

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: P775616

Luminaire Tested: HCDJBL510CSD-HCD41TRC-1000lm-3000K

Issue Date: 2/13/2024

Test Information

Test Method: LM-79-2019
Report Number: P775616
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2312156B028)
Test Lab:
Issue Date: 2/13/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBL510CSD-HCD41TRC-1000lm-3000K
Description: 4 INCH ROUND SHALLOW-WIDE SPECULAR CLEAR TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 3000K CCT
Ballast/Driver: -

Summary

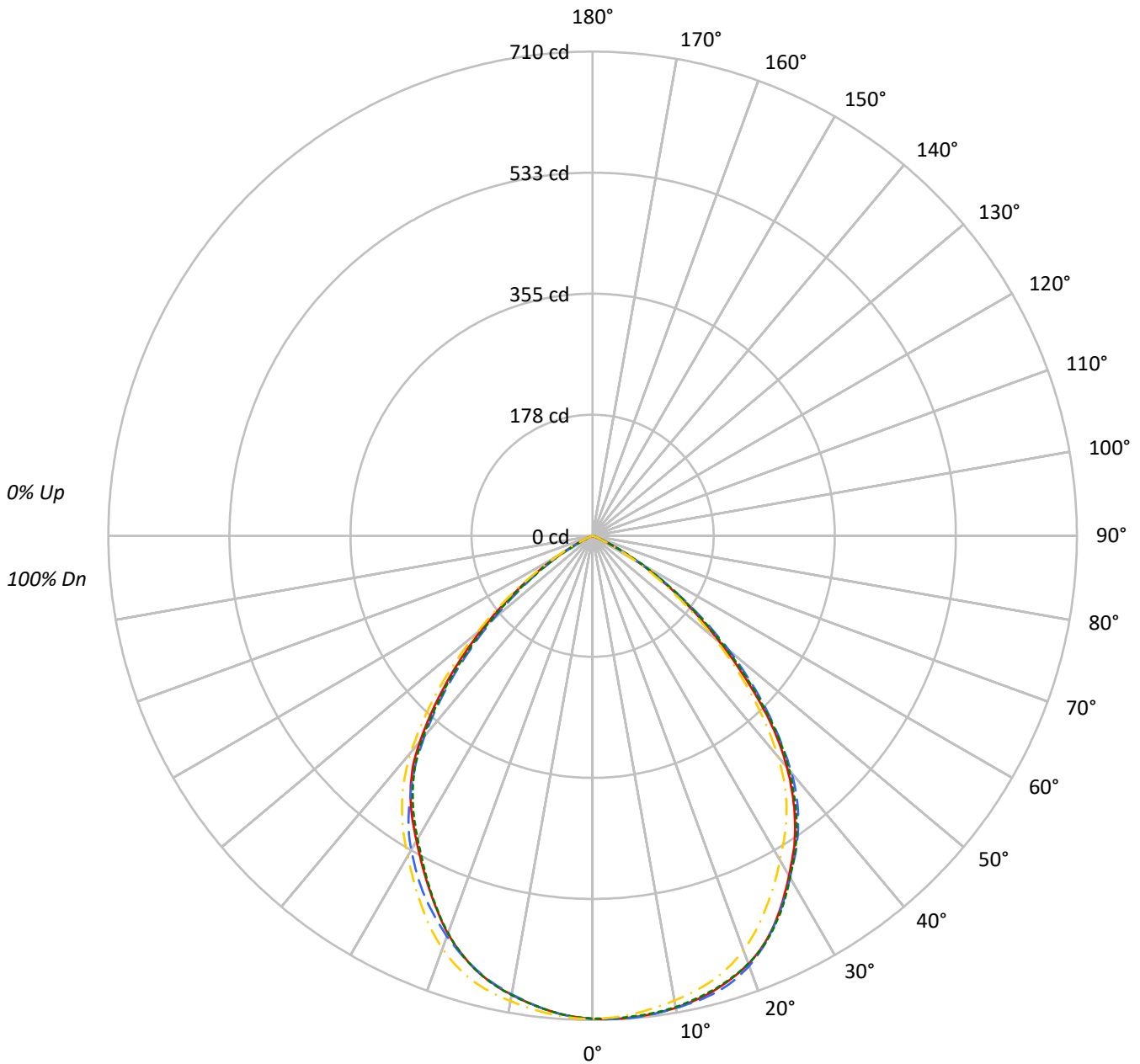
Lumens per Lamp: N/A
Luminaire Lumens: 1234.8 lumens
Efficiency: N/A
Efficacy: 123.5 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 1.16 / 1.22
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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: P775616
CATALOG NUMBER: HCDJBL510CSD-HCD41TRC-1000lm-3000K

