

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: P775752

Luminaire Tested: HCDJBL510CSD-HCD62TRH-HCD62TRLWW-1000lm-3500K

Issue Date: 2/13/2024

Test Information

Test Method: LM-79-2019
Report Number: P775752
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2312156B061)
Test Lab:
Issue Date: 2/13/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBL510CSD-HCD62TRH-HCD62TRLWW-1000lm-3500K
Description: 6 INCH ROUND NARROW LENSED WALLWASH KIT
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 3500K CCT
Ballast/Driver: -

Summary

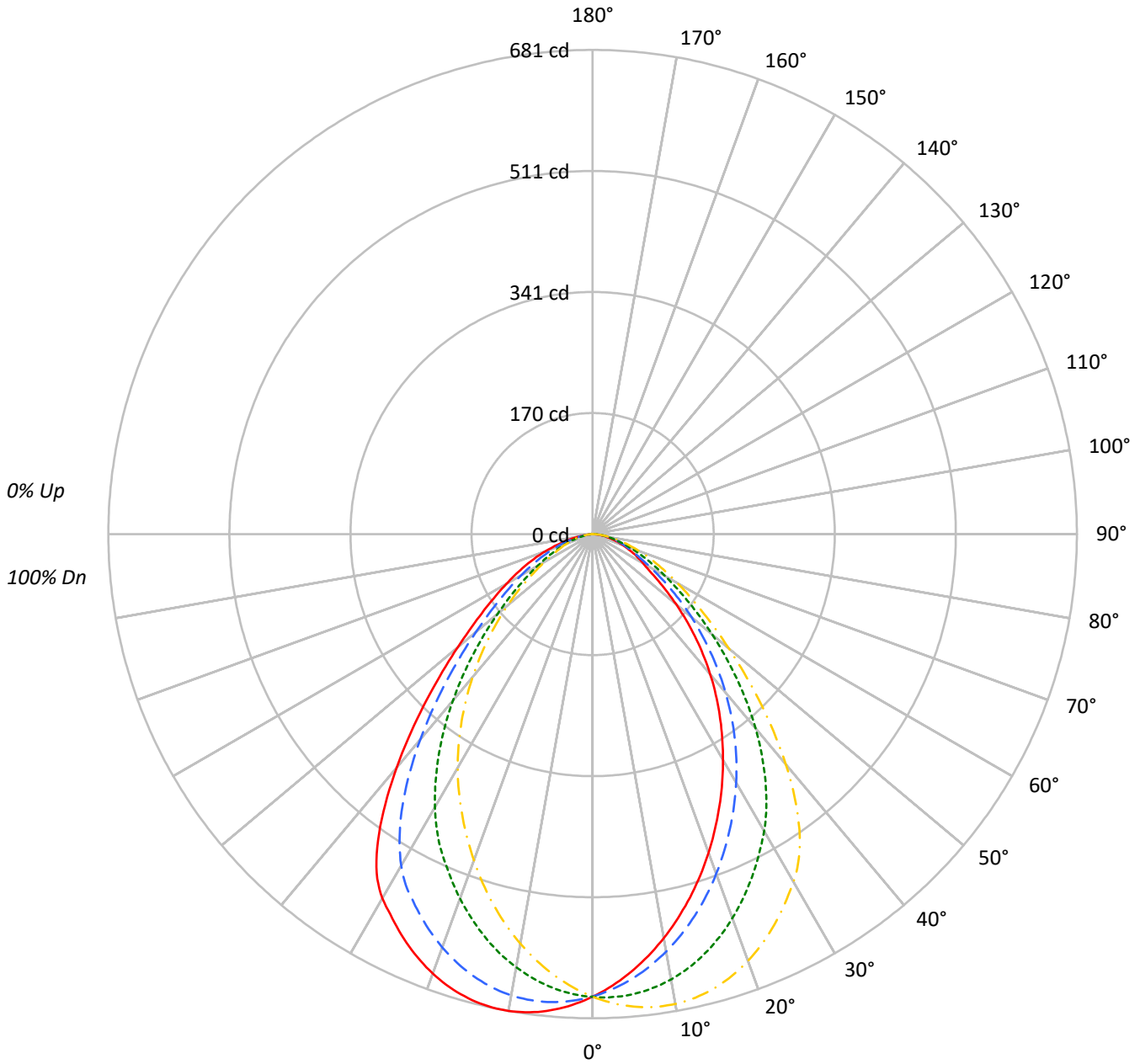
Lumens per Lamp: N/A
Luminaire Lumens: 1181.2 lumens
Efficiency: N/A
Efficacy: 118.1 lumens/watt
Spacing Criteria (0/90/45): 1.11 / 1.09 / 1.15
Luminous Opening: Circular (Dia: 0.5' x H: 0')
CIE Type: Direct

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				100															
1	111	107	103	100	108	105	102	99	101	98	96	97	95	93	93	92	90	88				88															
2	103	96	90	85	100	94	89	84	91	86	82	87	84	81	84	81	79	77				77															
3	95	86	79	74	93	85	78	73	82	76	72	79	74	71	77	73	69	67				67															
4	88	78	70	64	86	76	69	64	74	68	63	72	67	62	70	65	61	60				60															
5	82	71	63	57	80	69	62	57	67	61	56	66	60	55	64	59	55	53				53															
6	76	64	56	51	74	63	56	51	62	55	50	60	54	50	59	53	49	48				48															
7	71	59	51	46	70	58	51	46	57	50	45	55	49	45	54	49	45	43				43															
8	67	54	47	41	65	54	46	41	53	46	41	51	45	41	50	45	41	39				39															
9	63	50	43	38	61	50	43	38	49	42	38	48	42	37	47	41	37	36				36															
10	59	47	40	35	58	46	39	35	45	39	35	44	39	34	44	38	34	33				33															

