7	487.8	540.8
30.5°	392.9	414.6	425.5	442.9	471.8	524.7
31°	378.5	400.5	410.4	428.4	456.0	508.8
31.5°	364.2	386.4	395.2	413.9	440.3	492.6
32°	350.4	372.6	380.5	399.4	425.2	476.4
32.5°	337.0	358.3	366.0	384.8	410.3	460.3
33°	323.3	345.1	352.5	369.9	395.2	444.1
33.5°	310.4	331.9	338.9	354.0	380.1	428.4
34°	297.2	318.7	325.3	340.3	365.1	412.0
34.5°	284.7	305.5	311.7	326.6	350.3	396.2
35°	272.4	292.7	298.2	312.9	335.5	380.3
35.5°	260.2	280.9	285.3	299.2	320.7	364.7
36°	248.5	269.1	272.9	285.7	305.9	350.5
36.5°	237.4	258.2	260.6	272.4	291.2	336.2
37°	226.5	246.7	248.9	259.1	277.2	321.9
37.5°	216.2	235.8	237.3	246.0	263.9	307.7
38°	206.0	225.1	226.3	233.3	250.9	293.4
38.5°	196.1	214.7	215.6	220.9	238.9	279.9
39°	186.9	205.2	205.2	208.7	227.2	267.2
39.5°	177.4	195.2	195.5	197.5	215.7	254.9
40°	168.8	186.2	185.7	186.7	204.5	243.0
40.5°	160.2	177.0	176.5	176.9	193.7	231.0
41°	152.1	168.5	167.5	167.6	183.7	219.7
41.5°	144.6	159.9	158.9	159.3	174.1	208.9
42°	137.2	152.0	150.9	151.4	165.3	198.4
42.5°	130.3	144.2	143.2	144.1	156.6	188.4
43°	123.1	136.7	135.8	137.1	148.6	179.0
43.5°	116.7	129.5	128.8	130.6	141.0	169.5



TEST NUMBER: P775645

CATALOG NUMBER: HCDJBL510CSD-HCD42TRH-1000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	98.4	109.3	109.2	111.8	120.5	144.1
45.5°	93.0	103.0	103.1	106.1	114.2	136.3
46°	88.0	97.0	97.3	100.3	108.1	128.5
46.5°	83.0	91.4	91.8	94.8	102.2	121.3
47°	78.0	86.2	86.7	89.6	96.5	114.4
47.5°	72.9	81.3	81.7	84.6	90.9	107.8
48°	68.1	76.3	76.9	79.8	85.7	101.4
48.5°	62.2	71.6	72.3	75.1	80.8	95.1
49°	56.0	66.4	67.3	70.4	75.9	89.3
49.5°	49.7	60.8	61.9	65.4	71.0	84.2
50°	43.7	54.7	56.0	59.8	65.9	78.8
50.5°	38.2	48.4	50.0	53.8	60.0	73.7
51°	33.0	42.3	43.9	47.9	53.9	68.3
51.5°	28.8	36.9	38.3	42.0	47.9	62.3
52°	25.1	33.2	34.6	36.6	41.9	55.9
52.5°	22.1	29.6	30.8	33.0	36.5	49.7
53°	19.4	26.1	27.0	29.4	33.0	43.5
53.5°	17.2	22.5	23.3	25.9	29.4	37.9
54°	15.3	18.9	19.5	22.3	25.8	34.2
54.5°	13.7	16.6	17.2	18.7	22.2	30.5
55°	12.2	14.8	15.3	16.6	18.7	26.8
55.5°	11.0	13.2	13.6	14.7	16.5	23.1
56°	9.9	11.8	12.2	13.1	14.7	19.5
56.5°	9.1	10.6	10.9	11.7	13.1	17.2
57°	8.3	9.6	9.8	10.5	11.7	15.2
57.5°	7.5	8.6	8.8	9.4	10.5	13.6
58°	6.7	7.8	8.0	8.5	9.4	12.1
58.5°	6.0	7.0	7.2	7.7	8.5	10.9
59°	5.4	6.4	6.5	7.0	7.7	9.8
59.5°	4.9	5.8	5.9	6.3	6.9	8.8
60°	4.5	5.3	5.4	5.7	6.3	7.9
60.5°	4.1	4.8	4.9	5.2	5.7	7.2
61°	3.7	4.3	4.4	4.7	5.2	6.5
61.5°	3.4	4.0	4.1	4.3	4.7	5.9
62°	3.1	3.7	3.8	3.9	4.3	5.3
62.5°	2.8	3.4	3.5	3.6	3.9	4.9
63°	2.6	3.1	3.2	3.3	3.6	4.4
63.5°	2.4	2.8	2.9	3.0	3.3	4.0
64°	2.2	2.5	2.6	2.7	3.0	3.7
64.5°	2.0	2.3	2.4	2.5	2.7	3.4
65°	1.8	2.1	2.2	2.3	2.5	3.2
65.5°	1.7	2.0	2.0	2.1	2.3	2.9
66°	1.5	1.8	1.8	1.9	2.1	2.6