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	112	109	106	103	110	107	104	101	102	100	98	99	97	95	95	94	93	91																			
2	105	99	94	90	102	97	92	89	94	90	87	91	87	85	88	85	83	81																			
3	98	90	83	78	95	88	82	78	85	80	76	83	79	75	80	77	74	72																			
4	91	81	75	69	89	80	74	69	78	72	68	76	71	67	74	70	66	64																			
5	85	74	67	62	83	73	66	61	71	65	61	70	64	60	68	63	60	58																			
6	79	68	61	55	77	67	60	55	65	59	55	64	58	54	62	58	54	52																			
7	74	62	55	50	72	62	55	50	60	54	49	59	53	49	58	53	49	47																			
8	69	58	50	45	68	57	50	45	56	49	45	55	49	45	53	48	44	43																			
9	65	53	46	41	64	53	46	41	52	45	41	51	45	41	50	44	41	39																			
10	61	49	42	38	60	49	42	38	48	42	38	47	42	37	46	41	37	36																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	89127	89127	89127	89127
5°	89505	89354	88419	88431
10°	89812	89658	87345	87384
15°	89913	89717	85926	85965
20°	89450	89423	83101	83021
25°	87385	87690	78984	78734
30°	83646	84154	75072	74578
35°	79490	80136	71471	70656
40°	72861	73633	64696	63726
45°	62061	63147	53518	52094
50°	48164	49456	40763	39001
55°	33811	35172	27273	25408
60°	19482	20816	14070	12434
65°	6790	7683	3841	3037
70°	221	478	221	184
75°	194	243	194	194
80°	145	217	145	145
85°	0	144	0	144

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 64001 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.8	5.4
10°-20°	190.1	15.4
20°-30°	275.8	22.3
30°-40°	305.9	24.8
40°-50°	248.3	20.1
50°-60°	124.7	10.1
60°-70°	22.7	1.8
70°-80°	0.5	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°	532.7	43.1
0°-40°	838.6	67.9
0°-60°	1211.6	98.1
0°-90°	1234.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1234.8	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	708	708	708	708	708	
5°	708	707	700	700	708	67
15°	690	689	660	660	690	195
25°	629	632	569	567	629	289
35°	517	522	465	460	517	322
45°	349	355	301	293	349	267
55°	154	160	124	116	154	139
65°	23	26	13	10	23	27
75°	0	0	0	0	0	0
85°	0	0	0	0	0	0
90°	0	0	0	0	0	0



