

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: P776386

Luminaire Tested: HCDJBL3040CSD-HCD6TRC-4000lm-3000K

Issue Date: 2/7/2024

Test Information

Test Method: LM-79-2019
Report Number: P776386
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2310613A001)
Test Lab:
Issue Date: 2/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBS3040CSD-HCD6TRC-4000lm-3000K
Description: 6 INCH ROUND MEDIUM SPECULAR CLEAR TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 3000K CCT
Ballast/Driver: -

Summary

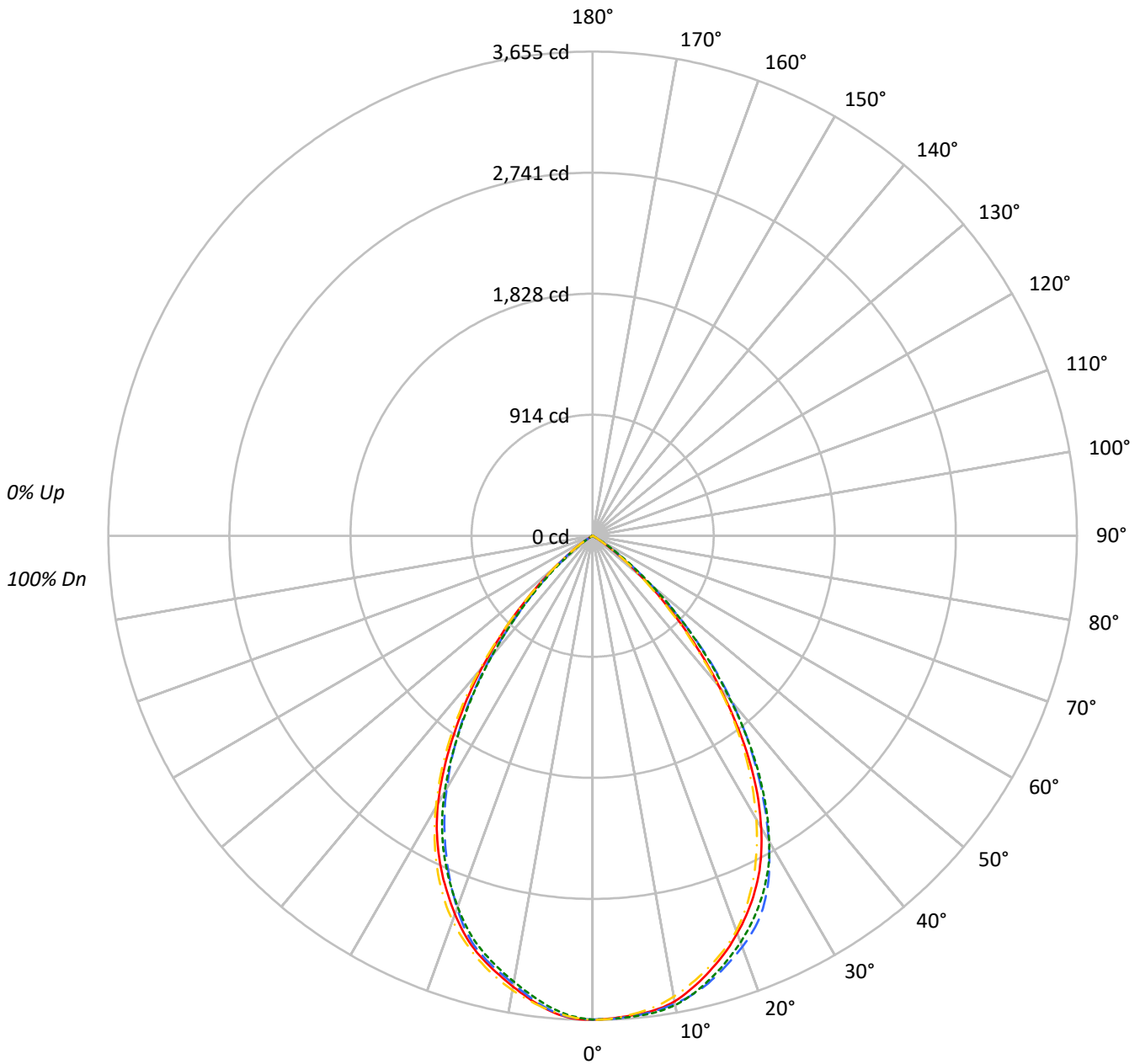
Lumens per Lamp: N/A
Luminaire Lumens: 4615.9 lumens
Efficiency: N/A
Efficacy: 119.9 lumens/watt
Spacing Criteria (0/90/45): 1.05 / 1.05 / 1.05
Luminous Opening: Circular (Dia: 0.5' x H: 0')
CIE Type: Direct

