

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: P776380

Luminaire Tested: HCDJBL3040CSD-HCD62TRMW-4000lm-2700K

Issue Date: 2/13/2024

Test Information

Test Method: LM-79-2019
Report Number: P776380
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2312156B057-HCD62TRMW)
Test Lab:
Issue Date: 2/13/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBS3040CSD-HCD62TRMW-4000lm-2700K
Description: 6 INCH ROUND NARROW MATTE WHITE TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 2700K CCT
Ballast/Driver: -

Summary

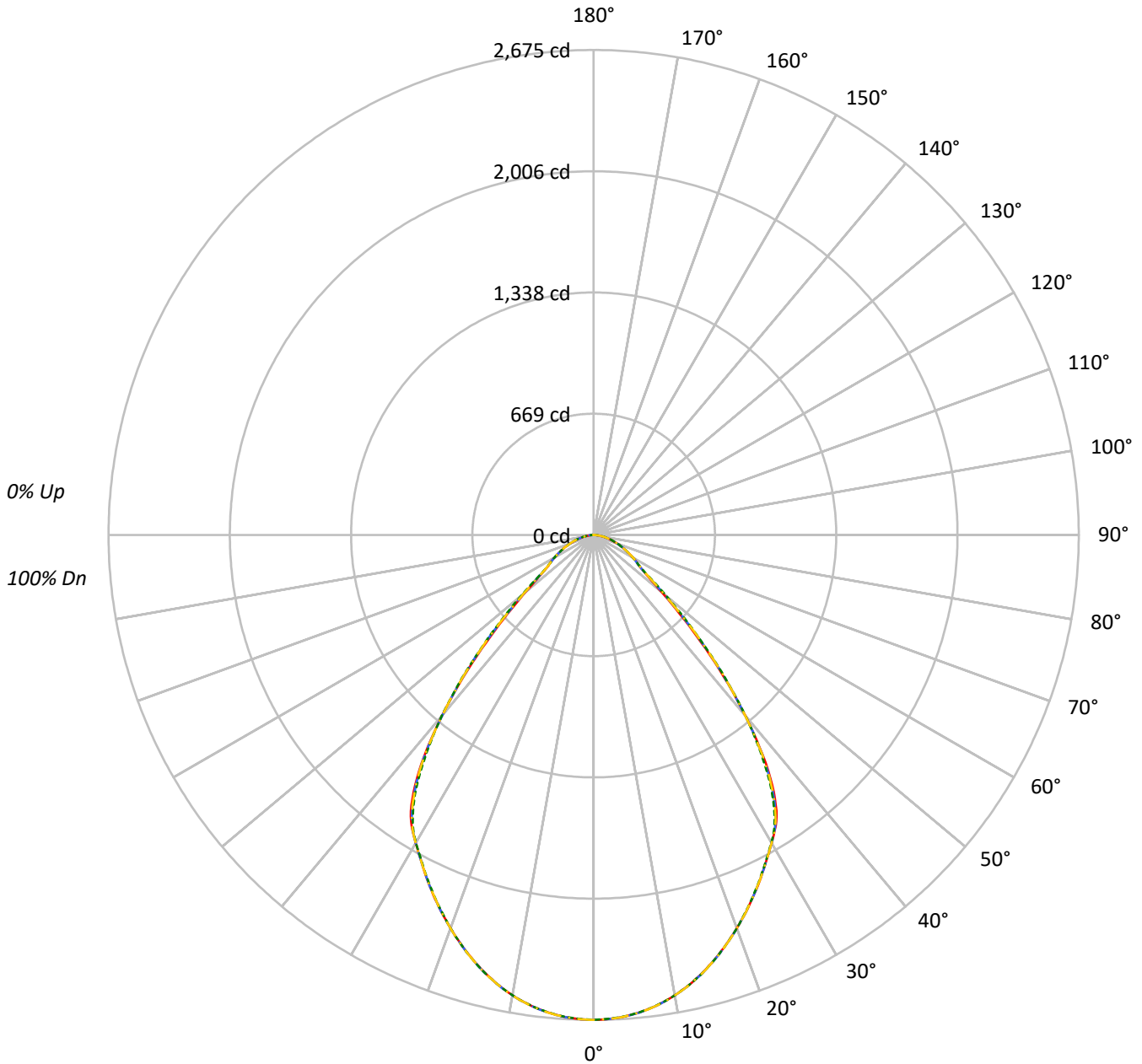
Lumens per Lamp: N/A
Luminaire Lumens: 4258.3 lumens
Efficiency: N/A
Efficacy: 110.6 lumens/watt
Spacing Criteria (0/90/45): 1.11 / 1.11 / 1.14
Luminous Opening: Circular (Dia: 0.5' x H: 0')
CIE Type: Direct

Input Watts (W): 38.5
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



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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					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	100	100	100	100		
	1	112	108	105	102	109	106	103	100	102	99	97	98	96	94	94	93	91	89	89	89	89	89	89		
	2	104	98	92	88	102	96	91	87	92	88	85	89	86	83	86	84	81	79	79	79	79	79	79		
	3	97	89	82	77	95	87	81	76	84	79	75	82	77	74	79	76	73	71	71	71	71	71	71		
	4	90	81	74	68	88	79	73	68	77	71	67	75	70	66	73	69	65	63	63	63	63	63	63		
	5	84	74	66	61	82	73	66	61	71	65	60	69	64	59	67	63	59	57	57	57	57	57	57		
	6	79	68	60	55	77	67	60	55	65	59	54	64	58	54	62	57	53	52	52	52	52	52	52		
	7	74	62	55	50	72	62	55	50	60	54	49	59	53	49	58	53	49	47	47	47	47	47	47		
	8	69	58	51	45	68	57	50	45	56	50	45	55	49	45	54	49	45	43	43	43	43	43	43		
	9	65	54	47	42	64	53	46	42	52	46	41	51	45	41	50	45	41	40	40	40	40	40	40		
	10	62	50	43	38	61	50	43	38	49	43	38	48	42	38	47	42	38	36	36	36	36	36	36		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	146638	146638	146638	146638
5°	145867	145801	145867	145801
10°	143540	143540	143540	143540
15°	139615	139677	139615	139677
20°	134668	134622	134668	134622
25°	129322	129110	129322	129110
30°	124234	124038	124234	124038
35°	115857	114164	115857	114164
40°	92989	93103	92989	93103
45°	65069	67030	65069	67030
50°	41602	44314	41602	44314
55°	30259	30737	30259	30737
60°	27476	27355	27476	27355
65°	24685	24594	24685	24594
70°	21895	22199	21895	22199
75°	19105	20079	19105	20079
80°	15753	17805	15753	17805
85°	9686	14718	9686	14718