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CATALOG NUMBER: HCDJBL510CSD-HCD41TRC-1000lm-3000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	708.2	708.2	708.2	708.2	708.2	708.2	708.2	708.2	708.2	708.2	708.2
0.5°	708.5	708.5	708.6	708.8	708.0	708.2	708.3	708.3	707.8	707.7	707.9
1°	708.8	708.8	708.9	709.0	708.2	708.1	708.1	708.1	707.4	707.2	707.5
1.5°	709.0	709.0	709.2	709.2	708.3	708.0	707.8	707.5	706.9	706.7	707.0
2°	709.1	709.2	709.3	709.3	708.2	707.8	707.4	706.8	706.2	705.9	706.2
2.5°	709.1	709.4	709.5	709.3	708.1	707.6	707.0	706.1	705.5	705.2	705.5
3°	709.1	709.4	709.5	709.3	708.0	707.3	706.5	705.3	704.6	704.3	704.7
3.5°	709.1	709.4	709.5	709.2	708.0	706.9	705.7	704.4	703.5	703.2	703.7
4°	708.9	709.3	709.4	709.2	707.7	706.6	705.0	703.5	702.4	702.2	702.6
4.5°	708.7	709.2	709.3	709.0	707.5	706.0	704.3	702.5	701.1	700.8	701.2
5°	708.5	708.9	709.0	708.8	707.3	705.6	703.4	701.2	699.9	699.5	699.9
5.5°	708.1	708.7	708.7	708.4	707.0	705.0	702.5	700.0	698.4	698.1	698.5
6°	707.7	708.3	708.3	708.1	706.7	704.4	701.4	698.7	697.0	696.7	697.0
6.5°	707.4	707.9	707.8	707.6	706.2	703.8	700.4	697.4	695.5	695.1	695.4
7°	706.9	707.4	707.4	707.1	705.8	703.0	699.3	695.9	693.9	693.5	693.8
7.5°	706.5	706.8	706.8	706.6	705.2	702.3	698.2	694.5	692.3	691.9	692.0
8°	705.8	706.0	706.1	705.9	704.7	701.4	697.1	693.1	690.6	690.1	690.3
8.5°	705.1	705.3	705.4	705.2	704.1	700.5	695.9	691.6	688.9	688.4	688.4
9°	704.4	704.6	704.7	704.4	703.3	699.6	694.7	690.0	687.3	686.6	686.5
9.5°	703.6	703.7	704.0	703.5	702.5	698.7	693.4	688.5	685.4	684.8	684.7
10°	702.8	702.8	703.3	702.6	701.6	697.6	692.2	686.8	683.5	683.1	682.8
10.5°	701.8	701.9	702.6	701.8	700.6	696.3	690.7	685.2	681.6	681.3	680.8
11°	700.7	700.8	701.9	700.7	699.5	695.0	689.3	683.5	679.6	679.4	678.7
11.5°	699.6	699.7	700.9	699.6	698.3	693.6	687.9	681.7	677.6	677.5	676.5
12°	698.6	698.7	700.2	698.5	697.1	692.3	686.3	680.0	675.3	675.4	674.4
12.5°	697.4	697.6	699.3	697.2	695.8	690.7	684.8	678.2	673.1	673.4	672.1
13°	696.1	696.4	698.5	695.8	694.5	689.2	683.3	676.3	670.7	671.1	669.7
13.5°	694.7	695.1	697.5	694.4	693.1	687.5	681.5	674.4	668.2	668.9	667.1
14°	693.3	693.7	696.4	693.0	691.6	685.8	679.7	672.3	665.5	666.5	664.4
14.5°	691.9	692.2	695.2	691.4	690.1	684.0	677.8	669.9	662.7	663.9	661.6
15°	690.1	690.6	694.0	689.7	688.6	682.1	675.7	667.6	659.5	661.2	658.8
15.5°	688.4	688.8	692.5	687.9	687.0	680.1	673.6	664.9	656.2	658.4	655.7
16°	686.5	686.7	690.9	685.8	685.1	678.0	671.2	662.2	652.9	655.2	652.4
16.5°	684.5	684.6	689.0	683.7	683.3	675.6	668.7	659.3	649.3	652.0	649.4
17°	682.4	682.4	687.0	681.3	681.3	673.3	665.9	656.3	645.5	648.8	646.2
17.5°	680.1	680.0	684.7	679.0	679.3	670.6	663.1	653.1	641.7	645.2	642.8
18°	678.0	677.6	682.4	676.4	677.2	668.1	660.3	649.5	637.8	641.5	639.5
18.5°	675.6	675.0	679.8	673.8	674.9	665.2	657.1	646.0	633.8	637.4	635.9
19°	673.3	672.4	677.0	671.1	672.7	662.5	653.9	642.2	629.5	633.5	632.3
19.5°	670.7	669.6	674.2	668.4	670.2	659.5	650.4	638.3	625.1	629.3	628.7
20°	667.9	666.6	671.2	665.4	667.7	656.3	646.8	634.2	620.5	624.9	625.0
20.5°	665.0	663.6	667.9	662.2	664.8	653.1	643.1	629.7	615.9	620.1	621.0
21°	661.8	660.3	664.4	659.1	661.9	649.6	639.1	625.1	610.8	615.3	617.0