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				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	0
RCR																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100	100
1	113	110	107	105	110	108	105	103	104	102	100	100	98	97	97	95	94	92	92	92	92
2	107	101	97	93	104	99	95	92	96	93	90	93	90	88	90	88	86	84	84	84	84
3	100	93	88	83	98	92	87	83	89	85	81	87	83	80	84	81	79	77	77	77	77
4	94	86	80	75	93	85	79	75	83	78	74	81	76	73	79	75	72	70	70	70	70
5	89	80	73	68	87	79	72	68	77	71	67	75	70	67	73	69	66	64	64	64	64
6	84	74	67	62	82	73	67	62	71	66	62	70	65	61	68	64	61	59	59	59	59
7	79	68	62	57	77	68	61	57	66	61	57	65	60	56	64	59	56	54	54	54	54
8	74	64	57	53	73	63	57	52	62	56	52	61	56	52	60	55	52	50	50	50	50
9	70	60	53	49	69	59	53	48	58	52	48	57	52	48	56	51	48	46	46	46	46
10	66	56	49	45	65	55	49	45	54	49	45	54	48	45	53	48	45	43	43	43	43

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	200220	200220	200220	200220
5°	199818	200401	198288	196802
10°	198599	200252	192409	190316
15°	193213	196170	186346	183724
20°	186292	190492	177244	173773
25°	176690	182521	164895	160509
30°	161063	168672	147751	141477
35°	137594	146193	121894	114244
40°	106356	115860	92652	84780
45°	73504	83187	61425	54106
50°	41619	49798	31897	26421
55°	15646	20922	12692	9959
60°	1118	3607	515	603
65°	156	208	156	104
70°	64	64	64	64
75°	0	85	0	0
80°	0	0	0	0
85°	0	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 86048 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	341.6	7.4
10°-20°	941.2	20.4
20°-30°	1293.2	28.0
30°-40°	1202.3	26.0
40°-50°	678.9	14.7
50°-60°	156.6	3.4
60°-70°	2.0	0.0
70°-80°	0.2	0.0
80°-90°	0.0	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°	2576.0	55.8
0°-40°	3778.3	81.9
0°-60°	4613.8	100.0
0°-90°	4615.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4615.9	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	3652	3652	3652	3652	3652	
5°	3631	3642	3603	3576	3631	345
15°	3404	3456	3283	3237	3404	957
25°	2921	3018	2726	2654	2921	1335
35°	2056	2184	1821	1707	2056	1268
45°	948	1073	792	698	948	733
55°	164	219	133	104	164	169
65°	1	2	1	1	1	2
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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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	3652.3	3652.3	3652.3	3652.3	3652.3	3652.3	3652.3	<i>3652.3</i>	3652.3	3652.3	3652.3
0.5°	<i>3653.4</i>	<i>3651.5</i>	<i>3651.5</i>	<i>3653.1</i>	<i>3651.1</i>	<i>3653.1</i>	<i>3654.6</i>	<i>3655.4</i>	<i>3654.2</i>	<i>3651.5</i>	<i>3649.9</i>
1°	3651.9	3651.5	3651.5	3653.1	3651.5	3653.4	3654.2	<i>3654.6</i>	3653.8	3651.5	3649.1
1.5°	3649.5	3649.5	3650.7	3653.1	3650.7	3653.4	3652.3	<i>3653.1</i>	3651.9	3649.5	3646.8
2°	3647.6	3648.4	3649.9	3653.1	3650.3	3653.1	3649.9	<i>3649.9</i>	3649.5	3647.6	3643.7
2.5°	3645.2	3647.2	3649.1	3651.9	3649.5	3651.1	3646.8	<i>3646.0</i>	3645.2	3643.7	3639.7
3°	3642.1	3645.2	3647.2	3650.3	3648.4	3649.1	3642.9	<i>3640.9</i>	3639.3	3639.0	3634.6
3.5°	3639.3	3643.3	3645.2	3649.1	3647.2	3646.8	3638.6	<i>3634.6</i>	3631.9	3631.9	3627.6