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	35666	35666	35666	35666
5°	34014	35747	36996	35257
10°	32103	35398	37908	34446
15°	30029	34648	38366	33275
20°	27816	33533	38363	31812
25°	25520	32113	37986	30171
30°	23206	30530	37436	28061
35°	20847	28342	35208	25210
40°	18392	25491	30679	21877
45°	15769	22165	25607	18265
50°	13040	18712	21117	14874
55°	10513	15522	17777	12033
60°	8936	12883	15361	9780
65°	8120	10844	13426	7939
70°	7213	9104	11364	6347
75°	6312	7689	9023	4978
80°	5241	6630	6093	3725
85°	3271	6416	2139	2076

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 157.5°
 Vertical Angle: 45°
 Luminance: 26150 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	61.0	5.2
10°-20°	168.7	14.3
20°-30°	239.0	20.2
30°-40°	254.6	21.6
40°-50°	204.3	17.3
50°-60°	132.7	11.2
60°-70°	76.9	6.5
70°-80°	36.2	3.1
80°-90°	7.9	0.7
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°	468.7	39.7
0°-40°	723.3	61.2
0°-60°	1060.2	89.8
0°-90°	1181.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1181.2	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	651	651	651	651	651	
5°	618	650	672	641	618	58
15°	529	610	676	586	529	148
25°	422	531	628	499	422	194
35°	312	424	526	377	312	194
45°	203	286	330	236	203	157
55°	110	162	186	126	110	100
65°	63	84	104	61	63	62
75°	30	36	43	24	30	32
85°	5	10	3	3	5	7
90°	0	2	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°	650.6	650.6	650.6	650.6	650.6	650.6	650.6	650.6	650.6	650.6	650.6
0.5°	647.9	647.9	648.6	649.8	651.6	652.2	652.9	653.2	653.5	652.7	651.9
1°	645.0	645.4	646.9	648.9	651.8	653.5	654.9	655.8	656.0	654.9	653.4
1.5°	642.0	642.8	644.8	648.0	651.9	654.7	656.9	658.1	658.5	657.0	654.7
2°	638.9	640.0	642.8	646.9	652.0	655.8	658.8	660.4	660.7	659.0	656.0
2.5°	635.6	637.1	640.6	645.6	651.8	656.6	660.5	662.6	663.0	660.8	657.1
3°	632.3	634.2	638.4	644.4	651.6	657.4	662.1	664.7	665.1	662.6	658.0
3.5°	628.9	631.1	636.0	642.9	651.3	658.0	663.5	666.6	667.2	664.2	659.0
4°	625.4	628.0	633.5	641.4	650.9	658.7	664.9	668.5	668.9	665.7	659.6
4.5°	621.8	624.8	630.9	639.7	650.3	659.1	666.1	670.2	670.7	667.1	660.3
5°	618.1	621.4	628.2	637.8	649.6	659.3	667.3	671.8	672.3	668.3	660.7
5.5°	614.3	618.0	625.4	636.1	648.7	659.5	668.2	673.3	673.8	669.4	661.2
6°	610.4	614.4	622.6	634.0	647.8	659.5	669.0	674.5	675.1	670.4	661.4
6.5°	606.5	610.8	619.6	631.9	646.7	659.4	669.8	675.7	676.4	671.3	661.5
7°	602.4	607.1	616.5	629.7	645.5	659.2	670.3	676.7	677.4	671.9	661.5
7.5°	598.4	603.2	613.4	627.3	644.2	658.9	670.7	677.6	678.4	672.5	661.4
8°	594.2	599.4	610.1	624.9	642.7	658.4	671.0	678.4	679.2	673.0	661.2
8.5°	589.9	595.5	606.7	622.4	641.2	657.7	671.2	679.1	679.8	673.3	660.7
9°	585.6	591.3	603.2	619.7	639.5	657.0	671.2	679.5	680.4	673.5	660.2
9.5°	581.2	587.2	599.7	616.9	637.7	656.2	671.1	679.9	680.7	673.6	659.6
10°	576.7	583.1	596.1	614.0	635.9	655.1	670.9	680.1	681.0	673.5	658.9
10.5°	572.2	579.0	592.4	611.1	633.8	654.1	670.6	680.2	681.1	673.2	657.9
11°	567.7	574.7	588.5	608.0	631.7	652.9	670.1	680.1	681.1	672.9	656.9
11.5°	562.9	570.2	584.6	604.9	629.3	651.5	669.4	679.9	680.9	672.3	655.7
12°	558.3	565.8	580.7	601.6	627.1	650.0	668.7	679.6	680.6	671.7	654.4
12.5°	553.5	561.2	576.6	598.2	624.7	648.4	667.8	679.1	680.2	671.0	653.1
13°	548.8	556.8	572.6	594.7	622.1	646.7	666.7	678.5	679.6	670.1	651.5
13.5°	543.8	552.2	568.3	591.3	619.3	644.8	665.5	677.7	678.9	669.1	649.9
14°	539.0	547.5	564.1	587.7	616.5	642.8	664.3	676.8	678.0	668.0	648.1
14.5°	533.9	542.6	559.8	583.9	613.6	640.6	662.8	675.8	677.1	666.6	646.2
15°	529.1	538.0	555.4	580.1	610.5	638.4	661.3	674.6	676.0	665.2	644.3
15.5°	523.8	533.0	550.8	576.1	607.5	636.1	659.6	673.3	674.6	663.6	642.1
16°	518.8	528.1	546.5	572.3	604.2	633.6	657.7	671.8	673.3	662.0	639.9
16.5°	513.7	523.2	541.9	568.1	600.9	631.0	655.8	670.3	671.7	660.2	637.6
17°	508.6	518.3	537.3	564.0	597.3	628.3	653.7	668.5	670.1	658.4	635.3
17.5°	503.3	513.2	532.5	559.7	593.9	625.5	651.5	666.7	668.3	656.3	632.7
18°	498.1	508.2	527.8	555.5	590.2	622.4	649.1	664.7	666.4	654.2	630.0
18.5°	492.7	503.1	523.0	551.0	586.5	619.4	646.7	662.6	664.4	651.9	627.2
19°	487.5	498.0	518.2	546.6	582.6	616.3	644.2	660.4	662.2	649.6	624.4
19.5°	482.1	492.7	513.2	542.1	578.8	613.1	641.5	658.1	659.9	647.1	621.5
20°	476.8	487.6	508.3	537.7	574.8	609.8	638.7	655.7	657.6	644.6	618.5
20.5°	471.3	482.3	503.4	532.9	570.7	606.2	635.8	653.1	655.0	641.9	615.3
21°	466.0	477.1	498.3	528.3	566.5	602.7	632.8	650.5	652.5	639.0	612.0