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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°	651.3	649.6	652.8	648.4	652.1	638.1	626.1	610.1	595.4	599.9	604.6
23°	647.4	645.7	648.4	644.6	648.4	634.0	621.4	605.0	590.1	594.5	600.3
23.5°	643.2	641.7	644.0	640.7	644.4	629.7	616.7	599.6	584.8	589.0	596.1
24°	638.8	637.6	639.4	636.7	640.3	625.3	611.7	594.2	579.4	583.6	591.8
24.5°	634.2	633.6	634.8	632.7	636.0	620.7	606.8	588.6	574.1	578.0	587.4
25°	629.3	629.4	630.1	628.8	631.5	616.3	601.8	583.1	568.8	572.5	582.8
25.5°	624.5	625.1	625.3	624.6	626.8	611.6	596.8	577.4	563.5	566.9	578.1
26°	619.5	620.8	620.3	620.4	622.1	606.9	591.7	572.1	558.3	561.4	573.3
26.5°	614.4	616.5	615.4	616.2	617.2	602.1	586.5	566.6	553.0	555.7	568.4
27°	609.1	612.1	610.4	611.8	612.0	597.1	581.4	561.1	547.7	549.9	563.4
27.5°	603.5	607.6	605.3	607.2	606.8	592.0	576.2	555.6	542.3	544.4	558.2
28°	598.0	602.9	600.1	602.6	601.4	586.9	570.9	550.1	537.0	538.9	553.1
28.5°	592.4	598.2	594.8	597.8	595.8	581.7	565.6	544.5	531.9	533.5	547.8
29°	586.8	593.3	589.4	592.9	590.3	576.4	560.1	539.1	526.7	528.2	542.5
29.5°	581.3	588.5	584.3	588.0	584.8	571.2	554.7	533.8	521.6	522.8	537.2
30°	575.6	583.7	579.0	582.9	579.1	565.9	549.4	528.5	516.6	517.5	531.8
30.5°	570.1	578.7	573.7	577.8	573.3	560.7	544.1	523.2	511.7	512.3	526.5
31°	564.5	573.6	568.3	572.7	567.8	555.6	538.9	518.2	506.8	507.2	520.9
31.5°	559.2	568.6	563.3	567.4	562.4	550.3	533.7	513.3	501.8	502.0	514.9
32°	553.5	563.5	558.1	562.3	557.0	545.0	528.6	508.3	496.9	497.0	508.7
32.5°	548.3	558.4	553.1	557.0	551.5	539.9	523.5	503.2	492.1	491.7	502.3
33°	542.7	552.9	547.7	551.7	546.2	534.7	518.3	498.1	486.9	486.2	495.3
33.5°	536.8	547.2	542.5	546.0	540.4	529.4	512.8	492.8	481.6	480.5	488.2
34°	530.3	540.9	536.9	539.8	534.4	523.6	507.3	487.5	476.2	474.9	481.0
34.5°	523.9	534.4	531.0	533.3	528.1	517.8	501.6	482.0	470.7	469.0	473.6
35°	517.4	527.6	524.9	526.6	521.6	511.5	495.7	476.3	465.2	463.1	466.1
35.5°	510.6	520.8	519.0	519.8	514.9	505.2	489.7	470.6	459.5	456.8	458.7
36°	503.9	513.7	512.9	512.6	508.4	498.8	483.3	464.8	453.6	450.6	451.0
36.5°	497.1	506.6	506.5	505.4	501.0	491.9	476.8	458.7	447.5	443.9	443.3
37°	489.7	499.1	499.6	498.0	494.0	484.7	469.9	452.3	441.0	437.1	435.5
37.5°	482.5	491.5	493.0	490.4	486.6	477.4	463.0	445.8	434.4	430.1	427.6
38°	474.7	483.5	485.7	482.7	479.0	469.9	455.8	438.7	427.3	422.2	419.6
38.5°	467.1	475.5	478.2	474.7	471.4	462.4	448.0	431.0	419.8	413.9	410.9
39°	459.6	467.7	470.6	466.8	464.0	454.5	439.8	423.2	411.5	405.3	401.5
39.5°	451.5	459.3	462.5	458.6	456.1	446.5	431.5	414.8	402.8	396.6	392.3
40°	443.5	450.6	453.6	450.0	448.2	438.1	423.0	406.2	393.8	387.5	383.0
40.5°	434.9	441.6	444.6	441.0	439.8	429.4	414.1	397.5	384.7	377.9	373.5
41°	426.7	432.5	435.5	431.9	431.5	420.5	405.0	388.5	375.5	368.4	364.1
41.5°	417.8	423.3	426.1	422.7	422.8	411.4	396.0	379.6	366.1	359.0	354.5
42°	408.9	414.0	416.8	413.7	414.1	402.0	386.9	370.4	356.9	349.1	344.8
42.5°	399.2	404.5	407.5	404.5	404.7	392.7	377.6	361.1	347.5	339.1	334.8
43°	389.9	395.1	398.1	395.0	395.3	383.4	368.3	351.7	338.2	329.3	325.2
43.5°	379.9	385.5	388.5	385.6	385.2	373.6	358.7	342.5	328.8	319.5	315.2