4°	3637.0	3641.3	3643.3	3647.2	3645.2	3644.4	3633.9	<i>3627.2</i>	3624.1	3623.3	3619.4
4.5°	3633.9	3638.6	3640.9	3645.2	3643.7	3642.1	3628.0	<i>3619.0</i>	3614.3	3613.5	3608.8
5°	3631.1	3636.2	3638.2	3642.5	3641.7	3639.3	3622.5	<i>3610.0</i>	3603.3	3602.5	3597.1
5.5°	3628.8	3633.1	3635.0	3639.7	3639.7	3636.6	3615.9	<i>3599.8</i>	3591.2	3589.6	3584.1
6°	3624.9	3629.6	3631.1	3637.0	3638.2	3633.5	3609.2	<i>3589.6</i>	3579.0	3576.7	3569.6
6.5°	3621.3	3625.3	3627.2	3633.5	3635.0	3630.7	3602.1	<i>3578.3</i>	3564.9	3561.8	3555.1
7°	3616.6	3620.9	3622.5	3629.9	3632.3	3626.8	3595.1	<i>3566.9</i>	3550.8	3547.3	3539.1
7.5°	3611.2	3615.5	3617.8	3625.6	3629.2	3623.3	3586.5	<i>3555.1</i>	3536.0	3531.7	3522.6
8°	3605.3	3609.2	3612.3	3621.3	3624.9	3619.0	3577.1	<i>3541.8</i>	3520.7	3515.6	3505.4
8.5°	3598.2	3602.1	3606.5	3615.5	3619.4	3613.1	3567.3	<i>3528.9</i>	3504.6	3498.8	3488.6
9°	3589.2	3594.3	3600.2	3610.4	3612.7	3606.8	3556.7	<i>3515.6</i>	3489.4	3483.1	3471.3
9.5°	3579.0	3584.9	3593.5	3603.7	3605.3	3599.0	3544.6	<i>3502.7</i>	3472.9	3466.6	3454.5
10°	3567.7	3575.5	3586.1	3596.7	3597.4	3589.6	3531.7	<i>3488.6</i>	3456.5	3449.4	3437.7
10.5°	3555.1	3564.5	3578.6	3588.4	3587.3	3579.0	3518.7	<i>3473.7</i>	3439.6	3432.6	3420.0
11°	3540.7	3552.4	3569.6	3579.8	3575.9	3566.9	3505.0	<i>3458.8</i>	3422.8	3415.3	3402.8
11.5°	3526.6	3539.1	3561.0	3570.8	3563.8	3553.2	3489.7	<i>3444.7</i>	3406.3	3398.1	3386.0
12°	3510.5	3525.8	3550.5	3561.0	3550.1	3538.3	3474.5	<i>3429.4</i>	3389.9	3380.5	3369.9
12.5°	3494.1	3511.3	3540.3	3550.1	3536.4	3522.3	3458.0	<i>3413.4</i>	3372.7	3361.7	3353.5
13°	3476.8	3496.4	3528.1	3539.1	3521.5	3506.2	3443.1	<i>3396.9</i>	3355.8	3343.3	3337.4
13.5°	3460.0	3480.3	3516.4	3527.7	3505.8	3489.4	3425.9	<i>3380.1</i>	3338.2	3323.3	3320.2
14°	3441.2	3464.3	3503.1	3515.6	3489.7	3471.3	3410.2	<i>3362.5</i>	3320.6	3302.9	3302.9
14.5°	3423.6	3448.6	3488.6	3502.7	3472.9	3452.9	3392.6	<i>3343.3</i>	3302.6	3281.4	3284.5
15°	3404.4	3431.4	3472.9	3489.7	3456.5	3434.1	3375.8	<i>3324.1</i>	3283.4	3260.3	3265.7
15.5°	3385.6	3414.2	3457.2	3474.9	3439.2	3415.7	3357.8	<i>3304.5</i>	3264.2	3237.5	3245.8
16°	3366.4	3396.9	3440.8	3460.0	3421.2	3397.3	3340.9	<i>3282.6</i>	3243.8	3214.4	3224.6
16.5°	3346.8	3379.3	3423.6	3443.9	3403.6	3378.5	3322.1	<i>3260.6</i>	3221.9	3191.3	3200.7
17°	3326.1	3361.3	3406.7	3428.3	3384.8	3359.3	3303.3	<i>3239.1</i>	3198.8	3166.3	3175.7
17.5°	3306.5	3343.3	3389.5	3411.0	3365.6	3340.1	3284.5	<i>3215.6</i>	3174.5	3139.6	3148.6
18°	3284.9	3325.3	3372.3	3394.6	3346.0	3320.2	3263.8	<i>3192.5</i>	3150.2	3114.6	3119.7
18.5°	3263.4	3307.3	3355.0	3377.4	3326.8	3300.6	3243.4	<i>3167.4</i>	3123.2	3087.6	3088.7
19°	3240.3	3288.5	3337.8	3359.7	3306.5	3281.0	3221.1	<i>3143.2</i>	3096.2	3060.5	3057.0
19.5°	3216.8	3268.9	3320.2	3341.3	3286.5	3259.9	3196.8	<i>3118.1</i>	3067.6	3031.6	3024.5
20°	3193.3	3248.9	3301.8	3321.4	3265.3	3238.7	3172.1	<i>3091.5</i>	3038.2	3003.7	2990.8
20.5°	3168.6	3227.8	3283.8	3301.4	3242.6	3215.2	3145.9	<i>3063.7</i>	3008.4	2974.4	2955.6
21°	3144.3	3205.8	3264.6	3280.6	3220.3	3191.3	3118.9	<i>3036.6</i>	2978.7	2944.2	2920.3