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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°	449.5	461.1	483.0	513.9	553.8	591.5	623.3	641.9	644.1	630.2	601.9
23°	444.0	455.6	477.8	509.1	549.3	587.6	619.9	638.9	641.1	627.0	598.3
23.5°	438.6	450.3	472.7	504.1	544.8	583.8	616.4	635.6	637.9	623.8	594.6
24°	433.1	444.8	467.4	499.2	540.2	579.5	612.9	632.4	634.7	620.3	590.9
24.5°	427.5	439.5	462.1	494.2	535.6	575.5	609.3	628.9	631.4	616.9	587.1
25°	421.9	434.1	457.0	489.1	530.9	571.3	605.4	625.6	628.0	613.4	583.0
25.5°	416.5	428.5	451.7	483.9	526.3	567.0	601.7	622.0	624.6	609.8	579.2
26°	411.0	423.1	446.3	478.9	521.4	562.7	597.9	618.4	621.0	606.0	575.3
26.5°	405.5	417.6	441.1	474.0	516.7	558.4	593.8	614.5	617.2	602.3	571.3
27°	399.9	412.3	435.8	468.8	511.8	553.9	589.7	610.9	613.5	598.5	567.6
27.5°	394.3	406.8	430.5	463.6	507.0	549.4	585.6	606.9	609.8	595.0	563.7
28°	388.7	401.1	425.2	458.5	502.0	544.8	581.5	603.0	606.0	591.3	559.4
28.5°	383.3	395.6	419.9	453.4	497.3	540.3	577.2	599.1	602.5	587.8	554.7
29°	377.7	390.2	414.5	448.2	492.3	535.7	573.0	595.3	599.1	583.9	549.5
29.5°	372.1	384.8	409.1	442.9	487.4	531.3	569.0	591.5	595.4	579.5	544.1
30°	366.6	379.3	403.7	437.7	482.3	526.6	564.9	587.8	591.4	574.7	538.4
30.5°	361.1	373.8	398.2	432.3	477.2	521.8	560.5	583.8	587.2	569.3	532.4
31°	355.5	368.3	392.8	426.6	471.8	516.7	556.0	579.5	582.4	563.6	525.9
31.5°	350.1	362.9	387.2	421.2	466.2	511.5	551.0	574.5	577.1	557.6	519.2
32°	344.5	357.2	381.8	415.5	460.6	505.8	545.6	569.4	571.4	551.0	512.5
32.5°	339.0	351.7	376.3	409.8	454.7	499.8	539.8	563.8	565.1	544.1	505.3
33°	333.6	346.2	370.6	404.1	448.6	493.6	534.0	557.8	558.3	536.6	497.9
33.5°	328.1	340.7	365.1	398.2	442.6	487.4	527.6	551.0	550.8	528.8	490.2
34°	322.6	335.1	359.4	392.3	436.2	481.0	521.1	543.9	542.8	520.8	482.6
34.5°	317.1	329.7	353.8	386.2	429.9	474.5	514.2	536.2	534.8	512.4	474.3
35°	311.5	324.2	348.1	380.2	423.5	467.5	506.8	528.1	526.1	503.8	466.1
35.5°	306.2	318.7	342.4	374.1	417.0	460.7	499.2	519.8	517.2	494.8	457.7
36°	300.8	313.2	336.7	368.0	410.4	453.6	491.5	511.2	508.0	485.7	449.1
36.5°	295.4	307.7	331.0	361.8	403.8	446.5	483.4	502.2	498.5	476.5	440.4
37°	289.8	302.0	325.2	355.6	397.2	439.1	475.2	493.0	488.8	467.0	431.4
37.5°	284.4	296.5	319.5	349.5	390.5	431.6	466.6	483.7	479.0	457.4	422.4
38°	278.9	291.0	313.6	343.3	383.5	424.4	458.0	474.4	469.1	447.5	413.4
38.5°	273.4	285.5	308.0	337.1	376.9	416.5	449.3	464.7	459.1	438.0	404.3
39°	268.0	279.9	302.3	331.0	369.9	408.8	440.5	455.0	448.9	428.0	395.2
39.5°	262.5	274.5	296.5	324.7	363.1	400.9	431.4	445.1	438.8	418.2	386.2
40°	257.0	269.0	290.6	318.5	356.2	393.3	422.3	435.1	428.7	408.3	376.8
40.5°	251.6	263.5	285.0	312.2	349.0	384.8	413.2	425.2	418.5	398.6	367.7
41°	246.1	258.1	279.2	306.0	342.1	376.9	404.1	415.2	408.4	388.5	358.5
41.5°	240.8	252.8	273.5	299.8	335.0	368.8	395.0	405.1	398.1	379.0	349.5
42°	235.3	247.3	267.8	293.5	328.1	361.0	385.6	395.1	388.2	368.9	340.3
42.5°	230.0	242.0	262.2	287.4	321.0	352.5	376.5	385.4	378.3	359.5	331.6
43°	224.6	236.6	256.5	281.0	313.9	344.6	367.4	375.6	368.4	349.7	322.6
43.5°	219.2	231.2	250.9	275.2	306.9	336.3	358.3	366.0	358.7	340.4	313.8