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	348.7	356.3	359.6	356.7	354.8	344.0	329.6	314.1	300.7	290.1	285.7
45.5°	338.2	346.5	349.8	347.4	344.1	333.8	319.9	305.0	291.3	280.5	276.1
46°	327.7	336.7	340.0	337.6	333.6	323.4	310.0	295.5	281.8	270.8	266.2
46.5°	317.0	326.7	330.2	327.5	323.2	313.2	300.3	286.3	272.6	261.4	256.5
47°	306.6	316.7	320.1	317.3	312.8	303.0	290.3	276.8	263.1	252.1	246.7
47.5°	296.3	306.4	310.1	307.5	302.4	292.7	280.5	267.5	253.8	242.5	237.3
48°	285.9	296.3	300.3	297.5	292.4	282.4	270.6	258.0	244.6	233.3	227.7
48.5°	275.6	286.2	290.2	287.4	282.4	272.1	261.1	248.8	235.4	224.3	218.3
49°	265.9	276.1	280.4	277.3	272.4	262.2	251.3	239.3	226.1	215.0	209.0
49.5°	255.8	266.1	270.5	267.3	262.4	252.3	241.7	230.0	217.1	206.0	199.9
50°	246.0	256.0	260.5	257.2	252.6	242.4	232.1	220.6	208.2	197.1	190.7
50.5°	236.1	245.8	250.6	247.3	243.1	232.4	222.7	211.4	199.4	188.5	181.9
51°	226.6	236.0	240.4	237.2	233.4	222.8	213.2	202.3	190.4	179.6	173.2
51.5°	217.0	226.4	230.7	227.6	223.9	213.5	203.9	193.4	181.8	171.1	164.9
52°	207.9	216.7	220.9	218.0	214.5	204.0	194.7	184.5	173.3	162.7	156.5
52.5°	198.4	207.0	211.2	208.5	205.0	195.0	185.6	175.4	164.8	154.6	148.3
53°	189.4	197.5	201.5	199.0	195.8	185.7	176.4	166.7	156.4	146.2	140.4
53.5°	180.1	188.3	191.6	189.5	186.7	176.7	167.6	158.2	148.1	138.2	132.8
54°	171.4	179.1	182.0	180.1	177.7	167.8	159.0	149.8	140.0	130.4	125.2
54.5°	162.7	169.8	172.6	171.1	168.9	159.4	150.4	141.5	132.0	122.7	117.6
55°	154.1	161.1	163.5	162.1	160.3	150.9	142.1	133.2	124.3	115.2	110.5
55.5°	145.5	152.2	154.3	153.4	151.9	142.4	133.7	125.2	116.6	107.9	103.4
56°	137.3	143.5	145.4	144.8	143.2	134.2	125.6	117.4	109.1	100.8	96.9
56.5°	129.2	135.0	136.7	136.1	135.0	126.2	117.8	109.8	101.8	94.2	90.5
57°	121.1	126.8	128.1	127.9	126.8	118.4	110.1	102.2	95.0	87.7	84.0
57.5°	113.3	118.7	119.6	119.7	119.0	110.9	102.5	95.2	88.3	81.2	77.5
58°	105.8	110.7	111.5	111.9	111.2	103.4	95.7	88.4	81.6	74.6	71.1
58.5°	98.4	103.0	103.7	104.1	103.6	96.6	88.8	81.5	74.8	68.0	65.2
59°	91.3	95.6	96.1	96.5	96.7	89.8	82.0	74.5	68.1	62.2	59.6
59.5°	84.1	88.3	88.7	89.2	89.6	83.0	75.1	67.7	61.9	56.5	54.0
60°	77.4	81.2	81.7	82.2	82.7	76.2	68.4	61.5	55.9	50.9	48.9
60.5°	70.7	74.2	74.7	75.3	75.6	69.4	62.4	55.5	50.3	45.8	43.9
61°	64.3	67.7	68.1	68.5	68.7	63.3	56.3	49.9	44.8	40.8	39.3
61.5°	58.4	61.4	62.0	62.3	62.4	57.3	50.7	44.5	39.7	36.2	34.9
62°	52.4	55.3	56.0	56.1	56.4	51.7	45.4	39.3	34.8	31.9	30.7
62.5°	46.8	49.4	50.3	50.3	50.4	46.1	40.3	34.5	30.2	27.7	26.8
63°	41.5	43.9	44.8	44.7	44.9	40.8	35.4	30.1	25.7	23.9	23.3
63.5°	36.4	38.7	39.8	39.4	39.7	35.9	31.0	25.8	21.8	20.3	19.9
64°	31.9	34.3	34.9	34.7	34.8	31.2	26.8	22.1	18.3	17.2	17.0
64.5°	27.3	30.0	30.8	30.5	30.1	27.0	23.0	18.4	15.0	14.4	14.3
65°	22.8	25.6	26.7	26.3	25.8	23.0	19.4	15.2	12.9	12.4	12.4
65.5°	18.2	21.2	22.7	22.2	21.8	19.2	16.0	13.1	10.8	10.4	10.4
66°	13.6	16.9	18.6	18.0	18.2	15.8	13.7	10.8	8.7	8.5	8.6



