

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: P776489

Luminaire Tested: HCDJBL3040CSD-HCD8TRC-4000lm-5000K

Issue Date: 2/7/2024

Test Information

Test Method: LM-79-2019
Report Number: P776489
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-HCD8TRC-4000lm-5000K
Description: 8 INCH ROUND MEDIUM SPECULAR CLEAR TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 5000K CCT
Ballast/Driver: -

Summary

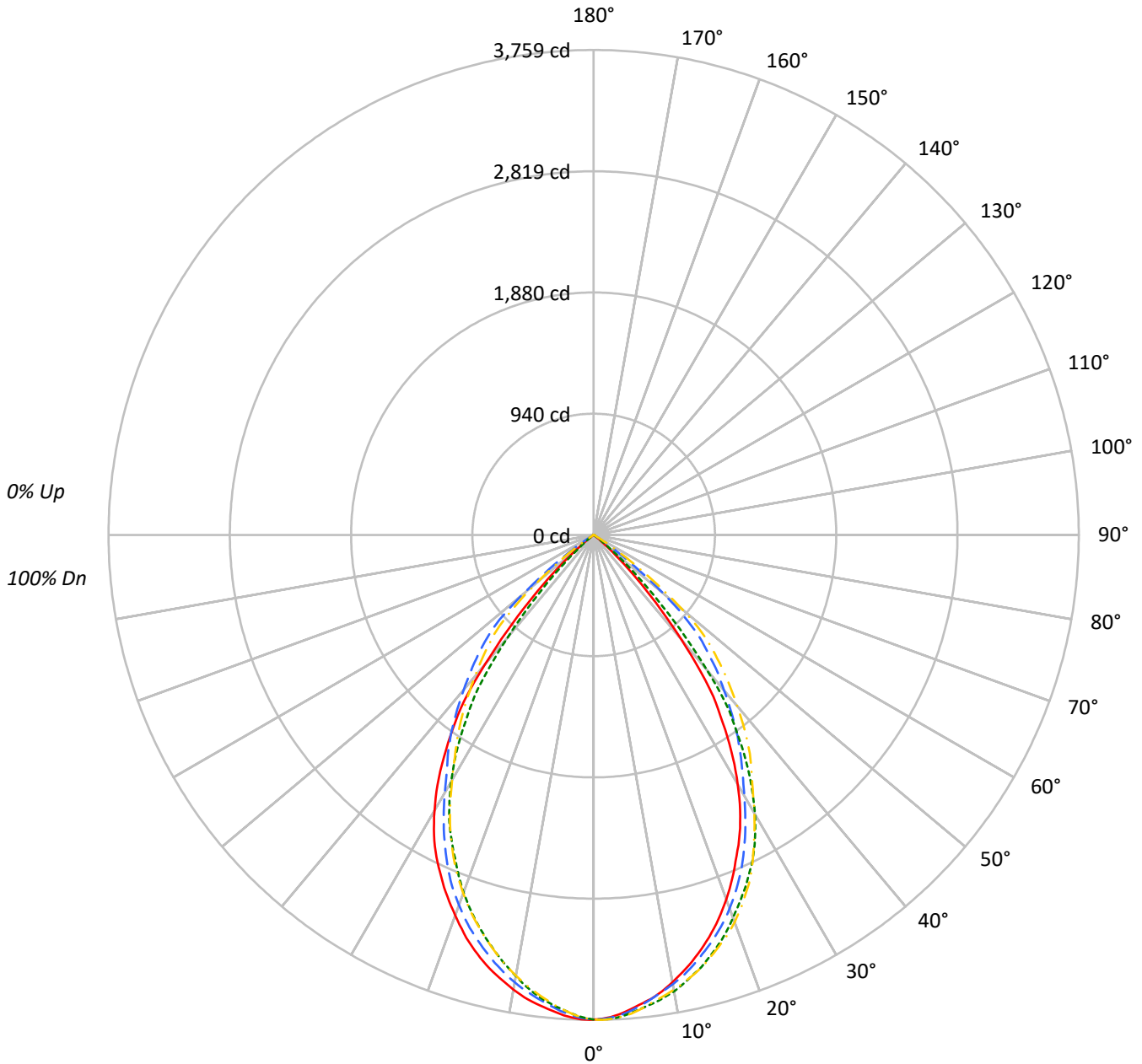
Lumens per Lamp: N/A
Luminaire Lumens: 4458.6 lumens
Efficiency: N/A
Efficacy: 115.8 lumens/watt
Spacing Criteria (0/90/45): 1 / 1 / 1.05
Luminous Opening: Circular (Dia: 0.67' x H: 0')
CIE Type: Direct

