

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: P775737

Luminaire Tested: HCDJBL510CSD-HCD61TRMW-1000lm-3500K

Issue Date: 2/13/2024

Test Information

Test Method: LM-79-2019
Report Number: P775737
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2312156B037)
Test Lab:
Issue Date: 2/13/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBL510CSD-HCD61TRMW-1000lm-3500K
Description: 6 INCH ROUND SHALLOW-WIDE MATTE WHITE TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 3500K CCT
Ballast/Driver: -

Summary

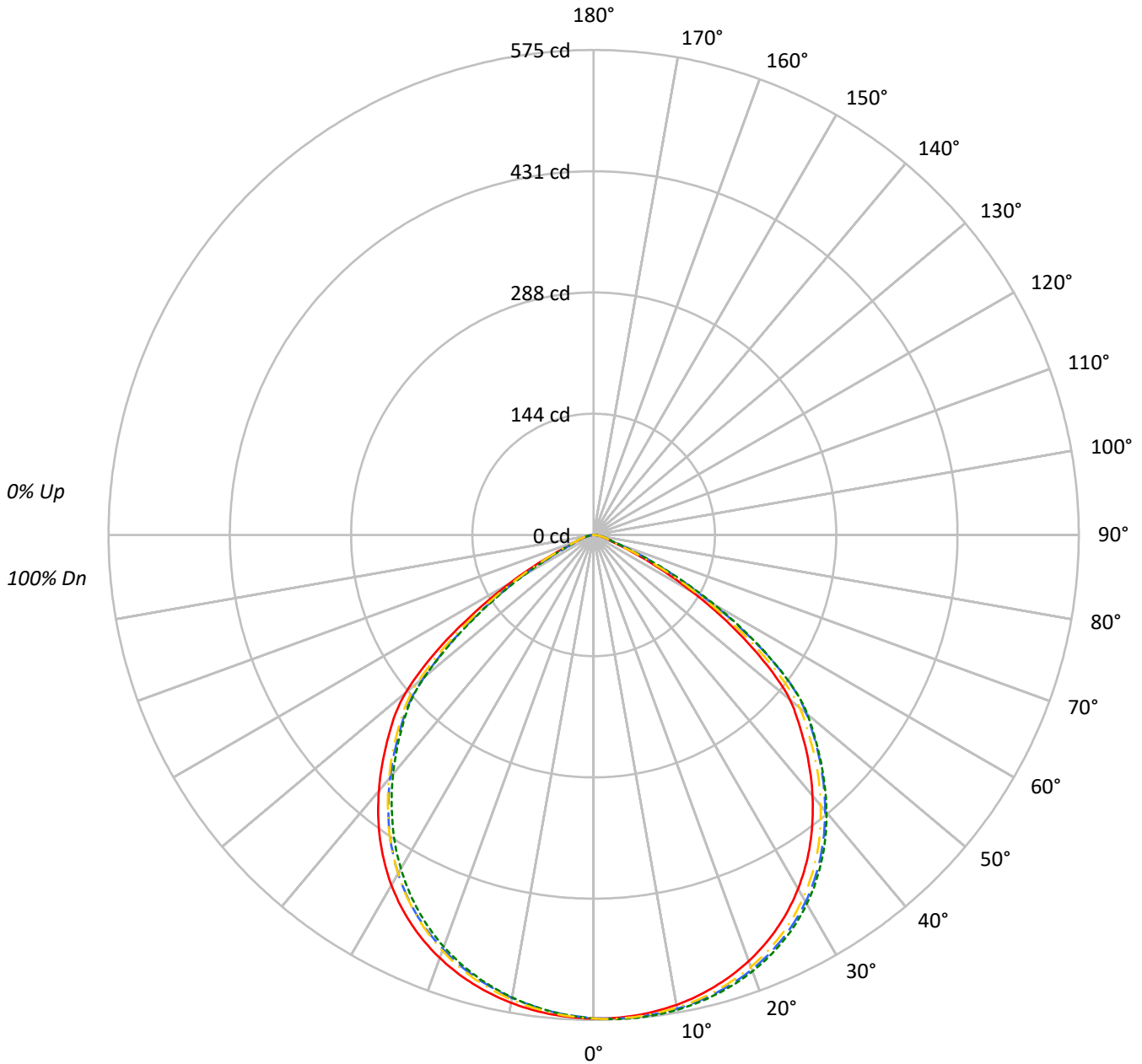
Lumens per Lamp: N/A
Luminaire Lumens: 1265.1 lumens
Efficiency: N/A
Efficacy: 126.5 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.24 / 1.32
Luminous Opening: Circular (Dia: 0.5' x H: 0')
CIE Type: Direct