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 67030 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	250.8	5.9
10°-20°	691.8	16.2
20°-30°	983.8	23.1
30°-40°	1051.7	24.7
40°-50°	664.5	15.6
50°-60°	302.4	7.1
60°-70°	189.4	4.4
70°-80°	99.5	2.3
80°-90°	24.5	0.6
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°	1926.3	45.2
0°-40°	2978.0	69.9
0°-60°	3944.9	92.6
0°-90°	4258.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4258.3	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2675	2675	2675	2675	2675	
5°	2651	2650	2651	2650	2651	251
15°	2460	2461	2460	2461	2460	692
25°	2138	2134	2138	2134	2138	984
35°	1731	1706	1731	1706	1731	1056
45°	839	865	839	865	839	655
55°	317	322	317	322	317	299
65°	190	190	190	190	190	189
75°	90	95	90	95	90	96
85°	15	23	15	23	15	20
90°	0	1	0	1	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°	2674.9	2674.9	2674.9	2674.9	2674.9	2674.9	2674.9	2674.9	2674.9	2674.9	2674.9
0.5°	2674.5	2674.9	2674.5	2674.5	2673.3	2674.5	2674.5	2674.9	2674.5	2674.9	2674.5
1°	2673.7	2674.1	2674.1	2673.7	2672.6	2673.7	2674.1	2674.1	2673.7	2674.1	2674.1
1.5°	2672.6	2673.0	2672.6	2672.6	2671.4	2672.6	2672.6	2673.0	2672.6	2673.0	2672.6
2°	2671.0	2671.0	2671.0	2671.0	2669.5	2671.0	2671.0	2671.0	2671.0	2671.0	2671.0
2.5°	2668.7	2668.7	2669.1	2668.7	2667.6	2668.7	2669.1	2668.7	2668.7	2668.7	2669.1
3°	2666.0	2666.4	2666.4	2666.4	2664.9	2666.4	2666.4	2666.4	2666.0	2666.4	2666.4
3.5°	2663.0	2663.0	2663.4	2663.4	2661.8	2663.4	2663.4	2663.0	2663.0	2663.0	2663.4
4°	2659.5	2659.5	2659.5	2659.5	2658.4	2659.5	2659.5	2659.5	2659.5	2659.5	2659.5
4.5°	2655.3	2655.7	2655.7	2655.7	2654.2	2655.7	2655.7	2655.7	2655.3	2655.7	2655.7
5°	2650.7	2651.1	2651.1	2651.1	2649.5	2651.1	2651.1	2651.1	2650.7	2651.1	2651.1
5.5°	2645.7	2646.1	2646.1	2646.1	2644.6	2646.1	2646.1	2646.1	2645.7	2646.1	2646.1
6°	2640.3	2640.3	2640.3	2640.3	2639.2	2640.3	2640.3	2640.3	2640.3	2640.3	2640.3
6.5°	2634.2	2634.2	2634.6	2634.6	2633.4	2634.6	2634.6	2634.2	2634.2	2634.2	2634.6
7°	2627.7	2628.1	2628.1	2628.1	2626.9	2628.1	2628.1	2628.1	2627.7	2628.1	2628.1
7.5°	2620.8	2620.8	2621.1	2621.1	2620.0	2621.1	2621.1	2620.8	2620.8	2620.8	2621.1
8°	2613.1	2613.5	2613.9	2613.9	2612.7	2613.9	2613.9	2613.5	2613.1	2613.5	2613.9
8.5°	2605.0	2605.4	2605.8	2605.8	2604.6	2605.8	2605.8	2605.4	2605.0	2605.4	2605.8
9°	2596.6	2597.0	2597.4	2597.7	2596.6	2597.7	2597.4	2597.0	2596.6	2597.0	2597.4
9.5°	2587.8	2588.1	2588.5	2588.9	2587.8	2588.9	2588.5	2588.1	2587.8	2588.1	2588.5
10°	2578.6	2578.6	2578.9	2579.7	2578.6	2579.7	2578.9	2578.6	2578.6	2578.6	2578.9
10.5°	2568.6	2568.6	2569.3	2569.7	2568.6	2569.7	2569.3	2568.6	2568.6	2568.6	2569.3
11°	2558.2	2558.2	2559.0	2559.7	2558.2	2559.7	2559.0	2558.2	2558.2	2558.2	2559.0
11.5°	2547.1	2547.5	2548.2	2549.0	2547.8	2549.0	2548.2	2547.5	2547.1	2547.5	2548.2
12°	2536.0	2536.3	2537.1	2537.9	2536.7	2537.9	2537.1	2536.3	2536.0	2536.3	2537.1
12.5°	2524.4	2524.8	2525.2	2526.0	2525.2	2526.0	2525.2	2524.8	2524.4	2524.8	2525.2
13°	2512.2	2512.5	2513.3	2514.1	2513.3	2514.1	2513.3	2512.5	2512.2	2512.5	2513.3
13.5°	2499.9	2500.3	2501.0	2501.8	2500.6	2501.8	2501.0	2500.3	2499.9	2500.3	2501.0
14°	2486.8	2487.6	2488.4	2488.7	2488.0	2488.7	2488.4	2487.6	2486.8	2487.6	2488.4
14.5°	2473.8	2474.2	2474.9	2475.7	2474.9	2475.7	2474.9	2474.2	2473.8	2474.2	2474.9
15°	2460.0	2460.7	2461.5	2462.3	2461.1	2462.3	2461.5	2460.7	2460.0	2460.7	2461.5
15.5°	2446.1	2446.5	2447.3	2448.1	2446.9	2448.1	2447.3	2446.5	2446.1	2446.5	2447.3
16°	2431.6	2432.3	2433.1	2433.9	2432.7	2433.9	2433.1	2432.3	2431.6	2432.3	2433.1
16.5°	2417.4	2417.8	2418.5	2419.3	2418.1	2419.3	2418.5	2417.8	2417.4	2417.8	2418.5
17°	2402.4	2402.8	2403.6	2404.3	2403.2	2404.3	2403.6	2402.8	2402.4	2402.8	2403.6
17.5°	2387.4	2387.4	2388.2	2389.0	2387.8	2389.0	2388.2	2387.4	2387.4	2387.4	2388.2
18°	2371.7	2372.5	2372.8	2373.2	2372.1	2373.2	2372.8	2372.5	2371.7	2372.5	2372.8
18.5°	2356.0	2356.7	2357.1	2357.5	2356.3	2357.5	2357.1	2356.7	2356.0	2356.7	2357.1
19°	2340.2	2341.0	2341.4	2341.4	2340.6	2341.4	2341.4	2341.0	2340.2	2341.0	2341.4
19.5°	2324.5	2324.9	2325.3	2325.6	2324.5	2325.6	2325.3	2324.9	2324.5	2324.9	2325.3
20°	2308.4	2308.8	2309.1	2309.1	2307.6	2309.1	2309.1	2308.8	2308.4	2308.8	2309.1
20.5°	2292.3	2292.3	2292.3	2292.3	2291.1	2292.3	2292.3	2292.3	2292.3	2292.3	2292.3
21°	2275.0	2275.4	2275.8	2275.4	2274.2	2275.4	2275.8	2275.4	2275.0	2275.4	2275.8