Input Watts (W): 38.5
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					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			
1	113	110	107	105	111	108	105	103	104	102	100	100	99	97	97	95	94	92					92			
2	107	101	97	93	104	100	96	92	96	93	90	93	91	88	91	88	86	85					85			
3	101	94	88	84	99	92	87	83	89	85	82	87	83	80	85	82	79	78					78			
4	95	86	80	76	93	85	80	75	83	78	74	81	77	74	79	76	73	71					71			
5	89	80	74	69	88	79	73	69	77	72	68	76	71	67	74	70	67	65					65			
6	84	74	68	63	83	73	67	63	72	66	62	70	66	62	69	65	61	60					60			
7	79	69	62	58	78	68	62	58	67	61	57	66	61	57	65	60	57	55					55			
8	75	64	58	53	74	64	58	53	63	57	53	62	56	53	61	56	52	51					51			
9	71	60	54	49	70	60	54	49	59	53	49	58	53	49	57	52	49	47					47			
10	67	56	50	46	66	56	50	46	55	50	46	54	49	45	54	49	45	44					44			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	114660	114660	114660	114660
5°	112591	113556	113443	112039
10°	109109	111316	110938	107664
15°	104171	107686	107247	102180
20°	97641	102586	101920	95740
25°	89400	96592	95727	87827
30°	78731	88049	86966	77868
35°	63826	74500	73267	63353
40°	41919	54326	52126	41333
45°	18406	27909	26178	18000
50°	4023	8103	7229	3885
55°	522	782	719	500
60°	427	623	574	397
65°	354	535	470	325
70°	295	437	402	259
75°	236	389	342	236
80°	211	352	281	211
85°	140	280	280	140