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	111	107	104	101	109	105	102	99	101	99	96	97	95	93	94	92	91	89																			
2	103	96	91	86	100	94	89	85	91	87	83	88	84	81	85	82	79	77																			
3	95	86	79	74	93	85	78	73	82	76	72	79	74	71	77	73	69	67																			
4	88	77	70	64	86	76	69	63	74	67	63	71	66	62	69	65	61	59																			
5	81	70	62	56	79	69	61	56	67	60	55	65	59	55	63	58	54	52																			
6	75	63	55	49	74	62	55	49	61	54	49	59	53	48	58	52	48	46																			
7	70	58	50	44	68	57	49	44	55	49	44	54	48	43	53	47	43	41																			
8	65	53	45	40	64	52	45	39	51	44	39	50	44	39	49	43	39	37																			
9	61	49	41	36	60	48	41	36	47	40	36	46	40	35	45	39	35	34																			
10	57	45	38	33	56	44	37	33	44	37	32	43	37	32	42	36	32	30																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	31423	31423	31423	31423
5°	31471	31631	31405	31224
10°	31496	31824	31357	30995
15°	31470	31992	31283	30704
20°	31363	32121	31135	30307
25°	31121	32143	30855	29736
30°	30669	31980	30346	28929
35°	29935	31534	29533	27833
40°	28883	30722	28346	26464
45°	27514	29538	26848	24863
50°	25884	28195	24750	22276
55°	21342	24563	19440	16640
60°	14812	18069	12696	10482
65°	8016	10663	6058	5357
70°	3815	4536	3334	3318
75°	3071	3474	2542	2669
80°	2336	2841	1736	2020
85°	1447	2264	692	1195

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 30367 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	54.3	4.3
10°-20°	155.9	12.3
20°-30°	235.6	18.6
30°-40°	277.0	21.9
40°-50°	269.8	21.3
50°-60°	190.3	15.0
60°-70°	63.8	5.0
70°-80°	15.4	1.2
80°-90°	3.1	0.2
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°	445.7	35.2
0°-40°	722.8	57.1
0°-60°	1182.8	93.5
0°-90°	1265.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1265.1	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	573	573	573	573	573	
5°	572	575	571	567	572	54
15°	554	564	551	541	554	156
25°	514	531	510	492	514	237
35°	447	471	441	416	447	279
45°	355	381	346	321	355	273
55°	223	257	203	174	223	198
65°	62	82	47	41	62	66
75°	14	16	12	13	14	16
85°	2	4	1	2	2	3
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°	573.2	573.2	573.2	573.2	573.2	573.2	573.2	573.2	573.2	573.2	573.2
0.5°	573.6	573.5	573.1	572.6	573.8	573.9	573.8	573.8	573.5	573.0	572.5
1°	573.6	573.6	573.5	573.0	574.1	574.1	574.0	573.8	573.3	572.8	572.1
1.5°	573.6	573.7	573.6	573.3	574.3	574.3	574.1	573.7	573.0	572.4	571.7
2°	573.5	573.7	573.8	573.7	574.5	574.4	574.1	573.6	572.8	572.1	571.2
2.5°	573.2	573.7	573.9	573.9	574.7	574.4	574.1	573.5	572.6	571.7	570.8
3°	573.1	573.7	574.0	574.1	574.7	574.5	574.1	573.2	572.2	571.3	570.1
3.5°	572.8	573.7	574.1	574.3	574.8	574.5	574.0	573.0	571.9	570.8	569.5
4°	572.6	573.5	574.0	574.4	574.8	574.5	573.9	572.8	571.6	570.2	568.9
4.5°	572.2	573.2	574.0	574.5	574.9	574.4	573.8	572.4	571.1	569.6	568.1
5°	571.9	573.0	573.9	574.5	574.8	574.3	573.5	572.1	570.7	569.0	567.4
5.5°	571.5	572.8	573.7	574.4	574.7	574.1	573.2	571.7	570.1	568.4	566.6
6°	571.1	572.4	573.6	574.4	574.5	573.9	573.0	571.3	569.5	567.7	565.8
6.5°	570.6	572.1	573.2	574.3	574.3	573.7	572.6	570.8	568.9	566.8	564.9
7°	570.0	571.7	572.9	574.1	574.1	573.2	572.3	570.2	568.3	566.1	563.9
7.5°	569.4	571.3	572.6	573.9	573.8	572.9	571.9	569.6	567.5	565.3	562.9
8°	568.8	570.8	572.2	573.7	573.5	572.5	571.4	569.0	566.8	564.3	562.0
8.5°	568.1	570.2	571.9	573.5	573.0	572.1	570.8	568.4	566.0	563.4	560.8
9°	567.3	569.6	571.4	573.0	572.6	571.6	570.2	567.7	565.2	562.4	559.8
9.5°	566.5	569.0	570.9	572.6	572.2	571.1	569.7	566.9	564.2	561.3	558.5
10°	565.8	568.3	570.3	572.2	571.7	570.4	569.0	566.0	563.3	560.3	557.4
10.5°	564.9	567.5	569.7	571.8	571.1	569.7	568.3	565.2	562.3	559.2	556.1
11°	563.9	566.7	569.0	571.2	570.4	569.1	567.5	564.2	561.2	558.0	554.8
11.5°	562.9	565.9	568.4	570.7	569.7	568.3	566.7	563.3	560.2	556.8	553.5
12°	561.9	565.0	567.5	570.0	569.0	567.5	565.9	562.3	559.1	555.5	552.1
12.5°	560.7	564.0	566.7	569.3	568.3	566.7	565.0	561.2	557.8	554.2	550.7
13°	559.6	563.0	565.9	568.6	567.4	565.9	564.0	560.1	556.6	552.8	549.1
13.5°	558.3	562.1	565.0	567.9	566.6	564.9	563.0	559.0	555.3	551.4	547.6
14°	557.1	560.9	564.0	567.0	565.7	563.9	562.0	557.7	554.0	549.9	546.0
14.5°	555.8	559.8	563.0	566.2	564.6	562.9	560.8	556.5	552.5	548.4	544.2
15°	554.5	558.5	562.0	565.2	563.7	561.9	559.7	555.1	551.2	546.9	542.6
15.5°	553.0	557.3	560.8	564.2	562.7	560.6	558.4	553.8	549.6	545.3	540.8
16°	551.6	555.9	559.7	563.2	561.5	559.5	557.1	552.3	548.2	543.6	539.1
16.5°	550.0	554.6	558.3	562.3	560.3	558.2	555.8	550.9	546.5	541.9	537.2
17°	548.4	553.1	557.2	561.0	559.2	556.9	554.5	549.3	544.9	540.1	535.2
17.5°	546.7	551.7	555.8	559.9	557.8	555.5	553.0	547.7	543.1	538.2	533.3
18°	545.1	550.1	554.5	558.6	556.5	554.2	551.5	546.0	541.3	536.4	531.3
18.5°	543.3	548.6	553.0	557.3	555.0	552.6	549.9	544.3	539.6	534.4	529.1
19°	541.4	546.9	551.5	555.9	553.7	551.2	548.4	542.6	537.6	532.4	527.0
19.5°	539.6	545.2	549.9	554.6	552.1	549.5	546.7	540.7	535.6	530.4	524.9
20°	537.6	543.4	548.3	553.1	550.6	547.9	545.1	538.9	533.7	528.2	522.6
20.5°	535.6	541.7	546.7	551.6	548.9	546.1	543.2	536.9	531.6	526.0	520.2
21°	533.6	539.7	545.0	550.0	547.2	544.3	541.3	534.8	529.5	523.8	517.9