TEST NUMBER: P775616

CATALOG NUMBER: HCDJBL510CSD-HCD41TRC-1000lm-3000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	4.6	8.2	9.6	9.2	10.3	8.8	6.8	4.2	3.1	3.3	3.4
68°	3.8	6.0	7.1	6.9	8.0	6.4	4.5	3.1	1.9	2.2	2.2
68.5°	3.0	4.3	5.1	5.0	5.7	4.1	3.1	2.0	1.1	1.4	1.4
69°	2.1	3.6	3.5	3.5	3.4	2.8	2.0	1.3	0.7	0.9	0.9
69.5°	1.3	2.9	2.8	2.8	2.1	1.7	1.1	0.8	0.6	0.6	0.6
70°	0.6	2.1	2.0	2.0	1.3	0.9	0.7	0.6	0.6	0.6	0.6
70.5°	0.5	1.3	1.3	1.3	0.8	0.6	0.6	0.5	0.5	0.6	0.6
71°	0.5	0.6	0.7	0.7	0.6	0.6	0.5	0.5	0.5	0.5	0.6
71.5°	0.5	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5
72°	0.5	0.5	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5
72.5°	0.5	0.5	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5
73°	0.5	0.5	0.6	0.6	0.5	0.5	0.5	0.4	0.5	0.5	0.5
73.5°	0.4	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.5	0.5
74°	0.4	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.5
74.5°	0.4	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4
75°	0.4	0.4	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4
75.5°	0.4	0.4	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4
76°	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4
76.5°	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.4	0.4
77°	0.3	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.4
77.5°	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3
78°	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3
78.5°	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3
79°	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3
79.5°	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3
80°	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3
80.5°	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2
81°	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2
81.5°	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2
82°	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2
82.5°	0.1	0.2	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	0.2	0.2	0.2	0.1	0.1	0.1	0.1
83.5°	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1
84°	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1
84.5°	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.0	0.1	0.1
85°	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1
85.5°	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1
86°	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1
86.5°	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0
87°	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.1	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: P775616
CATALOG NUMBER: HCDJBL510CSD-HCD41TRC-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	0.1	0.1



TEST NUMBER: P775616

CATALOG NUMBER: HCDJBL510CSD-HCD41TRC-1000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	708.2	708.2	708.2	708.2	708.2	708.2
0.5°	708.1	707.6	708.0	708.3	708.6	708.5
1°	707.7	707.2	707.8	708.3	708.8	708.8
1.5°	707.2	706.7	707.5	708.3	708.8	709.0
2°	706.7	706.0	707.0	708.0	708.7	709.1
2.5°	705.9	705.3	706.5	707.6	708.6	709.1
3°	705.1	704.5	705.6	707.1	708.4	709.1
3.5°	704.2	703.6	704.8	706.5	708.1	709.1
4°	703.1	702.5	703.9	705.8	707.7	708.9
4.5°	701.9	701.3	702.8	705.0	707.3	708.7
5°	700.5	700.0	701.7	704.1	706.9	708.5
5.5°	699.1	698.6	700.4	703.2	706.3	708.1
6°	697.6	697.2	699.1	702.2	705.7	707.7
6.5°	696.0	695.6	697.8	701.1	705.0	707.4
7°	694.4	694.1	696.4	700.1	704.4	706.9
7.5°	692.8	692.5	694.9	699.0	703.6	706.5
8°	691.1	690.8	693.5	697.9	702.9	705.8
8.5°	689.4	689.2	692.0	696.8	702.0	705.1
9°	687.7	687.5	690.4	695.5	700.9	704.4
9.5°	685.9	685.6	688.8	694.2	699.8	703.6
10°	684.2	683.8	687.1	692.9	698.7	702.8
10.5°	682.4	681.9	685.4	691.5	697.5	701.8
11°	680.5	680.0	683.7	690.2	696.1	700.7
11.5°	678.6	677.9	681.7	688.8	694.8	699.6
12°	676.6	675.8	679.9	687.4	693.5	698.6
12.5°	674.6	673.5	677.9	685.7	692.0	697.4
13°	672.5	671.1	675.7	684.2	690.3	696.1
13.5°	670.3	668.5	673.6	682.4	688.7	694.7
14°	667.9	665.7	671.1	680.4	686.8	693.3
14.5°	665.3	662.9	668.5	678.4	684.9	691.9
15°	662.7	659.8	665.7	676.0	682.9	690.1
15.5°	659.7	656.5	662.8	673.6	680.5	688.4
16°	656.6	653.1	659.6	671.0	678.2	686.5
16.5°	653.4	649.5	656.2	668.3	675.5	684.5
17°	650.0	645.7	652.8	665.3	673.0	682.4
17.5°	646.5	641.8	649.1	662.1	670.2	680.1
18°	642.7	637.7	645.3	659.0	667.4	678.0
18.5°	638.9	633.6	641.5	655.5	664.4	675.6
19°	634.8	629.3	637.3	651.9	661.4	673.3
19.5°	630.5	624.7	633.0	648.2	658.3	670.7
20°	626.0	619.9	628.6	644.2	655.0	667.9
20.5°	621.3	615.1	624.0	640.1	651.4	665.0
21°	616.5	610.0	619.2	635.7	647.6	661.8