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 135°

Vertical Angle: 45°

Luminance: 58487 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	346.7	7.8
10°-20°	933.0	20.9
20°-30°	1255.1	28.1
30°-40°	1185.9	26.6
40°-50°	636.4	14.3
50°-60°	92.1	2.1
60°-70°	6.0	0.1
70°-80°	2.7	0.1
80°-90°	0.6	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°	2534.8	56.9
0°-40°	3720.7	83.4
0°-60°	4449.2	99.8
0°-90°	4458.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4458.6	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	3756	3756	3756	3756	3756	
5°	3674	3705	3702	3656	3674	346
15°	3296	3407	3393	3233	3296	923
25°	2654	2867	2842	2607	2654	1212
35°	1712	1999	1966	1700	1712	1049
45°	426	646	606	417	426	354
55°	10	15	14	9	10	16
65°	5	7	6	4	5	5
75°	2	3	3	2	2	2
85°	0	1	1	0	0	1
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°	3755.6	3755.6	3755.6	3755.6	3755.6	3755.6	3755.6	3755.6	3755.6	3755.6	3755.6
0.5°	3755.2	3755.6	3755.2	3756.0	3756.8	3757.6	3758.1	3759.3	3758.5	3756.4	3753.1
1°	3751.5	3752.7	3753.1	3755.6	3757.6	3758.5	3759.3	3759.3	3757.6	3754.0	3749.1
1.5°	3745.8	3748.6	3749.5	3752.7	3756.0	3757.6	3758.1	3758.1	3754.8	3750.3	3744.6
2°	3739.2	3743.3	3744.6	3748.6	3753.6	3754.8	3755.2	3755.2	3751.1	3745.0	3738.0
2.5°	3731.5	3736.4	3738.0	3743.3	3749.5	3750.7	3751.5	3751.1	3745.8	3738.0	3730.2
3°	3721.6	3727.4	3730.2	3736.0	3743.3	3745.4	3745.8	3745.0	3739.6	3730.6	3720.8
3.5°	3711.0	3717.1	3720.8	3727.4	3736.0	3738.4	3738.8	3737.6	3731.5	3721.2	3710.2
4°	3697.9	3705.3	3710.6	3718.0	3727.0	3729.8	3730.6	3729.4	3722.1	3710.6	3697.9
4.5°	3686.5	3693.8	3698.7	3705.7	3716.3	3720.0	3721.2	3719.2	3711.8	3699.1	3684.8
5°	3673.8	3682.8	3685.2	3693.4	3705.3	3708.5	3710.2	3708.5	3701.6	3686.9	3670.9
5.5°	3661.1	3669.7	3671.3	3679.5	3694.2	3697.1	3697.5	3697.1	3692.2	3674.6	3657.4
6°	3648.0	3656.2	3657.0	3667.2	3684.4	3686.0	3684.4	3687.3	3681.5	3662.7	3643.5
6.5°	3636.5	3643.5	3641.9	3654.1	3674.6	3675.4	3671.3	3675.8	3671.7	3650.0	3629.2
7°	3623.9	3631.2	3626.3	3641.0	3664.4	3664.4	3657.0	3664.8	3661.5	3637.8	3615.7
7.5°	3608.7	3617.3	3610.8	3628.8	3655.0	3653.7	3643.5	3652.5	3649.2	3624.3	3601.4
8°	3593.6	3602.6	3596.0	3616.1	3643.9	3642.7	3631.2	3639.4	3637.0	3610.4	3586.2
8.5°	3577.6	3586.6	3580.9	3602.6	3632.0	3631.2	3617.7	3625.5	3623.9	3595.2	3571.1
9°	3558.8	3569.5	3566.2	3587.0	3618.1	3617.7	3605.9	3611.6	3609.1	3580.5	3556.0
9.5°	3539.6	3551.0	3551.0	3571.9	3605.0	3604.2	3593.2	3595.6	3594.4	3565.4	3539.6
10°	3519.5	3531.8	3535.9	3556.0	3590.7	3590.3	3579.7	3579.3	3578.5	3549.0	3522.4
10.5°	3498.7	3511.4	3519.5	3540.0	3575.2	3575.6	3566.6	3562.5	3561.7	3532.6	3504.0
11°	3477.8	3488.9	3502.8	3522.0	3559.2	3559.2	3551.9	3545.3	3543.7	3514.2	3485.2
11.5°	3457.8	3466.8	3484.8	3504.0	3540.8	3542.5	3536.3	3526.5	3526.5	3495.8	3465.5
12°	3436.9	3445.1	3465.1	3484.4	3522.0	3524.0	3520.8	3507.7	3509.7	3477.0	3445.5
12.5°	3415.6	3423.4	3444.7	3464.7	3504.0	3504.4	3504.8	3488.9	3492.5	3459.4	3424.6
13°	3393.5	3400.9	3425.0	3444.3	3486.4	3484.8	3488.9	3471.7	3475.8	3441.4	3404.6
13.5°	3369.4	3378.8	3402.5	3425.0	3469.2	3466.8	3471.7	3454.1	3456.1	3424.2	3382.1
14°	3345.3	3355.5	3381.3	3405.8	3450.4	3448.8	3454.1	3437.3	3435.3	3405.8	3359.2
14.5°	3320.3	3330.9	3358.4	3386.6	3428.7	3429.9	3434.9	3418.5	3414.8	3385.4	3336.3
15°	3295.8	3305.6	3336.3	3366.1	3407.0	3410.3	3414.8	3398.4	3393.1	3363.7	3312.5
15.5°	3270.0	3281.0	3312.5	3343.6	3384.5	3388.6	3393.5	3377.6	3371.4	3341.6	3289.6
16°	3243.8	3255.3	3291.3	3320.7	3362.9	3366.9	3372.3	3357.9	3348.5	3318.7	3266.3
16.5°	3216.4	3229.9	3267.5	3297.4	3340.8	3344.0	3351.4	3335.9	3325.2	3295.8	3243.4
17°	3188.2	3203.3	3242.6	3273.3	3317.0	3322.4	3330.5	3314.2	3301.5	3271.2	3218.0
17.5°	3159.5	3177.5	3216.4	3248.7	3293.3	3299.0	3310.1	3291.7	3275.7	3246.3	3193.9
18°	3129.7	3149.7	3192.7	3223.8	3267.5	3275.7	3290.4	3268.8	3248.3	3219.7	3166.5
18.5°	3099.0	3121.1	3165.7	3198.4	3241.4	3250.8	3267.9	3244.6	3220.9	3192.3	3138.7
19°	3068.3	3092.4	3138.3	3171.4	3214.3	3225.0	3244.6	3218.8	3193.9	3164.0	3110.4
19.5°	3037.2	3063.4	3110.0	3142.8	3185.7	3198.8	3219.3	3192.3	3164.8	3135.8	3081.4
20°	3005.3	3032.7	3081.4	3114.1	3157.5	3171.4	3193.5	3165.3	3137.0	3106.8	3051.9
20.5°	2973.0	3002.0	3050.7	3084.3	3129.7	3143.6	3165.7	3137.4	3109.2	3076.5	3022.5
21°	2938.6	2970.9	3019.2	3054.0	3101.4	3114.9	3138.7	3109.6	3081.0	3046.2	2993.0