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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°	526.8	533.7	539.4	545.1	541.8	538.6	535.4	528.5	522.7	516.7	510.5
23°	524.6	531.6	537.4	543.2	539.8	536.7	533.4	526.2	520.2	514.2	507.7
23.5°	522.2	529.3	535.3	541.3	537.8	534.6	531.2	523.8	517.8	511.6	505.1
24°	519.7	527.0	533.2	539.5	535.7	532.4	528.9	521.5	515.2	509.0	502.3
24.5°	517.2	524.7	531.0	537.4	533.6	530.2	526.6	519.0	512.6	506.2	499.5
25°	514.5	522.2	528.7	535.3	531.4	527.9	524.4	516.5	510.1	503.5	496.6
25.5°	511.8	519.7	526.4	533.2	529.1	525.5	521.9	513.8	507.3	500.7	493.5
26°	509.0	517.1	523.9	531.0	526.7	523.1	519.4	511.1	504.5	497.8	490.5
26.5°	506.3	514.5	521.6	528.7	524.4	520.5	516.9	508.4	501.6	494.7	487.4
27°	503.3	511.7	519.0	526.3	521.9	518.0	514.2	505.5	498.7	491.8	484.2
27.5°	500.4	509.0	516.4	523.9	519.3	515.3	511.4	502.6	495.7	488.7	481.0
28°	497.3	506.2	513.8	521.5	516.6	512.5	508.7	499.7	492.6	485.4	477.5
28.5°	494.3	503.2	511.0	519.0	513.9	509.7	505.8	496.7	489.3	482.2	474.2
29°	491.1	500.2	508.2	516.3	511.1	506.8	502.8	493.6	486.1	478.8	470.7
29.5°	487.8	497.2	505.2	513.6	508.2	503.8	499.8	490.4	482.7	475.4	467.2
30°	484.5	494.0	502.3	510.8	505.2	500.9	496.8	487.1	479.4	471.8	463.4
30.5°	481.2	490.8	499.3	507.9	502.2	497.7	493.5	483.7	475.9	468.2	459.7
31°	477.6	487.6	496.1	505.1	499.1	494.5	490.3	480.3	472.4	464.6	456.0
31.5°	474.1	484.2	492.9	502.0	495.9	491.2	487.1	476.8	468.7	460.9	452.0
32°	470.5	480.6	489.5	498.9	492.7	487.9	483.5	473.2	465.0	457.0	448.1
32.5°	466.8	477.2	486.2	495.7	489.2	484.5	480.0	469.6	461.3	453.1	444.0
33°	463.0	473.6	482.7	492.4	485.8	480.8	476.5	465.9	457.4	449.1	439.9
33.5°	459.2	469.9	479.2	489.0	482.3	477.2	472.9	462.1	453.4	445.0	435.9
34°	455.3	466.2	475.7	485.7	478.8	473.6	469.1	458.2	449.4	440.9	431.5
34.5°	451.4	462.4	471.9	482.2	475.0	469.9	465.3	454.2	445.3	436.7	427.3
35°	447.3	458.6	468.2	478.6	471.2	466.0	461.5	450.3	441.3	432.5	422.8
35.5°	443.2	454.5	464.4	474.9	467.4	462.2	457.4	446.1	437.0	428.0	418.4
36°	438.9	450.5	460.4	471.2	463.5	458.1	453.5	442.0	432.7	423.7	413.7
36.5°	434.8	446.5	456.5	467.4	459.5	453.9	449.4	437.8	428.2	419.1	409.2
37°	430.6	442.3	452.4	463.5	455.4	449.8	445.1	433.5	423.9	414.6	404.5
37.5°	426.2	438.2	448.4	459.5	451.1	445.5	440.9	429.1	419.4	410.0	399.8
38°	421.7	433.8	444.2	455.5	447.0	441.3	436.6	424.6	415.0	405.3	395.0
38.5°	417.2	429.5	439.9	451.3	442.5	436.9	432.2	420.1	410.2	400.6	390.0
39°	412.7	425.0	435.6	447.2	438.3	432.4	427.7	415.5	405.5	395.7	385.1
39.5°	408.2	420.6	431.2	442.8	433.7	427.9	423.1	410.8	400.9	390.7	380.2
40°	403.6	416.1	426.8	438.5	429.3	423.4	418.6	406.3	396.1	385.9	375.1
40.5°	398.8	411.4	422.3	434.0	424.6	418.7	413.9	401.5	391.3	380.9	370.2
41°	394.1	406.8	417.7	429.6	420.0	413.9	409.3	396.7	386.4	375.8	364.9
41.5°	389.4	402.1	413.0	424.9	415.4	409.3	404.4	391.8	381.5	370.8	359.9
42°	384.5	397.5	408.3	420.4	410.6	404.5	399.6	386.9	376.5	365.8	354.7
42.5°	379.6	392.7	403.7	415.7	405.7	399.6	395.0	382.0	371.6	360.7	349.5
43°	374.8	387.8	398.8	411.0	400.9	394.8	390.0	377.1	366.6	355.4	344.1
43.5°	369.9	383.0	394.0	406.2	396.0	389.9	384.9	372.1	361.5	350.2	338.9