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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°	2225.1	2225.1	2224.7	2224.3	2222.8	2224.3	2224.7	2225.1	2225.1	2225.1	2224.7
23°	2207.8	2207.8	2207.4	2207.1	2205.5	2207.1	2207.4	2207.8	2207.8	2207.8	2207.4
23.5°	2190.6	2190.6	2190.2	2189.4	2188.3	2189.4	2190.2	2190.6	2190.6	2190.6	2190.2
24°	2173.3	2173.3	2172.9	2171.8	2170.2	2171.8	2172.9	2173.3	2173.3	2173.3	2172.9
24.5°	2156.0	2155.6	2155.3	2154.1	2152.6	2154.1	2155.3	2155.6	2156.0	2155.6	2155.3
25°	2138.0	2138.0	2137.6	2136.4	2134.5	2136.4	2137.6	2138.0	2138.0	2138.0	2137.6
25.5°	2120.3	2120.3	2119.9	2118.4	2116.9	2118.4	2119.9	2120.3	2120.3	2120.3	2119.9
26°	2102.7	2102.7	2102.3	2101.1	2099.2	2101.1	2102.3	2102.7	2102.7	2102.7	2102.3
26.5°	2084.6	2084.6	2084.3	2082.7	2081.2	2082.7	2084.3	2084.6	2084.6	2084.6	2084.3
27°	2066.6	2067.0	2066.6	2065.1	2063.1	2065.1	2066.6	2067.0	2066.6	2067.0	2066.6
27.5°	2048.9	2048.9	2048.6	2047.4	2045.5	2047.4	2048.6	2048.9	2048.9	2048.9	2048.6
28°	2030.5	2031.3	2030.9	2029.8	2028.2	2029.8	2030.9	2031.3	2030.5	2031.3	2030.9
28.5°	2013.3	2014.0	2013.6	2012.5	2011.0	2012.5	2013.6	2014.0	2013.3	2014.0	2013.6
29°	1996.0	1996.8	1996.4	1995.6	1993.7	1995.6	1996.4	1996.8	1996.0	1996.8	1996.4
29.5°	1979.1	1979.5	1979.5	1978.3	1976.8	1978.3	1979.5	1979.5	1979.1	1979.5	1979.5
30°	1962.6	1962.6	1962.6	1961.1	1959.5	1961.1	1962.6	1962.6	1962.6	1962.6	1962.6
30.5°	1945.7	1946.1	1945.3	1944.2	1942.3	1944.2	1945.3	1946.1	1945.7	1946.1	1945.3
31°	1929.2	1929.2	1928.4	1926.5	1924.2	1926.5	1928.4	1929.2	1929.2	1929.2	1928.4
31.5°	1911.6	1911.6	1910.0	1908.1	1905.0	1908.1	1910.0	1911.6	1911.6	1911.6	1910.0
32°	1893.5	1892.4	1889.7	1886.2	1882.0	1886.2	1889.7	1892.4	1893.5	1892.4	1889.7
32.5°	1873.9	1871.3	1867.0	1861.3	1856.3	1861.3	1867.0	1871.3	1873.9	1871.3	1867.0
33°	1851.7	1848.6	1841.3	1834.8	1829.4	1834.8	1841.3	1848.6	1851.7	1848.6	1841.3
33.5°	1826.0	1823.3	1813.3	1806.4	1801.0	1806.4	1813.3	1823.3	1826.0	1823.3	1813.3
34°	1796.8	1795.7	1783.8	1776.1	1771.5	1776.1	1783.8	1795.7	1796.8	1795.7	1783.8
34.5°	1765.0	1763.0	1752.3	1743.9	1739.6	1743.9	1752.3	1763.0	1765.0	1763.0	1752.3
35°	1731.2	1728.1	1718.9	1709.7	1705.9	1709.7	1718.9	1728.1	1731.2	1728.1	1718.9
35.5°	1695.5	1691.3	1684.0	1674.4	1669.4	1674.4	1684.0	1691.3	1695.5	1691.3	1684.0
36°	1657.5	1652.1	1647.5	1637.9	1631.8	1637.9	1647.5	1652.1	1657.5	1652.1	1647.5
36.5°	1617.6	1611.8	1608.8	1599.6	1591.9	1599.6	1608.8	1611.8	1617.6	1611.8	1608.8
37°	1575.8	1570.4	1568.1	1559.6	1552.0	1559.6	1568.1	1570.4	1575.8	1570.4	1568.1
37.5°	1532.0	1528.2	1525.9	1519.0	1511.3	1519.0	1525.9	1528.2	1532.0	1528.2	1525.9
38°	1486.7	1484.4	1482.1	1477.5	1471.0	1477.5	1482.1	1484.4	1486.7	1484.4	1482.1
38.5°	1440.3	1440.3	1436.5	1434.9	1429.2	1434.9	1436.5	1440.3	1440.3	1440.3	1436.5
39°	1394.2	1395.0	1391.2	1390.8	1388.5	1390.8	1391.2	1395.0	1394.2	1395.0	1391.2
39.5°	1347.0	1348.2	1344.3	1345.5	1345.1	1345.5	1344.3	1348.2	1347.0	1348.2	1344.3
40°	1299.4	1301.7	1298.3	1300.2	1301.0	1300.2	1298.3	1301.7	1299.4	1301.7	1298.3
40.5°	1251.1	1254.5	1252.2	1255.3	1256.1	1255.3	1252.2	1254.5	1251.1	1254.5	1252.2
41°	1203.9	1207.7	1207.0	1209.6	1212.3	1209.6	1207.0	1207.7	1203.9	1207.7	1207.0
41.5°	1157.1	1159.8	1162.1	1165.5	1166.7	1165.5	1162.1	1159.8	1157.1	1159.8	1162.1
42°	1110.2	1112.5	1117.2	1120.2	1123.3	1120.2	1117.2	1112.5	1110.2	1112.5	1117.2
42.5°	1063.8	1066.1	1072.6	1076.5	1079.2	1076.5	1072.6	1066.1	1063.8	1066.1	1072.6
43°	1017.4	1020.4	1028.9	1032.3	1035.0	1032.3	1028.9	1020.4	1017.4	1020.4	1028.9
43.5°	971.7	974.4	984.8	988.2	990.5	988.2	984.8	974.4	971.7	974.4	984.8