TEST NUMBER: P775616

CATALOG NUMBER: HCDJBL510CSD-HCD41TRC-1000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	601.0	594.4	604.0	621.7	635.8	651.3
23°	595.6	588.8	598.5	616.6	631.5	647.4
23.5°	590.1	583.4	593.3	611.5	627.2	643.2
24°	584.6	578.0	587.9	606.4	622.6	638.8
24.5°	578.8	572.5	582.5	601.1	617.9	634.2
25°	573.2	567.0	577.1	595.7	613.1	629.3
25.5°	567.6	561.5	571.8	590.5	608.5	624.5
26°	561.8	556.1	566.2	585.2	603.6	619.5
26.5°	556.0	550.5	560.8	579.9	598.6	614.4
27°	550.3	544.9	555.3	574.3	593.6	609.1
27.5°	544.6	539.4	549.8	568.9	588.5	603.5
28°	539.0	534.1	544.2	563.4	583.2	598.0
28.5°	533.5	528.8	539.0	558.0	578.0	592.4
29°	527.9	523.3	533.7	552.6	572.6	586.8
29.5°	522.5	518.2	528.4	547.4	567.3	581.3
30°	517.3	513.2	523.1	542.1	562.0	575.6
30.5°	512.2	508.1	518.1	536.9	556.9	570.1
31°	507.0	503.1	513.1	531.7	551.8	564.5
31.5°	501.7	497.9	507.9	526.7	546.5	559.2
32°	496.6	492.9	502.8	521.3	541.2	553.5
32.5°	491.4	487.8	497.7	516.2	536.0	548.3
33°	485.7	482.4	492.4	510.8	530.7	542.7
33.5°	480.0	477.0	486.9	505.1	524.9	536.8
34°	474.3	471.2	481.3	499.3	518.8	530.3
34.5°	468.5	465.6	475.5	493.4	512.4	523.9
35°	462.4	459.9	469.7	487.3	505.9	517.4
35.5°	456.3	454.1	463.9	481.1	499.3	510.6
36°	449.8	447.9	458.0	474.7	492.6	503.9
36.5°	443.2	441.5	451.7	468.4	485.5	497.1
37°	436.0	435.0	445.1	461.5	478.3	489.7
37.5°	429.1	428.4	438.5	454.3	470.7	482.5
38°	421.5	421.2	431.5	447.0	463.1	474.7
38.5°	413.3	413.6	424.1	439.6	455.4	467.1
39°	404.7	405.5	416.1	431.5	447.5	459.6
39.5°	396.0	396.9	407.6	423.0	439.4	451.5
40°	386.5	387.9	398.9	414.1	430.9	443.5
40.5°	377.0	378.6	390.0	405.2	422.2	434.9
41°	367.3	369.2	380.9	396.1	413.0	426.7
41.5°	357.7	359.5	371.5	387.0	403.7	417.8
42°	347.8	350.3	362.4	377.7	394.7	408.9
42.5°	337.9	340.6	353.0	368.2	385.3	399.2
43°	328.0	331.2	343.7	358.7	375.8	389.9
43.5°	318.4	321.2	334.2	349.1	365.8	379.9



TEST NUMBER: P775616

CATALOG NUMBER: HCDJBL510CSD-HCD41TRC-1000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	288.2	292.7	305.9	319.9	336.1	348.7
45.5°	278.7	283.0	296.5	310.2	326.0	338.2
46°	268.7	273.6	287.2	300.5	315.8	327.7
46.5°	259.0	264.1	277.6	290.4	305.3	317.0
47°	249.4	254.7	268.2	280.7	295.1	306.6
47.5°	240.1	245.0	258.6	270.9	284.9	296.3
48°	230.6	235.8	249.1	261.2	274.7	285.9
48.5°	221.4	226.4	239.5	251.3	264.4	275.6
49°	212.1	217.3	230.1	242.1	254.5	265.9
49.5°	203.6	208.3	220.7	232.3	244.5	255.8
50°	194.3	199.2	211.4	222.7	234.6	246.0
50.5°	185.5	190.1	201.9	213.2	224.6	236.1
51°	176.7	181.3	192.9	203.9	215.0	226.6
51.5°	168.1	172.6	183.9	194.5	205.5	217.0
52°	159.9	164.2	175.0	185.5	196.3	207.9
52.5°	151.5	155.8	166.0	176.3	186.9	198.4
53°	143.3	147.3	157.4	167.3	177.9	189.4
53.5°	135.4	139.1	148.8	158.2	169.1	180.1
54°	127.6	131.2	140.4	149.7	160.3	171.4
54.5°	119.9	123.4	132.2	141.3	151.8	162.7
55°	112.5	115.8	124.1	132.7	143.3	154.1
55.5°	105.3	108.1	116.1	124.3	135.2	145.5
56°	98.2	100.9	108.3	116.6	127.1	137.3
56.5°	91.6	93.7	100.8	108.8	119.3	129.2
57°	85.0	86.8	93.4	101.2	111.7	121.1
57.5°	78.5	79.8	86.1	93.7	104.0	113.3
58°	72.0	73.5	79.4	86.6	96.9	105.8
58.5°	65.9	67.1	72.6	79.7	90.0	98.4
59°	60.1	60.9	66.2	73.1	83.2	91.3
59.5°	54.5	55.1	59.9	66.8	76.7	84.1
60°	49.2	49.4	54.0	60.4	70.3	77.4
60.5°	44.2	44.1	48.4	54.8	64.0	70.7
61°	39.3	38.9	43.0	49.2	58.0	64.3
61.5°	34.8	34.6	37.9	44.0	52.4	58.4
62°	30.5	30.5	33.9	38.9	46.9	52.4
62.5°	26.5	26.4	29.8	34.7	41.5	46.8
63°	23.0	22.4	25.8	30.7	36.6	41.5
63.5°	19.6	18.2	21.7	26.7	32.6	36.4
64°	16.6	15.1	17.8	22.8	28.6	31.9
64.5°	14.0	12.6	14.7	18.8	24.6	27.3
65°	12.1	10.2	12.0	15.7	20.5	22.8
65.5°	10.2	8.3	9.7	12.9	16.5	18.2
66°	8.3	6.5	7.7	10.3	13.4	13.6