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	354.9	368.1	379.3	391.7	381.0	374.8	369.9	356.8	346.3	334.8	323.6
45.5°	349.8	363.1	374.5	386.7	375.9	369.7	364.8	351.7	341.2	329.8	318.6
46°	344.7	358.0	369.4	381.7	370.9	364.5	359.7	346.6	336.0	324.7	313.8
46.5°	339.6	352.9	364.3	376.6	365.8	359.4	354.5	341.4	331.0	319.7	308.8
47°	334.6	347.9	359.2	371.6	360.6	354.5	349.5	336.4	326.1	314.8	303.5
47.5°	329.6	342.9	354.3	366.5	355.6	349.5	344.5	331.5	321.1	309.5	297.9
48°	324.6	337.8	349.1	361.3	350.7	344.4	339.6	326.5	315.7	303.8	291.8
48.5°	319.5	332.8	344.1	356.3	345.7	339.7	334.5	321.2	310.0	297.6	284.9
49°	314.6	327.9	339.0	351.3	340.7	334.5	329.5	315.3	304.0	290.8	277.5
49.5°	309.1	322.7	334.2	346.1	335.7	329.5	324.2	309.3	297.4	283.4	269.5
50°	303.5	317.5	329.1	341.1	330.6	323.9	318.4	302.9	290.2	275.6	261.6
50.5°	297.4	311.8	323.8	336.1	325.1	318.1	312.4	296.0	282.8	268.0	253.6
51°	290.5	305.7	318.1	331.1	319.1	311.7	305.9	288.7	275.1	259.8	245.2
51.5°	282.7	298.8	312.0	325.7	312.9	304.3	298.6	280.7	266.7	251.5	236.8
52°	274.8	291.6	305.6	319.9	305.9	296.9	290.9	272.2	258.1	243.0	228.2
52.5°	266.6	283.8	298.4	313.8	298.2	289.3	283.2	263.5	249.4	234.4	219.7
53°	258.2	275.6	291.0	307.2	290.6	281.2	274.8	254.6	240.5	225.4	211.1
53.5°	249.5	267.1	282.9	300.2	282.4	273.1	266.4	245.4	231.5	216.5	202.5
54°	240.9	258.8	274.4	292.5	274.1	264.8	257.7	236.3	222.2	207.7	194.0
54.5°	232.1	250.0	265.4	284.3	265.5	256.5	248.9	227.3	213.0	198.8	185.3
55°	223.3	241.0	256.4	275.6	257.0	247.9	239.8	217.7	203.4	189.6	176.5
55.5°	214.4	231.7	247.2	266.7	248.2	239.1	230.8	208.6	194.1	180.7	168.0
56°	205.7	222.5	237.7	257.5	239.3	230.1	221.7	199.3	184.7	171.7	159.4
56.5°	196.6	213.2	228.1	248.2	230.2	220.9	212.5	190.4	175.5	162.8	150.9
57°	187.8	203.7	218.4	238.8	220.9	211.8	203.1	181.4	166.5	154.1	142.6
57.5°	178.9	194.3	208.9	229.2	211.5	202.7	194.0	172.6	157.6	145.4	134.6
58°	169.9	184.8	199.5	219.9	202.3	193.4	184.9	163.7	148.7	136.8	126.5
58.5°	161.1	175.3	189.9	210.5	192.9	183.9	175.9	154.9	140.0	128.6	118.5
59°	152.4	166.2	180.4	201.2	183.5	174.4	166.8	146.1	131.8	120.2	110.8
59.5°	143.8	157.0	171.3	192.0	174.1	165.0	157.9	137.8	123.7	112.2	103.5
60°	135.1	148.0	162.4	182.8	164.8	155.8	149.1	129.3	115.8	104.3	96.4
60.5°	126.6	139.3	153.5	173.8	155.7	146.6	140.4	121.2	108.1	97.4	89.4
61°	118.6	130.7	144.4	164.7	146.8	137.6	131.9	113.0	100.6	90.4	82.4
61.5°	110.4	122.3	135.9	156.2	138.1	128.8	123.5	105.3	93.5	83.6	75.3
62°	102.8	114.2	127.6	147.2	129.4	120.1	115.1	98.2	86.5	76.7	68.3
62.5°	95.3	106.3	119.5	138.7	120.8	111.5	106.9	90.9	79.3	69.7	62.3
63°	88.2	98.7	111.6	130.3	112.5	103.4	99.5	83.8	72.3	63.8	56.6
63.5°	81.1	91.3	103.7	122.0	104.4	95.8	92.1	76.7	65.2	58.3	51.3
64°	74.5	84.2	96.2	113.8	97.0	88.4	84.6	69.5	58.6	53.0	46.4
64.5°	68.1	77.4	89.0	105.8	89.6	80.8	77.3	63.1	52.4	48.1	42.0
65°	61.8	71.0	82.0	98.1	82.2	73.3	69.8	57.1	46.7	43.5	38.0
65.5°	55.9	64.7	75.4	90.6	74.8	66.7	63.1	51.4	41.3	39.3	34.5
66°	50.3	59.1	69.0	83.3	67.4	60.3	56.9	46.1	36.8	35.6	31.6