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	203.4	215.3	234.1	256.6	285.9	312.2	331.4	337.3	330.3	312.9	288.3
45.5°	198.1	210.1	228.6	250.9	278.9	304.2	322.6	328.4	321.0	304.1	280.1
46°	193.0	204.9	223.3	244.9	272.1	296.3	314.0	319.3	312.1	295.3	272.0
46.5°	187.8	199.7	217.8	238.9	265.2	288.6	305.5	310.7	303.2	286.8	264.1
47°	182.6	194.7	212.4	232.8	258.4	281.0	296.8	301.7	294.6	278.5	256.3
47.5°	177.6	189.5	207.1	227.2	251.6	273.2	288.6	293.4	286.2	270.3	248.8
48°	172.5	184.4	201.8	221.4	245.1	265.7	280.6	285.1	278.2	262.4	241.4
48.5°	167.5	179.4	196.5	215.8	238.5	258.5	272.7	277.2	270.3	254.7	234.2
49°	162.6	174.5	191.4	209.9	232.1	251.3	265.0	269.0	262.4	247.4	227.1
49.5°	157.8	169.6	186.3	204.4	225.6	244.0	257.4	261.6	255.1	240.0	220.4
50°	152.9	164.6	181.1	198.8	219.4	237.0	250.0	254.0	247.6	233.0	213.7
50.5°	148.2	159.6	176.1	193.3	213.0	230.2	242.6	246.9	240.4	226.0	207.3
51°	143.6	155.0	171.1	187.9	207.0	223.5	235.8	239.7	233.5	219.4	201.0
51.5°	139.0	150.3	166.2	182.4	201.3	216.9	229.1	232.9	227.0	213.1	195.0
52°	134.6	145.8	161.4	177.2	195.3	210.4	222.2	226.3	220.5	207.0	189.2
52.5°	130.2	141.1	156.5	172.0	189.4	204.0	215.8	220.0	214.2	201.0	183.4
53°	126.0	136.6	151.9	166.8	183.8	198.0	209.5	213.6	208.2	195.1	177.9
53.5°	121.7	132.2	147.0	161.8	178.2	192.0	203.5	207.6	202.2	189.6	172.6
54°	117.8	128.0	142.5	156.8	172.9	186.2	197.6	201.7	196.6	184.2	167.3
54.5°	113.9	123.9	138.2	152.0	167.5	180.5	191.7	196.0	191.1	178.9	162.3
55°	110.0	119.8	133.7	147.2	162.4	175.0	186.3	190.5	186.0	173.9	157.5
55.5°	106.3	115.8	129.4	142.7	157.4	169.7	180.7	185.1	180.7	168.9	152.8
56°	102.9	111.9	125.2	138.0	152.4	164.5	175.4	179.8	175.6	164.3	148.2
56.5°	99.5	108.1	121.0	133.6	147.6	159.4	170.2	174.7	170.7	159.5	143.7
57°	96.2	104.5	116.9	129.3	142.9	154.6	165.1	169.8	166.1	155.1	139.4
57.5°	93.1	100.9	112.7	124.9	138.4	149.7	160.4	164.9	161.4	150.6	135.2
58°	90.4	97.5	109.0	120.9	134.0	145.2	155.6	160.4	156.9	146.5	131.3
58.5°	87.7	94.1	105.2	116.9	129.7	140.8	151.0	155.8	152.6	142.2	127.2
59°	85.4	91.1	101.4	113.0	125.6	136.3	146.6	151.4	148.2	138.1	123.3
59.5°	83.2	88.1	97.8	109.1	121.4	132.0	142.0	147.0	144.1	134.2	119.6
60°	81.5	85.3	94.5	105.4	117.5	127.8	137.8	142.8	140.1	130.4	115.9
60.5°	79.8	82.6	91.1	101.8	113.6	123.8	133.7	138.6	136.1	126.4	112.3
61°	77.9	80.4	87.8	98.3	109.9	119.9	129.7	134.6	132.1	122.7	108.8
61.5°	76.0	78.3	84.8	94.8	106.3	116.0	125.8	130.6	128.4	119.1	105.3
62°	74.1	76.7	81.9	91.6	102.8	112.4	121.8	126.8	124.7	115.6	101.9
62.5°	72.1	74.8	79.0	88.3	99.2	108.7	118.0	123.0	121.0	112.0	98.5
63°	70.1	72.9	76.5	85.2	95.9	105.0	114.3	119.2	117.3	108.5	95.3
63.5°	68.3	71.1	73.8	82.0	92.6	101.7	110.6	115.5	113.7	105.0	92.1
64°	66.3	69.2	71.3	79.3	89.6	98.3	107.1	112.0	110.3	101.8	89.1
64.5°	64.4	67.2	68.9	76.4	86.6	95.1	103.6	108.6	106.8	98.4	86.1
65°	62.6	65.5	66.7	73.6	83.6	91.8	100.3	105.2	103.5	95.3	83.1
65.5°	60.7	63.7	64.5	70.9	80.6	88.8	97.0	101.7	100.1	92.0	80.1
66°	58.8	61.8	62.5	68.3	77.5	85.8	93.7	98.3	96.7	88.9	77.1