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	839.3	843.9	855.4	861.9	864.6	861.9	855.4	843.9	839.3	843.9	855.4
45.5°	796.7	802.5	814.4	821.7	824.3	821.7	814.4	802.5	796.7	802.5	814.4
46°	756.0	762.6	774.1	782.5	786.0	782.5	774.1	762.6	756.0	762.6	774.1
46.5°	716.5	723.8	734.9	744.5	748.4	744.5	734.9	723.8	716.5	723.8	734.9
47°	678.1	686.2	696.9	707.3	711.5	707.3	696.9	686.2	678.1	686.2	696.9
47.5°	641.7	649.3	660.9	671.6	675.4	671.6	660.9	649.3	641.7	649.3	660.9
48°	607.1	614.8	626.3	637.4	641.7	637.4	626.3	614.8	607.1	614.8	626.3
48.5°	574.9	581.4	592.9	604.4	609.0	604.4	592.9	581.4	574.9	581.4	592.9
49°	543.8	549.9	561.1	573.4	577.6	573.4	561.1	549.9	543.8	549.9	561.1
49.5°	514.6	520.0	531.5	543.0	548.0	543.0	531.5	520.0	514.6	520.0	531.5
50°	487.8	491.6	503.5	515.0	519.6	515.0	503.5	491.6	487.8	491.6	503.5
50.5°	462.8	465.5	477.4	488.2	492.8	488.2	477.4	465.5	462.8	465.5	477.4
51°	439.8	442.1	452.8	462.4	467.8	462.4	452.8	442.1	439.8	442.1	452.8
51.5°	418.3	420.2	430.2	439.0	444.0	439.0	430.2	420.2	418.3	420.2	430.2
52°	398.7	400.7	409.9	417.2	421.4	417.2	409.9	400.7	398.7	400.7	409.9
52.5°	380.7	382.2	390.3	396.4	400.3	396.4	390.3	382.2	380.7	382.2	390.3
53°	364.2	366.9	372.6	377.6	380.7	377.6	372.6	366.9	364.2	366.9	372.6
53.5°	351.1	352.7	356.5	360.7	363.0	360.7	356.5	352.7	351.1	352.7	356.5
54°	338.9	339.3	341.9	345.0	346.9	345.0	341.9	339.3	338.9	339.3	341.9
54.5°	327.7	327.7	328.9	331.2	333.5	331.2	328.9	327.7	327.7	327.7	328.9
55°	316.6	317.0	318.5	320.1	321.6	320.1	318.5	317.0	316.6	317.0	318.5
55.5°	306.2	307.8	309.3	310.5	313.2	310.5	309.3	307.8	306.2	307.8	309.3
56°	299.0	299.7	300.9	301.6	304.7	301.6	300.9	299.7	299.0	299.7	300.9
56.5°	292.8	292.8	292.8	293.6	296.3	293.6	292.8	292.8	292.8	292.8	292.8
57°	287.1	287.1	286.3	285.9	287.8	285.9	286.3	287.1	287.1	287.1	286.3
57.5°	281.7	281.3	280.5	279.8	279.4	279.8	280.5	281.3	281.7	281.3	280.5
58°	275.9	275.5	274.8	274.0	273.2	274.0	274.8	275.5	275.9	275.5	274.8
58.5°	269.8	269.4	268.6	267.9	267.5	267.9	268.6	269.4	269.8	269.4	268.6
59°	263.6	263.3	262.9	262.1	261.3	262.1	262.9	263.3	263.6	263.3	262.9
59.5°	257.1	257.1	256.4	256.0	255.6	256.0	256.4	257.1	257.1	257.1	256.4
60°	250.6	250.6	250.2	249.8	249.5	249.8	250.2	250.6	250.6	250.6	250.2
60.5°	244.1	244.1	243.7	243.3	242.9	243.3	243.7	244.1	244.1	244.1	243.7
61°	237.9	237.9	237.6	237.2	236.8	237.2	237.6	237.9	237.9	237.9	237.6
61.5°	231.8	231.8	231.4	231.0	230.6	231.0	231.4	231.8	231.8	231.8	231.4
62°	225.7	225.7	225.3	224.9	224.5	224.9	225.3	225.7	225.7	225.7	225.3
62.5°	219.5	219.5	219.1	218.7	218.4	218.7	219.1	219.5	219.5	219.5	219.1
63°	213.8	213.4	213.4	212.6	212.6	212.6	213.4	213.4	213.8	213.4	213.4
63.5°	207.6	207.6	207.2	206.9	206.9	206.9	207.2	207.6	207.6	207.6	207.2
64°	201.9	201.9	201.5	201.1	200.7	201.1	201.5	201.9	201.9	201.9	201.5
64.5°	196.1	196.1	195.7	195.3	195.3	195.3	195.7	196.1	196.1	196.1	195.7
65°	190.3	190.7	190.3	190.0	189.6	190.0	190.3	190.7	190.3	190.7	190.3
65.5°	184.6	185.0	185.0	184.6	184.2	184.6	185.0	185.0	184.6	185.0	185.0
66°	179.2	179.6	179.2	178.8	178.8	178.8	179.2	179.6	179.2	179.6	179.2