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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°	3065.6	3133.8	3201.5	3211.7	3149.8	3114.6	3030.4	2950.9	2886.6	2853.4	2814.2
23°	3039.0	3107.1	3177.2	3185.5	3124.0	3086.4	2999.0	2920.7	2856.1	2822.8	2776.6
23.5°	3010.4	3079.7	3152.6	3159.2	3098.9	3058.6	2966.1	2891.0	2825.6	2788.7	2738.2
24°	2981.4	3051.1	3124.4	3130.6	3072.7	3028.8	2933.3	2861.2	2792.7	2754.7	2699.8
24.5°	2951.3	3022.2	3095.0	3100.1	3045.3	2998.7	2900.4	2831.4	2759.4	2720.2	2661.1
25°	2921.1	2991.6	3064.1	3069.5	3017.5	2968.1	2867.1	2798.9	2726.1	2684.6	2622.7
25.5°	2889.4	2958.7	3031.2	3037.0	2988.5	2935.6	2834.2	2765.6	2691.2	2648.5	2583.5
26°	2855.7	2925.4	2995.9	3003.0	2956.4	2903.1	2794.2	2730.8	2656.0	2612.9	2544.4
26.5°	2821.6	2891.7	2959.9	2967.7	2924.2	2870.6	2756.2	2694.8	2620.0	2574.9	2505.2
27°	2786.4	2855.7	2921.5	2930.9	2892.1	2838.5	2719.0	2658.7	2582.4	2536.9	2465.3
27.5°	2749.6	2816.9	2882.0	2893.3	2860.0	2804.4	2678.7	2620.7	2544.8	2497.4	2423.4
28°	2710.0	2777.8	2838.9	2853.4	2827.5	2766.0	2639.5	2581.2	2506.4	2455.9	2381.5
28.5°	2671.6	2736.7	2796.2	2812.6	2789.1	2729.6	2598.0	2540.1	2465.3	2412.4	2337.2
29°	2630.1	2694.0	2750.8	2769.6	2749.2	2688.9	2556.5	2498.6	2423.0	2368.5	2294.1
29.5°	2587.5	2652.5	2705.7	2726.1	2707.3	2649.3	2513.0	2455.1	2378.3	2323.9	2247.9
30°	2544.4	2606.2	2658.3	2681.4	2664.6	2607.8	2470.4	2411.2	2334.1	2278.1	2201.7
30.5°	2500.5	2562.4	2611.7	2637.2	2620.7	2565.9	2425.7	2365.4	2287.1	2231.1	2155.1
31°	2454.7	2516.6	2562.8	2589.0	2576.5	2521.7	2380.3	2318.4	2239.3	2183.3	2109.3
31.5°	2406.9	2469.6	2513.8	2542.0	2530.3	2478.2	2334.5	2271.4	2190.3	2134.7	2062.3
32°	2360.7	2421.0	2464.1	2492.3	2483.3	2432.8	2289.0	2223.6	2139.4	2085.8	2015.7
32.5°	2312.9	2372.4	2414.7	2442.9	2435.9	2387.7	2241.6	2174.3	2087.7	2034.1	1967.9
33°	2264.4	2323.5	2363.1	2392.8	2387.3	2338.8	2194.7	2124.2	2035.7	1982.0	1920.9
33.5°	2213.5	2273.8	2314.9	2343.1	2338.8	2291.0	2146.9	2073.6	1982.8	1930.3	1873.9
34°	2163.7	2222.1	2263.6	2291.8	2287.1	2241.6	2099.5	2021.9	1929.1	1876.7	1825.7
34.5°	2110.5	2170.8	2213.5	2241.6	2236.2	2191.5	2050.5	1971.0	1874.3	1824.6	1776.4
35°	2056.0	2116.7	2162.5	2190.3	2184.5	2139.0	2002.4	1918.6	1821.4	1771.7	1725.9
35.5°	2001.2	2063.5	2112.0	2139.4	2132.0	2087.7	1953.4	1866.5	1768.6	1718.0	1675.4
36°	1946.8	2009.8	2061.5	2088.5	2078.7	2034.1	1902.5	1813.6	1716.5	1666.0	1623.7
36.5°	1890.0	1955.0	2009.0	2036.8	2022.7	1980.4	1849.6	1761.1	1664.0	1612.7	1570.8
37°	1832.8	1901.7	1958.9	1984.4	1966.7	1926.8	1797.5	1709.0	1611.9	1560.2	1516.4
37.5°	1774.1	1845.3	1908.0	1931.1	1909.9	1871.6	1743.5	1656.6	1560.2	1507.7	1463.1
38°	1715.7	1789.7	1855.1	1877.8	1852.8	1814.8	1689.9	1602.9	1508.9	1453.7	1408.7
38.5°	1657.0	1733.7	1801.5	1822.6	1794.4	1758.0	1635.0	1550.0	1457.2	1401.2	1355.4
39°	1597.8	1677.7	1747.4	1769.4	1736.5	1701.2	1578.6	1496.8	1403.2	1348.0	1301.0
39.5°	1542.2	1621.7	1693.8	1714.1	1677.3	1643.2	1523.4	1443.5	1349.1	1295.1	1245.0
40°	1486.2	1563.4	1638.2	1660.1	1619.0	1584.1	1467.4	1389.5	1294.7	1241.1	1191.7
40.5°	1431.4	1506.2	1583.3	1604.1	1562.6	1526.5	1410.6	1336.2	1240.3	1188.6	1136.5
41°	1376.9	1449.4	1527.3	1548.1	1505.4	1468.6	1352.3	1283.0	1186.6	1136.5	1082.4
41.5°	1322.5	1386.0	1472.1	1491.3	1450.2	1411.0	1294.3	1229.3	1133.0	1084.0	1028.8
42°	1268.5	1335.0	1418.1	1435.3	1394.6	1354.6	1236.7	1175.3	1082.4	1033.1	976.7
42.5°	1214.0	1284.1	1362.5	1379.3	1342.1	1298.2	1181.1	1122.4	1034.3	982.6	928.1
43°	1159.6	1233.2	1306.8	1324.1	1288.4	1243.8	1124.3	1066.0	985.3	932.5	878.4
43.5°	1105.6	1182.3	1251.2	1289.2	1233.6	1189.0	1068.7	1012.7	937.5	883.9	832.2