TEST NUMBER: P775752

CATALOG NUMBER: HCDJBL510CSD-HCD62TRH-HCD62TRLWW-1000lm-3500K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	53.5	56.5	56.9	60.8	69.4	76.7	84.4	88.8	86.8	79.7	68.7
68°	51.8	54.7	55.2	58.6	66.7	73.9	81.4	85.7	83.6	76.6	65.9
68.5°	50.0	52.9	53.6	56.4	64.1	71.1	78.3	82.6	80.4	73.5	63.3
69°	48.4	51.3	52.0	54.2	61.6	68.3	75.4	79.5	77.1	70.4	60.7
69.5°	46.6	49.6	50.5	52.1	59.2	65.7	72.4	76.2	74.0	67.5	58.1
70°	45.0	48.0	48.9	50.1	56.8	63.0	69.6	73.3	70.9	64.5	55.5
70.5°	43.3	46.3	47.3	48.2	54.5	60.5	66.9	70.3	67.9	61.7	53.1
71°	41.7	44.7	45.8	46.3	52.2	58.0	64.2	67.5	64.9	59.1	50.8
71.5°	40.2	43.1	44.3	44.4	50.0	55.6	61.5	64.5	61.8	56.3	48.3
72°	38.6	41.5	42.8	42.8	47.9	53.2	58.9	61.8	58.9	53.6	46.0
72.5°	37.4	40.0	41.3	41.0	45.8	50.9	56.4	59.1	56.1	50.9	43.7
73°	35.8	38.4	39.9	39.5	43.8	48.7	53.9	56.4	53.4	48.3	41.4
73.5°	34.4	37.4	38.4	37.9	41.9	46.4	51.4	53.8	50.5	45.8	39.3
74°	32.8	35.9	37.6	36.5	40.0	44.3	49.0	51.2	47.9	43.3	37.1
74.5°	31.3	34.4	36.1	35.0	38.1	42.2	46.7	48.6	45.2	40.8	35.0
75°	29.8	32.8	34.6	33.7	36.3	40.1	44.4	46.1	42.6	38.4	32.9
75.5°	28.5	31.3	33.2	32.2	34.5	38.1	42.2	43.7	40.0	36.2	31.0
76°	27.0	29.8	31.6	30.9	32.8	36.3	39.9	41.3	37.4	33.9	29.0
76.5°	25.7	28.5	30.3	29.5	31.2	34.3	37.7	39.0	35.0	31.7	27.0
77°	24.3	27.0	28.9	28.3	29.6	32.4	35.6	36.7	32.6	29.5	25.3
77.5°	23.0	25.7	27.7	27.0	28.0	30.7	33.6	34.5	30.3	27.5	23.4
78°	21.7	24.3	26.3	25.9	26.5	28.9	31.6	32.4	28.0	25.4	21.8
78.5°	20.4	23.0	25.1	24.7	25.1	27.2	29.6	30.3	25.7	23.4	20.0
79°	19.1	21.8	23.8	23.5	23.7	25.6	27.8	28.2	23.5	21.5	18.3
79.5°	17.8	20.4	22.6	22.4	22.3	24.0	25.9	26.3	21.3	19.7	16.8
80°	16.6	19.2	21.3	21.2	21.0	22.5	24.1	24.3	19.3	17.8	15.2
80.5°	15.4	17.9	20.1	20.2	19.8	21.0	22.4	22.5	17.3	16.2	13.8
81°	14.2	16.7	19.0	19.1	18.5	19.6	20.7	20.6	15.3	14.5	12.3
81.5°	12.9	15.4	17.7	17.9	17.4	18.1	19.1	18.8	13.5	12.8	11.0
82°	11.8	14.3	16.6	16.9	16.3	16.8	17.4	16.9	11.7	11.4	9.8
82.5°	10.7	13.1	15.4	15.7	15.1	15.4	15.9	15.1	10.3	10.0	8.6
83°	9.5	11.9	14.3	14.7	14.1	14.3	14.4	13.5	8.8	8.7	7.5
83.5°	8.5	10.8	13.2	13.7	13.1	13.1	13.1	11.9	7.4	7.4	6.3
84°	7.4	9.6	12.1	12.6	12.0	11.8	11.6	10.5	5.9	6.0	5.1
84.5°	6.2	8.5	11.1	11.7	11.1	10.8	10.5	9.0	4.5	4.7	4.2
85°	5.2	7.4	10.0	10.7	10.2	9.7	9.3	7.7	3.4	3.6	3.3
85.5°	4.1	6.3	9.0	9.6	9.2	8.7	8.1	6.2	2.7	2.7	2.6
86°	3.5	5.3	8.1	8.7	8.3	7.8	6.9	4.9	2.1	2.0	1.9
86.5°	2.9	4.5	7.0	7.7	7.5	6.7	5.7	3.8	1.7	1.3	1.2
87°	2.3	3.7	6.1	6.7	6.5	5.7	4.8	3.0	1.2	0.8	0.7
87.5°	1.6	3.1	5.2	5.8	5.7	4.9	3.8	2.2	0.9	0.4	0.3
88°	1.1	2.4	4.2	4.9	4.9	3.9	3.0	1.5	0.6	0.2	0.1
88.5°	0.6	1.8	3.5	3.9	3.9	3.2	2.2	0.9	0.3	0.1	0.0