TEST NUMBER: P776380

CATALOG NUMBER: HCDJBL3040CSD-HCD62TRMW-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	162.7	163.5	163.5	163.1	163.1	163.1	163.5	163.5	162.7	163.5	163.5
68°	157.3	158.1	158.5	158.1	158.1	158.1	158.5	158.1	157.3	158.1	158.5
68.5°	152.4	153.1	153.5	153.1	153.1	153.1	153.5	153.1	152.4	153.1	153.5
69°	147.0	148.1	148.5	148.5	148.1	148.5	148.5	148.1	147.0	148.1	148.5
69.5°	141.6	143.1	143.9	143.5	143.5	143.5	143.9	143.1	141.6	143.1	143.9
70°	136.6	137.8	138.9	138.9	138.5	138.9	138.9	137.8	136.6	137.8	138.9
70.5°	131.6	133.2	134.3	133.9	133.9	133.9	134.3	133.2	131.6	133.2	134.3
71°	127.0	128.6	129.7	129.7	129.3	129.7	129.7	128.6	127.0	128.6	129.7
71.5°	122.0	123.6	125.1	125.1	124.7	125.1	125.1	123.6	122.0	123.6	125.1
72°	117.4	119.0	120.5	120.5	120.1	120.5	120.5	119.0	117.4	119.0	120.5
72.5°	112.8	114.4	116.3	115.9	115.9	115.9	116.3	114.4	112.8	114.4	116.3
73°	107.8	109.8	111.7	111.7	111.3	111.7	111.7	109.8	107.8	109.8	111.7
73.5°	103.2	105.2	107.5	107.5	107.1	107.5	107.5	105.2	103.2	105.2	107.5
74°	99.0	100.5	102.9	103.2	102.9	103.2	102.9	100.5	99.0	100.5	102.9
74.5°	94.4	96.3	98.6	99.0	98.6	99.0	98.6	96.3	94.4	96.3	98.6
75°	90.2	91.7	94.4	94.8	94.8	94.8	94.4	91.7	90.2	91.7	94.4
75.5°	86.0	87.5	90.6	90.6	90.6	90.6	90.6	87.5	86.0	87.5	90.6
76°	81.7	83.3	86.3	86.7	86.7	86.7	86.3	83.3	81.7	83.3	86.3
76.5°	77.5	79.1	82.1	82.9	82.5	82.9	82.1	79.1	77.5	79.1	82.1
77°	73.3	75.2	78.3	79.1	78.7	79.1	78.3	75.2	73.3	75.2	78.3
77.5°	69.1	71.0	74.5	75.2	74.8	75.2	74.5	71.0	69.1	71.0	74.5
78°	65.2	67.2	70.2	71.4	71.0	71.4	70.2	67.2	65.2	67.2	70.2
78.5°	61.4	62.9	66.4	67.5	67.5	67.5	66.4	62.9	61.4	62.9	66.4
79°	57.6	59.1	62.6	63.7	63.7	63.7	62.6	59.1	57.6	59.1	62.6
79.5°	53.7	55.3	59.1	60.3	60.3	60.3	59.1	55.3	53.7	55.3	59.1
80°	49.9	51.4	55.3	56.4	56.4	56.4	55.3	51.4	49.9	51.4	55.3
80.5°	46.4	48.0	51.8	53.0	53.0	53.0	51.8	48.0	46.4	48.0	51.8
81°	42.6	44.1	48.0	49.5	49.5	49.5	48.0	44.1	42.6	44.1	48.0
81.5°	39.1	40.3	44.5	46.1	46.1	46.1	44.5	40.3	39.1	40.3	44.5
82°	35.7	36.8	41.1	42.6	42.6	42.6	41.1	36.8	35.7	36.8	41.1
82.5°	31.9	33.4	37.6	39.5	39.5	39.5	37.6	33.4	31.9	33.4	37.6
83°	28.4	29.9	34.2	36.1	36.1	36.1	34.2	29.9	28.4	29.9	34.2
83.5°	24.9	26.5	31.1	33.0	32.6	33.0	31.1	26.5	24.9	26.5	31.1
84°	21.9	23.0	28.0	29.6	29.6	29.6	28.0	23.0	21.9	23.0	28.0
84.5°	18.4	19.6	24.9	26.5	26.5	26.5	24.9	19.6	18.4	19.6	24.9
85°	15.4	16.5	21.9	23.4	23.4	23.4	21.9	16.5	15.4	16.5	21.9
85.5°	12.3	13.8	18.8	20.3	20.3	20.3	18.8	13.8	12.3	13.8	18.8
86°	10.0	11.1	16.1	17.3	17.3	17.3	16.1	11.1	10.0	11.1	16.1
86.5°	8.1	9.2	13.0	14.2	14.6	14.2	13.0	9.2	8.1	9.2	13.0
87°	6.1	7.3	10.7	11.5	11.5	11.5	10.7	7.3	6.1	7.3	10.7
87.5°	4.6	5.4	8.1	8.8	8.8	8.8	8.1	5.4	4.6	5.4	8.1
88°	3.1	3.8	5.8	6.1	6.5	6.1	5.8	3.8	3.1	3.8	5.8
88.5°	1.5	2.3	3.8	4.6	5.0	4.6	3.8	2.3	1.5	2.3	3.8