TEST NUMBER: P775737

CATALOG NUMBER: HCDJBL510CSD-HCD61TRMW-1000lm-3500K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	36.4	43.9	51.4	62.9	49.4	43.8	40.8	33.0	26.7	26.9	25.2
68°	33.6	39.6	46.2	56.9	44.0	39.2	36.6	29.8	24.9	25.0	23.7
68.5°	30.9	36.0	41.4	51.1	39.5	34.9	32.8	27.1	23.7	23.3	22.7
69°	28.1	33.3	37.3	45.8	35.1	31.3	29.7	25.0	22.8	22.2	21.8
69.5°	25.3	30.6	34.5	40.8	31.5	28.2	27.0	23.4	21.9	21.2	20.9
70°	23.8	27.8	31.7	36.3	28.3	25.8	25.0	22.3	20.8	20.3	20.0
70.5°	22.8	25.1	29.0	33.4	25.9	23.8	23.4	21.3	19.9	19.4	19.2
71°	21.9	23.3	26.3	30.4	23.9	22.7	22.4	20.4	18.9	18.5	18.3
71.5°	20.9	22.1	23.5	27.5	22.6	21.8	21.4	19.5	17.9	17.6	17.4
72°	20.0	21.1	22.4	24.5	21.6	20.8	20.6	18.5	17.0	16.7	16.6
72.5°	19.0	20.2	21.5	23.0	20.7	19.9	19.7	17.6	16.1	15.8	15.7
73°	18.0	19.3	20.6	22.1	19.9	19.1	18.7	16.7	15.2	15.0	14.9
73.5°	17.1	18.3	19.7	21.1	19.0	18.1	17.9	15.8	14.4	14.2	14.2
74°	16.3	17.4	18.7	20.3	18.0	17.3	17.0	14.9	13.6	13.4	13.4
74.5°	15.3	16.6	17.9	19.4	17.2	16.4	16.2	14.1	12.7	12.5	12.6
75°	14.5	15.6	17.0	18.4	16.4	15.5	15.3	13.3	12.0	11.8	11.9
75.5°	13.7	14.8	16.2	17.6	15.5	14.7	14.5	12.5	11.3	11.1	11.2
76°	12.8	14.0	15.2	16.7	14.7	14.0	13.7	11.7	10.6	10.4	10.6
76.5°	12.1	13.2	14.5	15.8	13.9	13.2	12.9	11.0	9.8	9.6	9.8
77°	11.3	12.4	13.7	15.0	13.2	12.4	12.2	10.3	9.1	9.0	9.2
77.5°	10.6	11.6	12.8	14.2	12.4	11.7	11.5	9.5	8.5	8.4	8.6
78°	9.9	10.9	12.1	13.5	11.7	11.0	10.8	8.9	7.9	7.8	8.0
78.5°	9.2	10.2	11.4	12.6	11.0	10.4	10.0	8.3	7.3	7.0	7.4
79°	8.6	9.5	10.7	11.9	10.3	9.6	9.4	7.7	6.6	6.4	6.8
79.5°	8.0	8.8	9.9	11.3	9.6	9.1	8.8	7.0	6.0	5.9	6.2
80°	7.4	8.2	9.3	10.6	9.0	8.5	8.2	6.4	5.5	5.3	5.6
80.5°	6.7	7.6	8.7	9.8	8.4	7.9	7.6	5.8	5.0	4.8	5.1
81°	6.2	6.9	8.1	9.2	7.8	7.3	6.9	5.3	4.5	4.2	4.7
81.5°	5.7	6.4	7.5	8.6	7.1	6.7	6.3	4.7	3.9	3.7	4.1
82°	5.1	5.8	6.8	8.0	6.5	6.1	5.8	4.2	3.5	3.2	3.6
82.5°	4.6	5.3	6.3	7.5	6.0	5.6	5.3	3.7	3.0	2.8	3.2
83°	4.1	4.8	5.8	6.8	5.5	5.1	4.8	3.2	2.6	2.4	2.8
83.5°	3.6	4.4	5.3	6.3	5.1	4.6	4.2	2.8	2.2	2.0	2.4
84°	3.2	3.8	4.8	5.8	4.6	4.1	3.8	2.4	1.8	1.6	2.0
84.5°	2.8	3.4	4.2	5.3	4.0	3.6	3.3	2.0	1.5	1.2	1.7
85°	2.3	2.9	3.8	4.8	3.6	3.2	2.9	1.7	1.1	1.0	1.3
85.5°	1.9	2.5	3.3	4.2	3.2	2.8	2.5	1.3	0.8	0.8	1.0
86°	1.6	2.1	2.9	3.8	2.8	2.4	2.2	1.1	0.7	0.6	0.7
86.5°	1.1	1.7	2.6	3.4	2.4	2.0	1.8	0.8	0.5	0.4	0.4
87°	0.9	1.3	2.2	3.0	2.0	1.7	1.5	0.6	0.3	0.2	0.2
87.5°	0.7	1.1	1.9	2.6	1.6	1.2	1.1	0.4	0.2	0.1	0.0
88°	0.5	0.9	1.5	2.2	1.2	0.9	0.8	0.2	0.1	0.0	0.0
88.5°	0.3	0.6	1.1	1.8	0.9	0.6	0.5	0.1	0.0	0.0	0.0