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CATALOG NUMBER: HCDJBL3040CSD-HCD6TRC-4000lm-3000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	948.1	1024.5	1085.6	1109.9	1073.0	1026.1	912.5	856.9	792.3	744.9	697.5
45.5°	897.2	972.0	1030.0	1050.3	1019.0	973.6	862.0	805.2	745.6	698.7	656.4
46°	849.0	920.3	974.4	997.5	967.3	921.5	811.4	755.8	699.4	655.2	615.2
46.5°	799.7	869.4	920.7	945.4	918.4	871.0	763.3	707.7	654.0	613.3	576.5
47°	750.7	820.4	867.8	892.9	867.4	821.6	714.7	659.5	609.4	572.2	538.5
47.5°	702.6	770.7	816.5	841.2	818.5	774.6	668.5	615.2	568.6	532.2	503.6
48°	657.5	722.2	765.6	790.3	771.1	728.0	623.9	569.4	525.9	493.8	468.4
48.5°	612.1	674.0	715.5	740.6	723.3	683.0	580.8	527.5	484.8	457.4	435.9
49°	569.8	628.6	667.7	692.4	675.2	639.5	538.5	486.4	444.5	422.6	403.8
49.5°	527.5	582.7	620.3	643.8	628.2	597.2	499.7	448.8	407.3	389.3	376.0
50°	488.0	537.7	576.1	598.4	583.9	555.7	460.5	412.0	374.0	359.9	348.2
50.5°	447.6	494.2	532.6	553.4	539.7	515.0	424.9	381.4	341.1	330.5	320.3
51°	410.8	451.9	489.9	509.9	498.1	476.2	390.8	351.3	308.2	301.5	292.5
51.5°	374.4	410.8	449.2	467.6	457.4	438.2	360.7	320.7	275.3	272.2	264.7
52°	338.8	372.8	410.0	426.9	418.3	401.8	330.5	290.2	248.7	245.9	240.1
52.5°	304.3	336.8	372.4	389.7	383.8	368.5	300.4	259.6	224.8	222.0	217.0
53°	272.6	303.1	336.8	352.5	349.7	335.2	270.2	234.6	203.6	199.7	194.6
53.5°	242.0	270.6	301.5	316.4	315.3	302.3	244.4	212.3	184.8	179.0	173.5
54°	213.0	241.2	269.8	283.1	281.2	269.0	219.3	190.7	166.0	159.0	152.3
54.5°	187.2	212.7	238.5	252.6	247.1	240.8	196.6	170.7	149.2	141.0	133.2
55°	163.7	186.8	210.3	223.6	218.9	214.2	173.9	151.9	132.8	123.4	114.4
55.5°	141.8	162.9	183.7	196.2	192.3	188.4	152.7	133.9	116.7	106.1	97.1
56°	124.1	139.8	158.2	170.4	168.0	165.3	133.2	116.7	101.4	90.5	80.7
56.5°	106.9	122.2	134.7	147.6	145.3	143.3	114.0	100.6	86.5	75.6	66.2
57°	89.3	104.6	117.1	129.6	124.1	123.0	96.3	85.0	72.5	62.3	54.4
57.5°	72.1	86.9	99.5	111.6	105.0	103.8	79.9	70.5	59.9	49.3	42.3
58°	54.4	69.3	81.8	94.0	86.9	86.2	65.8	58.0	47.0	36.4	30.2
58.5°	38.8	51.7	64.2	76.0	71.7	70.9	53.7	45.4	34.5	23.1	18.4
59°	23.9	36.4	48.6	58.4	58.7	58.0	41.5	32.9	21.9	10.2	6.3
59.5°	12.9	22.3	32.9	42.3	45.8	45.4	29.8	20.4	9.4	5.5	4.3
60°	10.2	11.7	19.6	27.0	32.9	32.5	17.6	7.8	4.7	3.9	3.5
60.5°	7.8	9.4	10.2	15.3	20.0	20.0	5.5	4.3	3.5	3.1	3.1
61°	5.1	7.4	8.2	12.1	7.4	7.0	3.5	3.1	3.1	2.7	2.7
61.5°	2.7	5.1	6.3	9.0	4.3	3.9	2.7	2.7	2.7	2.3	2.3
62°	2.3	3.1	4.7	6.3	3.1	3.1	2.3	2.3	2.3	2.3	2.0
62.5°	2.0	2.7	3.1	3.1	2.7	2.7	2.0	2.0	2.0	2.0	2.0
63°	2.0	2.3	2.7	2.7	2.3	2.3	2.0	2.0	1.6	1.6	1.6
63.5°	1.6	2.0	2.3	2.3	2.0	2.0	1.6	1.6	1.6	1.6	1.6
64°	1.2	1.6	2.0	2.0	2.0	1.6	1.6	1.6	1.6	1.6	1.2
64.5°	1.2	1.6	1.6	2.0	1.6	1.6	1.2	1.2	1.2	1.2	1.2
65°	1.2	1.2	1.6	1.6	1.6	1.6	1.2	1.2	1.2	1.2	1.2
65.5°	0.8	1.2	1.2	1.6	1.2	1.2	1.2	1.2	1.2	1.2	0.8
66°	0.8	1.2	1.2	1.2	1.2	1.2	0.8	0.8	0.8	0.8	0.8