TEST NUMBER: P776380

CATALOG NUMBER: HCDJBL3040CSD-HCD62TRMW-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
90°	0.0	0.4	0.4	0.8	1.2	0.8	0.4	0.4	0.0	0.4	0.4



TEST NUMBER: P776380

CATALOG NUMBER: HCDJBL3040CSD-HCD62TRMW-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2674.9	2674.9	2674.9	2674.9	2674.9	2674.9
0.5°	2674.5	2673.3	2674.5	2674.5	2674.9	2674.5
1°	2673.7	2672.6	2673.7	2674.1	2674.1	2673.7
1.5°	2672.6	2671.4	2672.6	2672.6	2673.0	2672.6
2°	2671.0	2669.5	2671.0	2671.0	2671.0	2671.0
2.5°	2668.7	2667.6	2668.7	2669.1	2668.7	2668.7
3°	2666.4	2664.9	2666.4	2666.4	2666.4	2666.0
3.5°	2663.4	2661.8	2663.4	2663.4	2663.0	2663.0
4°	2659.5	2658.4	2659.5	2659.5	2659.5	2659.5
4.5°	2655.7	2654.2	2655.7	2655.7	2655.7	2655.3
5°	2651.1	2649.5	2651.1	2651.1	2651.1	2650.7
5.5°	2646.1	2644.6	2646.1	2646.1	2646.1	2645.7
6°	2640.3	2639.2	2640.3	2640.3	2640.3	2640.3
6.5°	2634.6	2633.4	2634.6	2634.6	2634.2	2634.2
7°	2628.1	2626.9	2628.1	2628.1	2628.1	2627.7
7.5°	2621.1	2620.0	2621.1	2621.1	2620.8	2620.8
8°	2613.9	2612.7	2613.9	2613.9	2613.5	2613.1
8.5°	2605.8	2604.6	2605.8	2605.8	2605.4	2605.0
9°	2597.7	2596.6	2597.7	2597.4	2597.0	2596.6
9.5°	2588.9	2587.8	2588.9	2588.5	2588.1	2587.8
10°	2579.7	2578.6	2579.7	2578.9	2578.6	2578.6
10.5°	2569.7	2568.6	2569.7	2569.3	2568.6	2568.6
11°	2559.7	2558.2	2559.7	2559.0	2558.2	2558.2
11.5°	2549.0	2547.8	2549.0	2548.2	2547.5	2547.1
12°	2537.9	2536.7	2537.9	2537.1	2536.3	2536.0
12.5°	2526.0	2525.2	2526.0	2525.2	2524.8	2524.4
13°	2514.1	2513.3	2514.1	2513.3	2512.5	2512.2
13.5°	2501.8	2500.6	2501.8	2501.0	2500.3	2499.9
14°	2488.7	2488.0	2488.7	2488.4	2487.6	2486.8
14.5°	2475.7	2474.9	2475.7	2474.9	2474.2	2473.8
15°	2462.3	2461.1	2462.3	2461.5	2460.7	2460.0
15.5°	2448.1	2446.9	2448.1	2447.3	2446.5	2446.1
16°	2433.9	2432.7	2433.9	2433.1	2432.3	2431.6
16.5°	2419.3	2418.1	2419.3	2418.5	2417.8	2417.4
17°	2404.3	2403.2	2404.3	2403.6	2402.8	2402.4
17.5°	2389.0	2387.8	2389.0	2388.2	2387.4	2387.4
18°	2373.2	2372.1	2373.2	2372.8	2372.5	2371.7
18.5°	2357.5	2356.3	2357.5	2357.1	2356.7	2356.0
19°	2341.4	2340.6	2341.4	2341.4	2341.0	2340.2
19.5°	2325.6	2324.5	2325.6	2325.3	2324.9	2324.5
20°	2309.1	2307.6	2309.1	2309.1	2308.8	2308.4
20.5°	2292.3	2291.1	2292.3	2292.3	2292.3	2292.3
21°	2275.4	2274.2	2275.4	2275.8	2275.4	2275.0