TEST NUMBER: P775752
CATALOG NUMBER: HCDJBL510CSD-HCD62TRH-HCD62TRLWW-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	1.0	1.5	1.6	1.0	0.4	0.1	0.0	0.0	0.0



TEST NUMBER: P775752

CATALOG NUMBER: HCDJBL510CSD-HCD62TRH-HCD62TRLWW-1000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	650.6	650.6	650.6	650.6	650.6	650.6
0.5°	651.1	650.7	649.3	648.4	647.8	647.9
1°	651.6	650.1	647.7	645.9	644.9	645.0
1.5°	652.0	649.3	645.9	643.3	641.9	642.0
2°	652.2	648.4	644.1	640.7	638.8	638.9
2.5°	652.5	647.5	642.1	637.9	635.7	635.6
3°	652.5	646.3	640.0	635.2	632.4	632.3
3.5°	652.2	645.1	637.8	632.1	628.9	628.9
4°	652.0	643.7	635.5	629.1	625.5	625.4
4.5°	651.7	642.3	633.1	625.9	622.0	621.8
5°	651.2	640.7	630.5	622.7	618.3	618.1
5.5°	650.6	639.1	627.9	619.3	614.4	614.3
6°	649.9	637.2	625.2	615.9	610.7	610.4
6.5°	649.0	635.4	622.3	612.3	606.8	606.5
7°	648.1	633.3	619.4	608.6	602.7	602.4
7.5°	647.0	631.1	616.3	604.9	598.6	598.4
8°	645.7	628.8	613.1	601.1	594.4	594.2
8.5°	644.4	626.4	609.9	597.1	590.2	589.9
9°	643.0	624.0	606.5	593.2	585.9	585.6
9.5°	641.5	621.4	603.0	589.1	581.4	581.2
10°	639.8	618.8	599.5	584.9	577.0	576.7
10.5°	637.9	615.9	595.9	580.7	572.5	572.2
11°	636.1	613.0	592.1	576.3	567.9	567.7
11.5°	634.0	610.0	588.2	572.0	563.3	562.9
12°	631.8	606.9	584.4	567.5	558.5	558.3
12.5°	629.7	603.8	580.3	562.9	553.7	553.5
13°	627.3	600.3	576.3	558.3	548.9	548.8
13.5°	624.9	596.9	572.2	553.6	544.1	543.8
14°	622.2	593.5	567.9	549.0	539.1	539.0
14.5°	619.5	590.0	563.7	544.2	534.1	533.9
15°	616.7	586.3	559.3	539.3	529.1	529.1
15.5°	613.8	582.5	554.9	534.5	523.9	523.8
16°	610.9	578.7	550.2	529.5	518.8	518.8
16.5°	607.7	574.8	545.6	524.5	513.7	513.7
17°	604.6	570.8	541.0	519.4	508.5	508.6
17.5°	601.3	566.8	536.3	514.4	503.3	503.3
18°	597.9	562.5	531.6	509.3	497.9	498.1
18.5°	594.4	558.4	526.7	504.0	492.7	492.7
19°	590.9	554.0	521.9	498.8	487.3	487.5
19.5°	587.4	549.8	516.9	493.6	481.9	482.1
20°	583.6	545.3	512.1	488.4	476.5	476.8
20.5°	579.8	540.9	507.1	483.1	471.1	471.3
21°	575.9	536.3	502.0	477.6	465.7	466.0