TEST NUMBER: P775737
CATALOG NUMBER: HCDJBL510CSD-HCD61TRMW-1000lm-3500K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
90°	0.0	0.1	0.3	0.7	0.1	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P775737

CATALOG NUMBER: HCDJBL510CSD-HCD61TRMW-1000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	573.2	573.2	573.2	573.2	573.2	573.2
0.5°	571.8	573.0	573.2	573.2	573.6	573.6
1°	571.3	572.6	572.8	572.9	573.5	573.6
1.5°	570.7	572.1	572.4	572.6	573.2	573.6
2°	570.0	571.6	572.0	572.2	573.0	573.5
2.5°	569.4	571.0	571.5	571.8	572.7	573.2
3°	568.7	570.3	571.0	571.4	572.4	573.1
3.5°	568.0	569.7	570.3	570.8	572.1	572.8
4°	567.2	569.0	569.7	570.2	571.6	572.6
4.5°	566.4	568.3	569.0	569.6	571.2	572.2
5°	565.5	567.4	568.2	568.9	570.7	571.9
5.5°	564.5	566.6	567.4	568.2	570.1	571.5
6°	563.5	565.7	566.6	567.4	569.5	571.1
6.5°	562.5	564.8	565.8	566.6	568.9	570.6
7°	561.4	563.7	564.9	565.8	568.2	570.0
7.5°	560.3	562.7	563.8	564.9	567.4	569.4
8°	559.2	561.6	562.8	563.9	566.7	568.8
8.5°	557.9	560.5	561.7	562.9	565.9	568.1
9°	556.7	559.4	560.6	561.9	565.0	567.3
9.5°	555.4	558.1	559.5	560.7	564.0	566.5
10°	554.0	556.8	558.2	559.6	563.0	565.8
10.5°	552.6	555.5	557.0	558.3	562.0	564.9
11°	551.1	554.1	555.6	557.1	560.8	563.9
11.5°	549.6	552.6	554.2	555.7	559.8	562.9
12°	548.1	551.2	552.7	554.4	558.6	561.9
12.5°	546.4	549.6	551.3	552.9	557.3	560.7
13°	544.7	548.0	549.7	551.5	556.1	559.6
13.5°	543.0	546.3	548.1	549.9	554.6	558.3
14°	541.2	544.7	546.4	548.4	553.1	557.1
14.5°	539.4	542.9	544.7	546.6	551.7	555.8
15°	537.5	541.0	543.0	545.1	550.2	554.5
15.5°	535.5	539.2	541.1	543.2	548.6	553.0
16°	533.6	537.2	539.3	541.3	546.9	551.6
16.5°	531.5	535.2	537.2	539.5	545.2	550.0
17°	529.3	533.2	535.2	537.5	543.4	548.4
17.5°	527.3	531.0	533.2	535.5	541.7	546.7
18°	525.0	528.9	531.0	533.5	539.8	545.1
18.5°	522.7	526.5	528.8	531.3	537.8	543.3
19°	520.3	524.4	526.5	529.1	535.7	541.4
19.5°	517.8	522.0	524.2	526.8	533.7	539.6
20°	515.3	519.5	521.9	524.6	531.6	537.6
20.5°	512.9	517.1	519.3	522.2	529.4	535.6
21°	510.3	514.4	516.8	519.7	527.1	533.6