TEST NUMBER: P776380

CATALOG NUMBER: HCDJBL3040CSD-HCD62TRMW-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	2224.3	2222.8	2224.3	2224.7	2225.1	2225.1
23°	2207.1	2205.5	2207.1	2207.4	2207.8	2207.8
23.5°	2189.4	2188.3	2189.4	2190.2	2190.6	2190.6
24°	2171.8	2170.2	2171.8	2172.9	2173.3	2173.3
24.5°	2154.1	2152.6	2154.1	2155.3	2155.6	2156.0
25°	2136.4	2134.5	2136.4	2137.6	2138.0	2138.0
25.5°	2118.4	2116.9	2118.4	2119.9	2120.3	2120.3
26°	2101.1	2099.2	2101.1	2102.3	2102.7	2102.7
26.5°	2082.7	2081.2	2082.7	2084.3	2084.6	2084.6
27°	2065.1	2063.1	2065.1	2066.6	2067.0	2066.6
27.5°	2047.4	2045.5	2047.4	2048.6	2048.9	2048.9
28°	2029.8	2028.2	2029.8	2030.9	2031.3	2030.5
28.5°	2012.5	2011.0	2012.5	2013.6	2014.0	2013.3
29°	1995.6	1993.7	1995.6	1996.4	1996.8	1996.0
29.5°	1978.3	1976.8	1978.3	1979.5	1979.5	1979.1
30°	1961.1	1959.5	1961.1	1962.6	1962.6	1962.6
30.5°	1944.2	1942.3	1944.2	1945.3	1946.1	1945.7
31°	1926.5	1924.2	1926.5	1928.4	1929.2	1929.2
31.5°	1908.1	1905.0	1908.1	1910.0	1911.6	1911.6
32°	1886.2	1882.0	1886.2	1889.7	1892.4	1893.5
32.5°	1861.3	1856.3	1861.3	1867.0	1871.3	1873.9
33°	1834.8	1829.4	1834.8	1841.3	1848.6	1851.7
33.5°	1806.4	1801.0	1806.4	1813.3	1823.3	1826.0
34°	1776.1	1771.5	1776.1	1783.8	1795.7	1796.8
34.5°	1743.9	1739.6	1743.9	1752.3	1763.0	1765.0
35°	1709.7	1705.9	1709.7	1718.9	1728.1	1731.2
35.5°	1674.4	1669.4	1674.4	1684.0	1691.3	1695.5
36°	1637.9	1631.8	1637.9	1647.5	1652.1	1657.5
36.5°	1599.6	1591.9	1599.6	1608.8	1611.8	1617.6
37°	1559.6	1552.0	1559.6	1568.1	1570.4	1575.8
37.5°	1519.0	1511.3	1519.0	1525.9	1528.2	1532.0
38°	1477.5	1471.0	1477.5	1482.1	1484.4	1486.7
38.5°	1434.9	1429.2	1434.9	1436.5	1440.3	1440.3
39°	1390.8	1388.5	1390.8	1391.2	1395.0	1394.2
39.5°	1345.5	1345.1	1345.5	1344.3	1348.2	1347.0
40°	1300.2	1301.0	1300.2	1298.3	1301.7	1299.4
40.5°	1255.3	1256.1	1255.3	1252.2	1254.5	1251.1
41°	1209.6	1212.3	1209.6	1207.0	1207.7	1203.9
41.5°	1165.5	1166.7	1165.5	1162.1	1159.8	1157.1
42°	1120.2	1123.3	1120.2	1117.2	1112.5	1110.2
42.5°	1076.5	1079.2	1076.5	1072.6	1066.1	1063.8
43°	1032.3	1035.0	1032.3	1028.9	1020.4	1017.4
43.5°	988.2	990.5	988.2	984.8	974.4	971.7



TEST NUMBER: P776380

CATALOG NUMBER: HCDJBL3040CSD-HCD62TRMW-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	861.9	864.6	861.9	855.4	843.9	839.3
45.5°	821.7	824.3	821.7	814.4	802.5	796.7
46°	782.5	786.0	782.5	774.1	762.6	756.0
46.5°	744.5	748.4	744.5	734.9	723.8	716.5
47°	707.3	711.5	707.3	696.9	686.2	678.1
47.5°	671.6	675.4	671.6	660.9	649.3	641.7
48°	637.4	641.7	637.4	626.3	614.8	607.1
48.5°	604.4	609.0	604.4	592.9	581.4	574.9
49°	573.4	577.6	573.4	561.1	549.9	543.8
49.5°	543.0	548.0	543.0	531.5	520.0	514.6
50°	515.0	519.6	515.0	503.5	491.6	487.8
50.5°	488.2	492.8	488.2	477.4	465.5	462.8
51°	462.4	467.8	462.4	452.8	442.1	439.8
51.5°	439.0	444.0	439.0	430.2	420.2	418.3
52°	417.2	421.4	417.2	409.9	400.7	398.7
52.5°	396.4	400.3	396.4	390.3	382.2	380.7
53°	377.6	380.7	377.6	372.6	366.9	364.2
53.5°	360.7	363.0	360.7	356.5	352.7	351.1
54°	345.0	346.9	345.0	341.9	339.3	338.9
54.5°	331.2	333.5	331.2	328.9	327.7	327.7
55°	320.1	321.6	320.1	318.5	317.0	316.6
55.5°	310.5	313.2	310.5	309.3	307.8	306.2
56°	301.6	304.7	301.6	300.9	299.7	299.0
56.5°	293.6	296.3	293.6	292.8	292.8	292.8
57°	285.9	287.8	285.9	286.3	287.1	287.1
57.5°	279.8	279.4	279.8	280.5	281.3	281.7
58°	274.0	273.2	274.0	274.8	275.5	275.9
58.5°	267.9	267.5	267.9	268.6	269.4	269.8
59°	262.1	261.3	262.1	262.9	263.3	263.6
59.5°	256.0	255.6	256.0	256.4	257.1	257.1
60°	249.8	249.5	249.8	250.2	250.6	250.6
60.5°	243.3	242.9	243.3	243.7	244.1	244.1
61°	237.2	236.8	237.2	237.6	237.9	237.9
61.5°	231.0	230.6	231.0	231.4	231.8	231.8
62°	224.9	224.5	224.9	225.3	225.7	225.7
62.5°	218.7	218.4	218.7	219.1	219.5	219.5
63°	212.6	212.6	212.6	213.4	213.4	213.8
63.5°	206.9	206.9	206.9	207.2	207.6	207.6
64°	201.1	200.7	201.1	201.5	201.9	201.9
64.5°	195.3	195.3	195.3	195.7	196.1	196.1
65°	190.0	189.6	190.0	190.3	190.7	190.3
65.5°	184.6	184.2	184.6	185.0	185.0	184.6
66°	178.8	178.8	178.8	179.2	179.6	179.2