TEST NUMBER: P775752

CATALOG NUMBER: HCDJBL510CSD-HCD62TRH-HCD62TRLWW-1000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	563.9	522.3	486.7	461.6	449.2	449.5
23°	559.7	517.7	481.6	456.1	443.7	444.0
23.5°	555.5	512.9	476.4	450.7	438.2	438.6
24°	551.2	508.2	471.4	445.5	432.6	433.1
24.5°	546.9	503.5	466.3	440.1	427.1	427.5
25°	542.6	498.8	461.2	434.4	421.6	421.9
25.5°	538.4	493.9	455.8	429.3	416.1	416.5
26°	534.1	489.2	450.7	423.6	410.7	411.0
26.5°	529.8	484.2	445.6	418.4	405.1	405.5
27°	525.2	478.8	440.2	412.9	399.5	399.9
27.5°	520.3	473.0	434.5	407.5	394.0	394.3
28°	514.9	467.4	428.8	401.9	388.5	388.7
28.5°	509.3	461.4	423.0	396.5	383.0	383.3
29°	503.6	455.6	417.2	390.9	377.4	377.7
29.5°	497.7	449.5	411.4	385.3	371.9	372.1
30°	491.4	443.3	405.4	379.3	366.5	366.6
30.5°	485.0	437.0	399.4	373.9	361.0	361.1
31°	478.5	430.7	393.1	368.0	355.3	355.5
31.5°	471.9	424.1	386.9	362.2	349.8	350.1
32°	464.9	417.5	380.7	356.2	344.3	344.5
32.5°	458.0	410.8	374.5	350.6	338.7	339.0
33°	451.0	404.1	368.2	344.7	333.2	333.6
33.5°	443.8	397.3	361.8	338.8	327.6	328.1
34°	436.3	390.6	355.5	332.9	322.0	322.6
34.5°	428.8	383.3	349.0	327.0	316.3	317.1
35°	421.3	376.7	342.8	321.0	310.7	311.5
35.5°	413.8	369.5	336.3	315.1	305.2	306.2
36°	406.1	362.6	330.2	309.2	299.6	300.8
36.5°	398.1	355.5	323.7	303.4	294.0	295.4
37°	390.0	348.5	317.5	297.5	288.4	289.8
37.5°	382.1	341.5	311.0	291.8	282.9	284.4
38°	374.0	334.2	304.9	285.8	277.2	278.9
38.5°	365.9	327.1	298.5	280.0	271.7	273.4
39°	357.7	320.0	292.1	274.3	266.1	268.0
39.5°	349.5	313.0	285.7	268.5	260.6	262.5
40°	341.4	305.7	279.4	262.5	255.2	257.0
40.5°	333.2	298.6	273.0	256.6	249.7	251.6
41°	325.1	291.4	266.6	250.8	244.3	246.1
41.5°	316.8	284.4	260.2	245.1	238.8	240.8
42°	308.8	277.3	254.1	239.5	233.4	235.3
42.5°	300.7	270.3	247.9	234.0	228.1	230.0
43°	292.8	263.2	241.8	228.4	222.8	224.6
43.5°	284.8	256.2	235.8	222.9	217.6	219.2



TEST NUMBER: P775752

CATALOG NUMBER: HCDJBL510CSD-HCD62TRH-HCD62TRLWW-1000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	261.9	235.6	218.1	206.7	201.6	203.4
45.5°	254.4	228.9	212.2	201.4	196.3	198.1
46°	247.2	222.5	206.6	196.2	191.2	193.0
46.5°	239.8	216.0	200.9	190.9	186.1	187.8
47°	232.6	209.8	195.3	185.9	181.1	182.6
47.5°	225.7	203.5	189.7	180.8	176.2	177.6
48°	219.0	197.4	184.1	175.6	171.3	172.5
48.5°	212.4	191.4	178.6	170.6	166.4	167.5
49°	206.0	185.5	173.4	165.8	161.7	162.6
49.5°	199.5	180.1	168.2	160.8	157.1	157.8
50°	193.5	174.4	163.1	156.0	152.3	152.9
50.5°	187.4	168.9	157.9	151.3	147.6	148.2
51°	181.5	163.6	152.9	146.5	143.3	143.6
51.5°	176.0	158.5	148.1	141.8	138.8	139.0
52°	170.6	153.4	143.5	137.5	134.5	134.6
52.5°	165.1	148.5	138.8	133.0	130.1	130.2
53°	160.0	143.7	134.3	128.6	125.9	126.0
53.5°	154.9	139.0	129.8	124.2	121.6	121.7
54°	150.0	134.5	125.5	120.0	117.5	117.8
54.5°	145.1	130.1	121.3	115.8	113.4	113.9
55°	140.7	125.9	117.3	111.8	109.6	110.0
55.5°	136.1	121.7	113.1	107.8	105.7	106.3
56°	131.8	117.7	109.3	104.0	102.0	102.9
56.5°	127.5	113.7	105.5	100.3	98.3	99.5
57°	123.5	109.9	101.7	96.7	94.8	96.2
57.5°	119.4	106.2	98.2	93.1	91.5	93.1
58°	115.6	102.6	94.7	89.8	88.3	90.4
58.5°	111.8	99.1	91.4	86.5	85.3	87.7
59°	108.1	95.7	88.1	83.4	82.4	85.4
59.5°	104.5	92.4	84.9	80.4	79.7	83.2
60°	101.0	89.2	81.8	77.4	77.2	81.5
60.5°	97.7	86.0	78.7	74.6	74.8	79.8
61°	94.5	83.0	75.9	71.9	72.5	77.9
61.5°	91.2	80.0	73.0	69.3	70.5	76.0
62°	88.2	77.2	70.3	66.9	68.8	74.1
62.5°	85.1	74.3	67.8	64.5	67.0	72.1
63°	82.0	71.5	65.1	62.2	65.3	70.1
63.5°	78.9	68.8	62.6	60.0	63.5	68.3
64°	76.2	66.2	60.2	57.9	61.7	66.3
64.5°	73.5	63.7	57.9	55.9	60.0	64.4
65°	70.7	61.2	55.6	54.0	58.3	62.6
65.5°	68.0	58.7	53.4	52.1	56.7	60.7
66°	65.4	56.4	51.3	50.3	54.9	58.8