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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°	2833.1	2871.5	2923.9	2959.9	3016.8	3030.7	3049.5	3024.5	2996.3	2955.8	2897.3
23°	2795.0	2835.5	2889.1	2927.6	2988.1	3002.4	3018.8	2995.9	2968.1	2923.5	2862.5
23.5°	2758.2	2800.3	2855.2	2896.9	2959.9	2974.2	2988.1	2967.2	2934.5	2891.2	2826.9
24°	2722.2	2762.3	2819.2	2865.0	2928.0	2942.7	2957.4	2934.9	2902.6	2858.4	2790.1
24.5°	2687.8	2726.3	2781.9	2833.5	2897.3	2912.4	2922.2	2902.6	2871.5	2825.3	2752.9
25°	2653.9	2691.1	2744.7	2800.7	2867.4	2880.5	2886.2	2869.9	2841.7	2791.7	2714.0
25.5°	2617.5	2656.7	2706.2	2767.6	2838.8	2847.8	2848.6	2835.5	2811.4	2759.8	2675.6
26°	2579.8	2624.8	2667.4	2734.5	2807.3	2816.3	2811.0	2802.4	2779.5	2729.1	2636.3
26.5°	2541.4	2591.7	2628.1	2701.7	2772.9	2786.0	2770.5	2770.1	2745.1	2698.5	2596.6
27°	2500.9	2556.9	2586.8	2670.6	2737.7	2757.4	2729.6	2739.8	2709.1	2667.4	2556.9
27.5°	2459.5	2520.5	2545.9	2640.0	2701.3	2726.7	2689.9	2709.1	2672.3	2634.6	2516.4
28°	2415.8	2481.6	2502.9	2606.8	2663.3	2694.4	2650.2	2677.2	2633.8	2599.9	2475.5
28.5°	2372.4	2443.6	2461.2	2572.9	2624.0	2660.8	2610.1	2642.0	2594.6	2564.3	2434.6
29°	2326.6	2404.3	2418.6	2535.6	2582.7	2625.2	2571.6	2608.1	2553.2	2527.1	2392.9
29.5°	2280.8	2363.8	2376.1	2498.4	2540.6	2588.8	2529.9	2570.4	2509.9	2488.2	2349.1
30°	2233.3	2321.3	2334.8	2459.5	2497.6	2550.8	2490.2	2532.0	2466.9	2448.1	2304.9
30.5°	2185.0	2276.7	2293.9	2419.0	2452.6	2510.7	2448.5	2492.3	2421.5	2405.5	2262.8
31°	2132.7	2232.1	2253.4	2377.3	2407.2	2469.8	2407.2	2451.8	2376.9	2363.0	2222.3
31.5°	2086.0	2187.9	2215.7	2334.4	2359.7	2427.2	2365.0	2408.4	2329.5	2318.8	2183.4
32°	2034.1	2142.5	2178.1	2291.0	2312.3	2383.9	2325.8	2365.9	2282.4	2274.6	2147.4
32.5°	1983.3	2095.4	2140.9	2247.6	2263.6	2339.7	2287.3	2321.3	2231.3	2229.6	2112.2
33°	1928.9	2048.8	2103.6	2203.9	2214.1	2294.7	2251.7	2276.3	2181.4	2184.2	2079.5
33.5°	1878.2	2000.9	2066.0	2158.9	2162.5	2248.9	2217.4	2230.0	2128.2	2135.9	2045.9
34°	1822.6	1952.3	2030.0	2113.0	2109.4	2203.4	2184.2	2183.0	2074.6	2088.9	2012.4
34.5°	1768.6	1902.3	1994.0	2066.0	2053.7	2154.8	2150.7	2135.9	2019.3	2038.6	1976.8