TEST NUMBER: P776380

CATALOG NUMBER: HCDJBL3040CSD-HCD62TRMW-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	163.1	163.1	163.1	163.5	163.5	162.7
68°	158.1	158.1	158.1	158.5	158.1	157.3
68.5°	153.1	153.1	153.1	153.5	153.1	152.4
69°	148.5	148.1	148.5	148.5	148.1	147.0
69.5°	143.5	143.5	143.5	143.9	143.1	141.6
70°	138.9	138.5	138.9	138.9	137.8	136.6
70.5°	133.9	133.9	133.9	134.3	133.2	131.6
71°	129.7	129.3	129.7	129.7	128.6	127.0
71.5°	125.1	124.7	125.1	125.1	123.6	122.0
72°	120.5	120.1	120.5	120.5	119.0	117.4
72.5°	115.9	115.9	115.9	116.3	114.4	112.8
73°	111.7	111.3	111.7	111.7	109.8	107.8
73.5°	107.5	107.1	107.5	107.5	105.2	103.2
74°	103.2	102.9	103.2	102.9	100.5	99.0
74.5°	99.0	98.6	99.0	98.6	96.3	94.4
75°	94.8	94.8	94.8	94.4	91.7	90.2
75.5°	90.6	90.6	90.6	90.6	87.5	86.0
76°	86.7	86.7	86.7	86.3	83.3	81.7
76.5°	82.9	82.5	82.9	82.1	79.1	77.5
77°	79.1	78.7	79.1	78.3	75.2	73.3
77.5°	75.2	74.8	75.2	74.5	71.0	69.1
78°	71.4	71.0	71.4	70.2	67.2	65.2
78.5°	67.5	67.5	67.5	66.4	62.9	61.4
79°	63.7	63.7	63.7	62.6	59.1	57.6
79.5°	60.3	60.3	60.3	59.1	55.3	53.7
80°	56.4	56.4	56.4	55.3	51.4	49.9
80.5°	53.0	53.0	53.0	51.8	48.0	46.4
81°	49.5	49.5	49.5	48.0	44.1	42.6
81.5°	46.1	46.1	46.1	44.5	40.3	39.1
82°	42.6	42.6	42.6	41.1	36.8	35.7
82.5°	39.5	39.5	39.5	37.6	33.4	31.9
83°	36.1	36.1	36.1	34.2	29.9	28.4
83.5°	33.0	32.6	33.0	31.1	26.5	24.9
84°	29.6	29.6	29.6	28.0	23.0	21.9
84.5°	26.5	26.5	26.5	24.9	19.6	18.4
85°	23.4	23.4	23.4	21.9	16.5	15.4
85.5°	20.3	20.3	20.3	18.8	13.8	12.3
86°	17.3	17.3	17.3	16.1	11.1	10.0
86.5°	14.2	14.6	14.2	13.0	9.2	8.1
87°	11.5	11.5	11.5	10.7	7.3	6.1
87.5°	8.8	8.8	8.8	8.1	5.4	4.6
88°	6.1	6.5	6.1	5.8	3.8	3.1
88.5°	4.6	5.0	4.6	3.8	2.3	1.5



TEST NUMBER: P776380

CATALOG NUMBER: HCDJBL3040CSD-HCD62TRMW-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
90°	0.8	1.2	0.8	0.4	0.4	0.0



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Cooper Lighting Solutions Photometric Lab
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Peachtree City, GA 30269

Scaled Data Report





— 0°-180° - - 45°-225° - - - - 90°-270° - · - 135°-315°

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21.5°	2258.5	2258.9	2258.5	2258.5	2257.3	2258.5	2258.5	2258.9	2258.5	2258.9	2258.5
22°	2242.0	2242.0	2242.0	2241.2	2240.1	2241.2	2242.0	2242.0	2242.0	2242.0	2242.0



44°	926.4	929.1	940.6	945.6	947.9	945.6	940.6	929.1	926.4	929.1	940.6
44.5°	881.9	886.1	897.3	903.4	905.7	903.4	897.3	886.1	881.9	886.1	897.3



66.5°	173.5	174.2	174.2	173.8	173.5	173.8	174.2	174.2	173.5	174.2	174.2
67°	168.1	168.9	168.9	168.5	168.1	168.5	168.9	168.9	168.1	168.9	168.9



89°	0.8	1.2	2.3	3.1	3.5	3.1	2.3	1.2	0.8	1.2	2.3
89.5°	0.4	0.4	1.2	1.9	2.3	1.9	1.2	0.4	0.4	0.4	1.2

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21.5°	2258.5	2257.3	2258.5	2258.5	2258.9	2258.5
22°	2241.2	2240.1	2241.2	2242.0	2242.0	2242.0

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44°	945.6	947.9	945.6	940.6	929.1	926.4
44.5°	903.4	905.7	903.4	897.3	886.1	881.9

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66.5°	173.8	173.5	173.8	174.2	174.2	173.5
67°	168.5	168.1	168.5	168.9	168.9	168.1

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89°	3.1	3.5	3.1	2.3	1.2	0.8
89.5°	1.9	2.3	1.9	1.2	0.4	0.4

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(END OF REPORT)