TEST NUMBER: P776386

CATALOG NUMBER: HCDJBL3040CSD-HCD6TRC-4000lm-3000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
68°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
68.5°	0.4	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.4
69°	0.4	0.4	0.8	0.8	0.8	0.8	0.4	0.4	0.4	0.4	0.4
69.5°	0.4	0.4	0.8	0.8	0.8	0.4	0.4	0.4	0.4	0.4	0.4
70°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
70.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
71°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
71.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
72°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
72.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
73°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
73.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
74°	0.0	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
74.5°	0.0	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
75°	0.0	0.0	0.4	0.4	0.4	0.4	0.0	0.0	0.0	0.0	0.4
75.5°	0.0	0.0	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
76°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
76.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
78°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
78.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
79°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
79.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
81°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
81.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
83°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
83.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
84°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
84.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
86°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
86.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
88°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
88.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P776386
CATALOG NUMBER: HCDJBL3040CSD-HCD6TRC-4000lm-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	0.0	0.0



TEST NUMBER: P776386

CATALOG NUMBER: HCDJBL3040CSD-HCD6TRC-4000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	3652.3	3652.3	3652.3	3652.3	3652.3	3652.3
0.5°	3649.9	3648.0	3649.1	3652.3	3653.4	3653.4
1°	3647.6	3645.2	3645.2	3649.9	3651.5	3651.9
1.5°	3644.4	3640.9	3640.5	3646.8	3648.4	3649.5
2°	3639.7	3635.4	3634.3	3642.1	3645.2	3647.6
2.5°	3634.3	3628.8	3627.2	3636.6	3641.3	3645.2
3°	3626.8	3620.9	3619.0	3630.3	3637.0	3642.1
3.5°	3618.6	3611.5	3610.0	3622.9	3632.3	3639.3
4°	3608.8	3601.0	3599.8	3615.9	3627.6	3637.0
4.5°	3597.4	3589.2	3588.8	3607.6	3622.5	3633.9
5°	3584.9	3576.3	3576.3	3599.0	3617.0	3631.1
5.5°	3570.4	3563.0	3563.8	3589.6	3611.5	3628.8
6°	3556.7	3548.5	3550.5	3579.8	3605.3	3624.9
6.5°	3541.1	3533.2	3536.7	3569.6	3597.8	3621.3
7°	3525.8	3517.6	3522.3	3559.1	3591.2	3616.6
7.5°	3509.7	3502.3	3507.8	3546.9	3582.6	3611.2
8°	3492.5	3485.4	3492.9	3535.6	3574.7	3605.3
8.5°	3475.7	3469.4	3477.6	3523.0	3564.2	3598.2
9°	3459.2	3452.5	3461.6	3510.1	3553.6	3589.2
9.5°	3442.4	3435.7	3445.1	3496.4	3541.8	3579.0
10°	3425.1	3418.9	3429.8	3483.1	3529.3	3567.7
10.5°	3407.5	3402.0	3414.2	3468.2	3516.0	3555.1
11°	3391.1	3385.2	3398.1	3454.1	3501.5	3540.7
11.5°	3372.7	3368.0	3381.3	3439.2	3486.6	3526.6
12°	3355.4	3349.9	3364.4	3423.2	3471.3	3510.5
12.5°	3337.0	3332.7	3347.6	3406.7	3455.3	3494.1
13°	3318.6	3314.3	3330.4	3389.9	3440.0	3476.8
13.5°	3298.2	3295.9	3312.0	3372.3	3423.6	3460.0
14°	3278.7	3276.3	3293.5	3354.2	3407.1	3441.2
14.5°	3257.9	3257.5	3274.4	3334.7	3391.1	3423.6
15°	3237.2	3237.2	3254.4	3315.5	3374.2	3404.4
15.5°	3214.8	3216.0	3234.4	3294.7	3356.2	3385.6
16°	3192.1	3194.1	3212.9	3275.1	3338.6	3366.4
16.5°	3168.2	3171.4	3190.2	3254.4	3320.2	3346.8
17°	3143.9	3147.1	3166.7	3232.8	3301.4	3326.1
17.5°	3116.9	3121.2	3141.6	3210.9	3281.4	3306.5
18°	3091.1	3094.6	3115.7	3188.6	3259.9	3284.9
18.5°	3062.5	3066.8	3088.7	3165.9	3236.8	3263.4
19°	3033.5	3038.6	3060.9	3141.6	3212.5	3240.3
19.5°	3003.7	3008.8	3032.7	3116.9	3187.4	3216.8
20°	2973.2	2978.7	3003.7	3091.5	3160.8	3193.3
20.5°	2941.1	2948.1	2973.6	3064.1	3133.8	3168.6
21°	2908.2	2917.2	2943.0	3037.0	3104.8	3144.3