TEST NUMBER: P775616

CATALOG NUMBER: HCDJBL510CSD-HCD41TRC-1000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	3.3	3.1	3.4	4.6	6.0	4.6
68°	2.2	2.3	2.7	3.3	4.3	3.8
68.5°	1.4	1.6	1.9	2.6	3.5	3.0
69°	0.9	0.8	1.3	1.8	2.8	2.1
69.5°	0.6	0.6	0.6	1.2	2.0	1.3
70°	0.6	0.5	0.5	0.5	1.2	0.6
70.5°	0.6	0.5	0.5	0.5	0.5	0.5
71°	0.5	0.5	0.5	0.5	0.5	0.5
71.5°	0.5	0.5	0.5	0.5	0.5	0.5
72°	0.5	0.5	0.4	0.4	0.5	0.5
72.5°	0.5	0.5	0.4	0.4	0.4	0.5
73°	0.5	0.4	0.4	0.4	0.4	0.5
73.5°	0.5	0.4	0.4	0.4	0.4	0.4
74°	0.4	0.4	0.4	0.4	0.4	0.4
74.5°	0.4	0.4	0.4	0.4	0.4	0.4
75°	0.4	0.4	0.4	0.4	0.4	0.4
75.5°	0.4	0.4	0.3	0.3	0.3	0.4
76°	0.4	0.4	0.3	0.3	0.3	0.4
76.5°	0.4	0.3	0.3	0.3	0.3	0.3
77°	0.4	0.3	0.3	0.3	0.3	0.3
77.5°	0.3	0.3	0.3	0.3	0.3	0.3
78°	0.3	0.3	0.3	0.3	0.3	0.3
78.5°	0.3	0.3	0.3	0.3	0.3	0.3
79°	0.3	0.3	0.3	0.2	0.2	0.3
79.5°	0.3	0.3	0.2	0.2	0.2	0.2
80°	0.3	0.2	0.2	0.2	0.2	0.2
80.5°	0.2	0.2	0.2	0.2	0.2	0.2
81°	0.2	0.2	0.2	0.2	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	0.1	0.2
82.5°	0.2	0.2	0.2	0.1	0.1	0.1
83°	0.2	0.2	0.1	0.1	0.1	0.1
83.5°	0.1	0.1	0.1	0.1	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	0.1	0.0
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°	0.0	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: P775616
CATALOG NUMBER: HCDJBL510CSD-HCD41TRC-1000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
90°	0.1	0.1	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°	658.5	656.8	660.6	655.6	658.9	645.9	634.9	620.3	605.7	610.2	612.9
22°	655.1	653.3	656.7	652.1	655.6	642.1	630.7	615.3	600.6	605.1	608.9



44°	369.7	375.9	379.0	376.1	375.5	363.6	348.9	332.9	319.2	309.6	305.4
44.5°	358.7	366.2	369.3	366.6	364.8	353.7	339.3	323.6	309.9	299.7	295.6



66.5°	10.1	13.6	15.2	14.7	14.9	13.5	11.4	8.6	6.5	6.4	6.6
67°	6.9	10.7	12.3	11.7	12.6	11.1	9.1	6.4	4.5	4.5	4.7



89°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
89.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1

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21.5°	611.5	605.0	614.3	631.1	643.9	658.5
22°	606.2	599.6	609.2	626.5	639.9	655.1



44°	307.9	311.7	324.6	339.5	356.0	369.7
44.5°	298.0	302.1	315.2	329.7	346.2	358.7

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66.5°	6.3	5.1	5.9	8.2	10.5	10.1
67°	4.5	3.9	4.5	6.2	8.1	6.9

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89°	0.1	0.1	0.0	0.0	0.0	0.0
89.5°	0.1	0.1	0.0	0.0	0.0	0.0

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(END OF REPORT)