TEST NUMBER: P775752

CATALOG NUMBER: HCDJBL510CSD-HCD62TRH-HCD62TRLWW-1000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	57.8	49.6	45.3	45.6	50.0	53.5
68°	55.3	47.6	43.4	44.1	48.4	51.8
68.5°	53.0	45.5	41.6	42.8	46.7	50.0
69°	50.8	43.5	39.9	41.3	45.2	48.4
69.5°	48.5	41.5	38.2	40.0	43.5	46.6
70°	46.3	39.6	36.8	38.6	42.1	45.0
70.5°	44.1	37.8	35.2	37.2	40.5	43.3
71°	42.2	36.2	33.8	35.8	39.0	41.7
71.5°	40.1	34.4	32.3	34.6	37.4	40.2
72°	38.0	32.7	30.8	33.4	35.9	38.6
72.5°	36.2	31.1	29.4	32.1	34.6	37.4
73°	34.3	29.4	28.1	30.9	33.2	35.8
73.5°	32.4	27.8	26.8	29.5	31.8	34.4
74°	30.6	26.3	25.6	28.3	30.4	32.8
74.5°	28.9	24.9	24.4	27.0	29.0	31.3
75°	27.2	23.5	23.3	25.8	27.7	29.8
75.5°	25.6	22.2	22.2	24.7	26.3	28.5
76°	24.0	20.8	21.0	23.4	25.0	27.0
76.5°	22.5	19.6	20.0	22.2	23.7	25.7
77°	21.0	18.3	19.0	21.0	22.4	24.3
77.5°	19.6	17.2	17.9	19.9	21.1	23.0
78°	18.2	16.1	16.9	18.8	19.9	21.7
78.5°	16.8	14.9	15.9	17.6	18.6	20.4
79°	15.5	13.8	14.9	16.5	17.4	19.1
79.5°	14.3	12.7	13.9	15.3	16.2	17.8
80°	13.1	11.8	12.9	14.3	15.0	16.6
80.5°	11.9	10.9	12.0	13.3	13.8	15.4
81°	10.8	9.9	11.1	12.2	12.6	14.2
81.5°	9.7	9.0	10.0	11.2	11.5	12.9
82°	8.8	8.1	9.2	10.2	10.4	11.8
82.5°	7.8	7.3	8.3	9.1	9.2	10.7
83°	6.7	6.4	7.4	8.2	8.1	9.5
83.5°	5.8	5.6	6.5	7.3	7.0	8.5
84°	4.9	4.8	5.6	6.3	6.0	7.4
84.5°	4.0	4.0	4.8	5.5	5.1	6.2
85°	3.3	3.3	3.9	4.6	4.2	5.2
85.5°	2.5	2.6	3.1	3.7	3.6	4.1
86°	1.9	1.8	2.3	3.0	3.0	3.5
86.5°	1.2	1.0	1.6	2.2	2.4	2.9
87°	0.6	0.4	0.7	1.5	1.8	2.3
87.5°	0.2	0.1	0.2	0.6	1.1	1.6
88°	0.0	0.0	0.0	0.1	0.6	1.1
88.5°	0.0	0.0	0.0	0.0	0.2	0.6



TEST NUMBER: P775752

CATALOG NUMBER: HCDJBL510CSD-HCD62TRH-HCD62TRLWW-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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— 0°-180° - - 45°-225° - - - - 90°-270° - · - 135°-315°

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21.5°	460.5	471.8	493.2	523.5	562.3	599.1	629.8	647.7	649.8	636.2	608.7
22°	455.1	466.5	488.1	518.8	558.1	595.3	626.6	644.8	647.0	633.2	605.4



44°	213.9	225.8	245.2	268.9	299.9	328.4	349.2	356.1	348.9	330.9	305.2
44.5°	208.6	220.7	239.6	262.8	293.0	320.1	340.1	346.6	339.7	321.8	296.8



66.5°	57.0	60.0	60.5	65.7	74.8	82.7	90.5	95.1	93.2	85.9	74.2
67°	55.2	58.2	58.6	63.3	72.0	79.7	87.5	92.0	90.0	82.8	71.5



89°	0.3	1.1	2.7	3.1	3.1	2.5	1.5	0.5	0.1	0.0	0.0
89.5°	0.0	0.6	1.9	2.3	2.4	1.8	0.9	0.2	0.0	0.0	0.0

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21.5°	572.1	531.7	496.7	472.3	460.1	460.5
22°	567.9	527.1	491.9	467.0	454.7	455.1



44°	277.0	249.3	229.9	217.3	212.2	213.9
44.5°	269.5	242.5	224.0	212.1	206.9	208.6



66.5°	62.8	54.1	49.2	48.7	53.2	57.0
67°	60.2	51.9	47.2	47.1	51.6	55.2

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89°	0.0	0.0	0.0	0.0	0.1	0.3
89.5°	0.0	0.0	0.0	0.0	0.0	0.0

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(END OF REPORT)