TEST NUMBER: P776386

CATALOG NUMBER: HCDJBL3040CSD-HCD6TRC-4000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	2810.7	2821.2	2850.2	2945.0	3011.2	3065.6
23°	2776.2	2789.5	2819.3	2912.9	2977.1	3039.0
23.5°	2739.4	2756.6	2786.4	2880.0	2942.7	3010.4
24°	2703.0	2723.3	2753.9	2845.1	2909.0	2981.4
24.5°	2665.8	2688.1	2719.0	2811.5	2873.7	2951.3
25°	2629.0	2653.6	2685.4	2775.0	2837.3	2921.1
25.5°	2590.2	2618.0	2648.9	2738.6	2800.1	2889.4
26°	2550.6	2580.8	2613.7	2701.0	2762.9	2855.7
26.5°	2510.3	2542.4	2576.1	2663.8	2724.9	2821.6
27°	2469.2	2502.9	2536.5	2624.3	2686.5	2786.4
27.5°	2426.5	2461.7	2495.4	2583.5	2647.8	2749.6
28°	2383.4	2419.4	2453.1	2540.8	2605.9	2710.0
28.5°	2338.8	2374.8	2410.0	2498.6	2565.1	2671.6
29°	2293.7	2330.2	2365.0	2454.3	2522.4	2630.1
29.5°	2247.1	2282.8	2317.6	2411.6	2479.8	2587.5
30°	2200.1	2235.0	2270.6	2365.0	2434.7	2544.4
30.5°	2153.1	2184.9	2222.1	2320.0	2390.9	2500.5
31°	2105.0	2135.1	2171.9	2272.6	2345.4	2454.7
31.5°	2056.0	2083.0	2118.7	2225.6	2299.6	2406.9
32°	2007.1	2030.2	2066.6	2179.8	2251.8	2360.7
32.5°	1958.1	1976.1	2014.5	2130.8	2205.2	2312.9
33°	1906.8	1923.7	1961.2	2083.0	2156.3	2264.4
33.5°	1856.7	1869.6	1907.2	2032.9	2109.3	2213.5
34°	1804.2	1816.3	1854.7	1983.2	2060.7	2163.7
34.5°	1753.7	1760.3	1800.7	1932.7	2011.0	2110.5
35°	1702.8	1707.1	1747.8	1880.2	1958.9	2056.0
35.5°	1650.7	1653.8	1695.7	1828.9	1908.0	2001.2
36°	1599.0	1601.7	1642.5	1776.4	1854.7	1946.8
36.5°	1545.0	1550.8	1591.2	1723.9	1801.5	1890.0
37°	1491.3	1498.0	1539.1	1668.7	1745.9	1832.8
37.5°	1437.6	1446.3	1486.6	1613.9	1690.2	1774.1
38°	1383.6	1389.5	1433.7	1559.0	1634.2	1715.7
38.5°	1330.0	1338.2	1380.5	1502.3	1577.5	1657.0
39°	1275.1	1286.9	1326.8	1448.2	1519.9	1597.8
39.5°	1221.9	1235.6	1273.2	1387.5	1462.3	1542.2
40°	1169.4	1184.7	1219.5	1334.3	1401.2	1486.2
40.5°	1117.3	1132.2	1165.9	1280.6	1344.0	1431.4
41°	1066.0	1080.1	1112.2	1227.3	1286.9	1376.9
41.5°	1014.7	1030.4	1058.9	1173.7	1230.1	1322.5
42°	963.4	981.0	1008.0	1118.9	1172.9	1268.5
42.5°	914.0	932.5	958.3	1064.8	1116.1	1214.0
43°	864.3	883.9	907.8	1010.4	1062.1	1159.6
43.5°	816.1	837.7	858.4	956.0	1008.0	1105.6



TEST NUMBER: P776386

CATALOG NUMBER: HCDJBL3040CSD-HCD6TRC-4000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	679.9	697.9	712.8	796.2	854.1	948.1
45.5°	638.0	653.2	665.0	746.4	806.0	897.2
46°	596.0	608.6	619.2	698.3	759.4	849.0
46.5°	557.7	567.1	574.5	651.3	714.3	799.7
47°	519.7	525.6	531.8	607.4	669.7	750.7
47.5°	484.0	484.8	489.9	564.7	624.6	702.6
48°	448.8	445.7	449.6	522.4	582.7	657.5
48.5°	415.1	410.0	412.0	483.7	541.2	612.1
49°	383.8	374.4	376.0	446.1	501.7	569.8
49.5°	355.6	342.3	343.1	412.0	462.5	527.5
50°	327.8	309.8	310.6	378.3	426.1	488.0
50.5°	299.6	281.6	281.6	345.4	389.3	447.6
51°	271.4	254.2	254.6	314.5	355.6	410.8
51.5°	246.3	230.7	230.3	287.5	323.1	374.4
52°	222.4	208.3	208.7	260.4	293.3	338.8
52.5°	200.1	188.4	188.4	235.0	264.3	304.3
53°	178.6	168.8	169.2	210.7	237.3	272.6
53.5°	158.2	151.6	151.6	188.8	211.5	242.0
54°	139.0	135.1	134.3	167.6	188.0	213.0
54.5°	121.4	119.8	119.1	147.6	164.5	187.2
55°	103.8	104.2	103.4	130.4	143.7	163.7
55.5°	87.7	88.9	88.1	113.6	126.1	141.8
56°	72.5	73.6	72.5	96.7	108.9	124.1
56.5°	59.5	59.9	58.7	79.9	91.2	106.9
57°	47.0	45.0	43.9	63.1	74.0	89.3
57.5°	34.1	30.5	29.0	48.2	56.8	72.1
58°	21.5	18.0	16.4	32.1	40.7	54.4
58.5°	8.6	14.5	12.9	19.2	26.2	38.8
59°	4.7	11.4	9.4	9.8	14.9	23.9
59.5°	3.5	8.6	6.3	7.8	11.7	12.9
60°	3.1	5.5	2.7	5.9	8.6	10.2
60.5°	2.7	2.3	2.3	4.3	5.5	7.8
61°	2.3	2.0	2.0	2.3	2.7	5.1
61.5°	2.0	2.0	1.6	2.0	2.3	2.7
62°	1.6	1.6	1.6	2.0	2.0	2.3
62.5°	1.6	1.6	1.2	1.6	1.6	2.0
63°	1.6	1.2	1.2	1.6	1.6	2.0
63.5°	1.2	1.2	1.2	1.2	1.2	1.6
64°	1.2	1.2	1.2	1.2	1.2	1.2
64.5°	1.2	0.8	0.8	1.2	1.2	1.2
65°	0.8	0.8	0.8	0.8	0.8	1.2
65.5°	0.8	0.8	0.8	0.8	0.8	0.8
66°	0.8	0.8	0.8	0.8	0.8	0.8