TEST NUMBER: P775645

CATALOG NUMBER: HCDJBL510CSD-HCD42TRH-1000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	1.2	1.4	1.4	1.5	1.6	2.0
68°	1.1	1.3	1.3	1.4	1.5	1.8
68.5°	1.0	1.2	1.2	1.3	1.4	1.6
69°	0.9	1.1	1.1	1.1	1.2	1.5
69.5°	0.8	1.0	1.0	1.1	1.1	1.4
70°	0.8	0.9	0.9	1.0	1.0	1.2
70.5°	0.7	0.8	0.8	0.9	0.9	1.1
71°	0.7	0.8	0.8	0.8	0.9	1.0
71.5°	0.6	0.7	0.7	0.7	0.8	0.9
72°	0.5	0.6	0.6	0.7	0.7	0.9
72.5°	0.5	0.6	0.6	0.6	0.7	0.8
73°	0.5	0.5	0.5	0.6	0.6	0.7
73.5°	0.4	0.5	0.5	0.5	0.5	0.7
74°	0.4	0.4	0.4	0.5	0.5	0.6
74.5°	0.3	0.4	0.4	0.4	0.4	0.5
75°	0.3	0.4	0.4	0.4	0.4	0.5
75.5°	0.3	0.3	0.3	0.4	0.4	0.4
76°	0.3	0.3	0.3	0.3	0.3	0.4
76.5°	0.2	0.3	0.3	0.3	0.3	0.4
77°	0.2	0.2	0.3	0.3	0.3	0.3
77.5°	0.2	0.2	0.2	0.2	0.2	0.3
78°	0.2	0.2	0.2	0.2	0.2	0.3
78.5°	0.2	0.2	0.2	0.2	0.2	0.2
79°	0.1	0.2	0.2	0.2	0.2	0.2
79.5°	0.1	0.1	0.1	0.1	0.1	0.2
80°	0.1	0.1	0.1	0.1	0.1	0.2
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	0.1
82.5°	0.0	0.1	0.1	0.1	0.1	0.1
83°	0.0	0.1	0.1	0.1	0.0	0.1
83.5°	0.0	0.0	0.0	0.0	0.0	0.1
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: P775645
CATALOG NUMBER: HCDJBL510CSD-HCD42TRH-1000lm-2700K

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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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°	764.7	800.1	819.4	828.9	814.0	808.9	797.6	774.0	735.3	690.6	665.8
22°	755.0	792.3	812.0	821.4	805.0	800.6	789.4	765.1	725.1	676.5	652.2



44°	160.6	189.9	206.9	213.7	192.9	185.6	177.7	165.1	142.9	122.5	114.2
44.5°	152.2	179.6	195.2	201.6	181.7	174.7	167.2	156.2	135.2	116.1	108.3



66.5°	2.3	2.9	3.2	3.2	2.6	2.6	2.4	2.3	2.0	1.7	1.5
67°	2.1	2.6	2.9	2.9	2.4	2.3	2.2	2.1	1.8	1.5	1.4



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°	657.4	681.1	688.9	701.6	725.2	764.7
22°	643.8	668.6	675.2	687.5	712.7	755.0



44°	110.5	122.4	121.9	123.9	133.8	160.6
44.5°	104.4	115.7	115.4	117.9	127.1	152.2

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66.5°	1.4	1.6	1.7	1.8	1.9	2.3
67°	1.3	1.5	1.5	1.6	1.8	2.1

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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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(END OF REPORT)