TEST NUMBER: P775737

CATALOG NUMBER: HCDJBL510CSD-HCD61TRMW-1000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	502.0	506.3	508.9	511.9	520.0	526.8
23°	499.2	503.6	506.0	509.1	517.5	524.6
23.5°	496.2	500.7	503.2	506.3	514.9	522.2
24°	493.2	497.7	500.3	503.4	512.3	519.7
24.5°	490.2	494.7	497.3	500.5	509.6	517.2
25°	487.0	491.6	494.2	497.6	506.7	514.5
25.5°	483.7	488.5	491.0	494.5	503.8	511.8
26°	480.5	485.2	487.9	491.4	500.9	509.0
26.5°	477.1	482.0	484.6	488.1	497.9	506.3
27°	473.7	478.6	481.3	484.8	494.8	503.3
27.5°	470.3	475.1	477.7	481.6	491.7	500.4
28°	466.8	471.6	474.3	478.2	488.5	497.3
28.5°	463.0	468.0	470.8	474.6	485.2	494.3
29°	459.3	464.4	467.1	471.0	481.9	491.1
29.5°	455.6	460.6	463.4	467.5	478.4	487.8
30°	451.6	457.0	459.6	463.7	474.8	484.5
30.5°	447.8	453.1	455.8	460.0	471.3	481.2
31°	443.8	449.1	451.9	456.1	467.7	477.6
31.5°	439.6	445.3	448.1	452.3	464.0	474.1
32°	435.5	441.3	444.1	448.2	460.1	470.5
32.5°	431.3	437.1	439.9	444.3	456.3	466.8
33°	427.0	433.1	436.0	440.2	452.4	463.0
33.5°	422.6	429.0	431.9	436.1	448.3	459.2
34°	418.3	424.6	427.6	431.9	444.3	455.3
34.5°	413.7	420.2	423.3	427.7	440.1	451.4
35°	409.3	415.9	419.0	423.3	436.0	447.3
35.5°	404.6	411.4	414.7	418.9	431.7	443.2
36°	400.0	407.0	410.2	414.4	427.4	438.9
36.5°	395.3	402.5	405.9	410.0	423.0	434.8
37°	390.6	398.0	401.3	405.5	418.5	430.6
37.5°	385.8	393.3	396.7	401.0	414.1	426.2
38°	381.0	388.7	392.2	396.3	409.6	421.7
38.5°	375.9	384.1	387.5	391.6	405.0	417.2
39°	371.1	379.2	383.0	387.0	400.3	412.7
39.5°	366.1	374.5	378.3	382.3	395.6	408.2
40°	361.1	369.8	373.5	377.6	390.9	403.6
40.5°	356.1	365.0	368.8	372.7	386.2	398.8
41°	351.1	360.1	363.9	367.9	381.4	394.1
41.5°	345.9	355.2	359.1	363.1	376.4	389.4
42°	340.8	350.3	354.3	358.2	371.7	384.5
42.5°	335.6	345.5	349.4	353.3	366.7	379.6
43°	330.6	340.6	344.5	348.5	361.8	374.8
43.5°	325.5	335.5	339.7	343.4	356.9	369.9



TEST NUMBER: P775737

CATALOG NUMBER: HCDJBL510CSD-HCD61TRMW-1000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	310.9	320.7	324.8	328.5	341.8	354.9
45.5°	306.0	315.8	319.9	323.5	336.7	349.8
46°	300.8	310.9	315.0	318.6	331.7	344.7
46.5°	295.4	306.0	310.0	313.6	326.6	339.6
47°	289.6	301.0	305.3	308.7	321.7	334.6
47.5°	283.0	295.5	300.2	303.7	316.8	329.6
48°	275.7	290.0	294.7	298.3	311.8	324.6
48.5°	267.9	283.8	289.0	292.7	306.7	319.5
49°	259.8	276.9	283.2	287.0	301.3	314.6
49.5°	251.6	269.3	276.1	280.4	295.8	309.1
50°	243.4	261.2	268.6	273.1	289.8	303.5
50.5°	234.8	252.9	260.2	265.0	283.0	297.4
51°	226.2	244.5	251.9	256.7	275.3	290.5
51.5°	217.6	235.8	243.1	248.2	267.1	282.7
52°	208.9	227.2	234.6	239.5	258.9	274.8
52.5°	200.4	218.3	225.9	230.7	250.5	266.6
53°	191.7	209.1	216.9	221.9	242.1	258.2
53.5°	183.3	200.3	207.6	212.8	233.4	249.5
54°	174.9	191.4	198.8	203.9	224.7	240.9
54.5°	166.4	182.9	189.8	194.9	215.9	232.1
55°	158.1	174.1	180.7	186.5	207.0	223.3
55.5°	149.8	165.5	172.0	177.7	198.2	214.4
56°	141.8	157.1	163.3	169.1	189.4	205.7
56.5°	134.1	148.7	154.7	160.7	180.7	196.6
57°	126.2	140.6	146.3	152.5	172.0	187.8
57.5°	118.5	132.6	138.0	144.0	163.5	178.9
58°	110.8	124.6	129.9	135.9	155.0	169.9
58.5°	103.8	117.1	122.3	128.2	146.6	161.1
59°	96.9	109.7	114.9	120.5	138.6	152.4
59.5°	90.0	102.4	107.7	113.0	130.6	143.8
60°	83.1	95.6	100.7	105.8	122.9	135.1
60.5°	76.2	88.7	94.0	98.6	115.3	126.6
61°	69.3	82.1	87.4	91.8	107.6	118.6
61.5°	63.3	76.0	81.3	85.0	100.3	110.4
62°	57.5	70.2	75.3	78.8	93.1	102.8
62.5°	52.2	64.5	69.6	72.7	86.2	95.3
63°	47.2	59.3	64.2	66.8	79.5	88.2
63.5°	42.9	54.3	59.1	61.4	73.1	81.1
64°	38.7	49.6	54.4	56.2	66.9	74.5
64.5°	35.2	45.3	49.7	51.5	60.9	68.1
65°	32.3	41.3	45.6	46.9	55.3	61.8
65.5°	29.7	37.6	41.6	42.8	50.1	55.9
66°	27.6	35.0	38.0	38.9	45.5	50.3