TEST NUMBER: P776386
 CATALOG NUMBER: HCDJBL3040CSD-HCD6TRC-4000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	0.8	0.4	0.4	0.4	0.4	0.8
68°	0.4	0.4	0.4	0.4	0.4	0.8
68.5°	0.4	0.4	0.4	0.4	0.4	0.4
69°	0.4	0.4	0.4	0.4	0.4	0.4
69.5°	0.4	0.4	0.4	0.4	0.4	0.4
70°	0.4	0.4	0.4	0.4	0.4	0.4
70.5°	0.4	0.4	0.4	0.4	0.4	0.4
71°	0.4	0.4	0.4	0.4	0.4	0.4
71.5°	0.4	0.4	0.4	0.4	0.4	0.4
72°	0.4	0.4	0.4	0.4	0.4	0.4
72.5°	0.4	0.4	0.4	0.4	0.4	0.4
73°	0.4	0.4	0.0	0.4	0.4	0.4
73.5°	0.4	0.0	0.0	0.0	0.0	0.4
74°	0.4	0.0	0.0	0.0	0.0	0.0
74.5°	0.0	0.0	0.0	0.0	0.0	0.0
75°	0.0	0.0	0.0	0.0	0.0	0.0
75.5°	0.0	0.0	0.0	0.0	0.0	0.0
76°	0.0	0.0	0.0	0.0	0.0	0.0
76.5°	0.0	0.0	0.0	0.0	0.0	0.0
77°	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	0.0	0.0	0.0	0.0	0.0	0.0
78°	0.0	0.0	0.0	0.0	0.0	0.0
78.5°	0.0	0.0	0.0	0.0	0.0	0.0
79°	0.0	0.0	0.0	0.0	0.0	0.0
79.5°	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0	0.0
80.5°	0.0	0.0	0.0	0.0	0.0	0.0
81°	0.0	0.0	0.0	0.0	0.0	0.0
81.5°	0.0	0.0	0.0	0.0	0.0	0.0
82°	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0
83°	0.0	0.0	0.0	0.0	0.0	0.0
83.5°	0.0	0.0	0.0	0.0	0.0	0.0
84°	0.0	0.0	0.0	0.0	0.0	0.0
84.5°	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0
85.5°	0.0	0.0	0.0	0.0	0.0	0.0
86°	0.0	0.0	0.0	0.0	0.0	0.0
86.5°	0.0	0.0	0.0	0.0	0.0	0.0
87°	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0
88°	0.0	0.0	0.0	0.0	0.0	0.0
88.5°	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P776386

CATALOG NUMBER: HCDJBL3040CSD-HCD6TRC-4000lm-3000K

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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Scaled Data Report





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

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Scaled Data Report



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Scaled Data Report





21.5°	3118.5	3182.7	3244.6	3259.1	3197.2	3166.7	3091.1	3008.4	2948.1	2913.7	2884.7
22°	3092.3	3158.8	3223.4	3235.6	3173.7	3141.2	3061.7	2980.6	2917.2	2883.5	2849.4



44°	1051.1	1129.8	1195.6	1229.3	1178.8	1134.1	1016.7	960.7	888.6	837.3	786.4
44.5°	998.6	1076.2	1140.0	1169.4	1127.5	1080.5	965.7	908.6	841.6	790.3	742.1



66.5°	0.8	0.8	1.2	1.2	1.2	1.2	0.8	0.8	0.8	0.8	0.8
67°	0.8	0.8	1.2	1.2	0.8	0.8	0.8	0.8	0.8	0.8	0.8



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

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21.5°	2875.7	2885.5	2912.9	3007.7	3074.6	3118.5
22°	2843.2	2853.4	2882.0	2975.9	3043.7	3092.3



44°	768.4	789.5	808.7	901.5	955.6	1051.1
44.5°	723.7	743.7	760.9	847.5	904.3	998.6

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66.5°	0.8	0.8	0.8	0.8	0.8	0.8
67°	0.8	0.8	0.4	0.8	0.8	0.8

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

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Scaled Data Report



(END OF REPORT)