TEST NUMBER: P775737

CATALOG NUMBER: HCDJBL510CSD-HCD61TRMW-1000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	22.9	27.3	30.1	30.1	34.8	36.4
68°	22.1	24.8	27.6	28.4	32.4	33.6
68.5°	21.1	23.3	25.0	26.5	29.9	30.9
69°	20.3	22.4	23.4	24.7	27.6	28.1
69.5°	19.5	21.5	22.4	22.8	25.1	25.3
70°	18.6	20.7	21.5	22.0	23.5	23.8
70.5°	17.8	19.8	20.7	21.0	22.4	22.8
71°	17.0	19.0	19.9	20.2	21.4	21.9
71.5°	16.2	18.1	19.1	19.4	20.5	20.9
72°	15.3	17.3	18.1	18.5	19.6	20.0
72.5°	14.6	16.5	17.3	17.7	18.7	19.0
73°	13.9	15.6	16.5	16.9	17.8	18.0
73.5°	13.1	14.9	15.7	16.1	17.0	17.1
74°	12.3	14.1	14.9	15.2	16.1	16.3
74.5°	11.7	13.4	14.2	14.4	15.2	15.3
75°	11.0	12.6	13.5	13.7	14.4	14.5
75.5°	10.4	11.9	12.7	12.9	13.6	13.7
76°	9.6	11.3	12.0	12.2	12.8	12.8
76.5°	9.0	10.6	11.3	11.5	12.0	12.1
77°	8.5	9.9	10.7	10.8	11.3	11.3
77.5°	7.9	9.3	9.9	10.0	10.6	10.6
78°	7.4	8.7	9.3	9.4	9.8	9.9
78.5°	6.7	8.1	8.7	8.8	9.2	9.2
79°	6.2	7.6	8.1	8.2	8.6	8.6
79.5°	5.7	6.9	7.6	7.6	7.9	8.0
80°	5.2	6.4	6.9	7.0	7.4	7.4
80.5°	4.7	5.9	6.4	6.4	6.7	6.7
81°	4.2	5.4	5.9	5.9	6.1	6.2
81.5°	3.7	4.9	5.4	5.4	5.6	5.7
82°	3.3	4.5	4.9	4.9	5.1	5.1
82.5°	2.9	3.9	4.5	4.5	4.6	4.6
83°	2.5	3.5	3.9	3.9	4.0	4.1
83.5°	2.1	3.1	3.5	3.5	3.5	3.6
84°	1.7	2.7	3.1	3.1	3.1	3.2
84.5°	1.2	2.3	2.7	2.7	2.7	2.8
85°	0.9	1.9	2.3	2.3	2.2	2.3
85.5°	0.6	1.5	1.9	1.9	1.9	1.9
86°	0.3	1.0	1.5	1.6	1.6	1.6
86.5°	0.1	0.7	1.1	1.1	1.2	1.1
87°	0.0	0.4	0.7	0.8	0.9	0.9
87.5°	0.0	0.2	0.4	0.5	0.7	0.7
88°	0.0	0.0	0.2	0.2	0.5	0.5
88.5°	0.0	0.0	0.0	0.1	0.3	0.3



TEST NUMBER: P775737

CATALOG NUMBER: HCDJBL510CSD-HCD61TRMW-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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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°	531.4	537.7	543.1	548.5	545.5	542.5	539.5	532.8	527.3	521.5	515.4
22°	529.1	535.7	541.2	546.8	543.7	540.7	537.5	530.7	525.0	519.2	513.0



44°	365.0	378.1	389.3	401.5	391.0	384.8	380.0	367.0	356.4	345.0	333.8
44.5°	359.9	373.0	384.2	396.6	386.0	380.0	374.9	361.9	351.3	340.0	328.7



66.5°	45.3	53.7	62.9	76.4	61.0	54.5	51.0	41.3	32.7	32.3	29.1
67°	40.7	48.6	57.0	69.4	54.9	48.9	45.7	36.9	29.4	29.4	26.9



89°	0.2	0.4	0.8	1.5	0.6	0.3	0.2	0.0	0.0	0.0	0.0
89.5°	0.1	0.2	0.5	1.0	0.3	0.1	0.1	0.0	0.0	0.0	0.0

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21.5°	507.6	511.8	514.2	517.1	524.9	531.4
22°	504.8	509.2	511.6	514.5	522.5	529.1



44°	320.6	330.5	334.7	338.5	351.9	365.0
44.5°	315.7	325.6	329.7	333.4	346.8	359.9

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66.5°	25.7	32.4	35.4	35.4	41.1	45.3
67°	24.1	29.8	32.7	32.4	37.3	40.7

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89°	0.0	0.0	0.0	0.0	0.1	0.2
89.5°	0.0	0.0	0.0	0.0	0.0	0.1

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(END OF REPORT)