35°	1712.5	1851.6	1957.6	2020.2	1998.9	2105.3	2117.5	2087.7	1965.8	1989.1	1942.4
35.5°	1661.4	1800.5	1920.8	1972.3	1944.5	2055.4	2082.4	2039.4	1909.7	1938.3	1905.2
36°	1609.0	1749.3	1881.5	1923.2	1889.3	2005.4	2045.9	1989.1	1855.3	1887.2	1868.8
36.5°	1558.7	1697.0	1842.6	1873.7	1835.3	1952.3	2008.7	1937.9	1802.9	1834.8	1830.8
37°	1493.2	1646.7	1803.3	1823.0	1782.9	1899.1	1970.3	1886.8	1750.2	1783.7	1792.7
37.5°	1420.0	1597.2	1764.5	1772.7	1733.0	1845.9	1930.2	1835.7	1688.4	1731.3	1753.8
38°	1346.8	1548.5	1724.4	1721.9	1669.6	1793.5	1890.1	1784.9	1623.7	1681.0	1716.2
38.5°	1274.0	1499.0	1684.7	1672.4	1600.8	1742.8	1850.4	1733.8	1550.1	1631.5	1678.6
39°	1200.7	1431.9	1647.1	1626.2	1527.6	1693.7	1810.7	1686.3	1472.8	1582.8	1641.3
39.5°	1127.5	1364.0	1608.6	1578.3	1445.0	1647.5	1769.8	1638.1	1389.3	1526.8	1603.3
40°	1051.8	1296.0	1571.8	1533.7	1363.1	1589.0	1730.1	1588.6	1307.9	1464.2	1566.5
40.5°	976.5	1228.1	1533.3	1481.0	1282.1	1526.0	1691.2	1536.2	1229.0	1396.7	1530.1
41°	907.4	1160.2	1496.9	1414.7	1204.4	1458.1	1652.4	1474.8	1152.9	1325.5	1494.1
41.5°	838.3	1088.2	1476.9	1348.0	1130.0	1383.2	1614.7	1409.8	1079.6	1251.9	1459.3
42°	774.8	1019.1	1437.2	1281.3	1055.1	1307.1	1575.9	1340.2	1004.8	1179.5	1423.7
42.5°	713.1	949.9	1397.1	1215.0	985.5	1232.2	1539.5	1269.5	934.4	1111.1	1389.7
43°	653.3	880.8	1357.4	1148.4	910.3	1160.6	1503.1	1199.5	862.0	1043.6	1355.8
43.5°	591.6	814.9	1317.3	1080.9	841.1	1091.5	1465.8	1130.8	792.8	979.4	1321.0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	426.3	636.6	1212.2	892.7	646.4	887.8	1354.6	936.9	606.3	785.1	1215.9
45.5°	376.0	578.5	1177.4	829.7	589.1	821.1	1316.9	871.8	549.4	724.5	1181.9
46°	329.7	523.2	1139.4	770.8	529.8	757.3	1280.1	807.6	494.2	664.0	1147.5
46.5°	283.9	469.2	1094.4	709.8	477.0	696.7	1244.1	745.8	441.8	610.8	1107.9
47°	241.8	418.9	1042.4	652.9	429.6	637.8	1210.5	685.7	396.0	554.3	1069.4
47.5°	202.5	370.2	989.2	596.5	382.5	579.7	1167.6	628.4	350.2	502.8	1024.4
48°	169.8	324.0	936.4	544.9	335.5	524.5	1125.0	572.3	304.0	450.4	980.2
48.5°	141.1	280.2	885.7	491.7	288.0	471.3	1076.4	518.7	258.6	405.0	920.9
49°	121.9	239.3	826.8	442.2	241.4	424.2	1017.9	466.0	220.1	359.2	857.5
49.5°	103.5	201.3	767.1	393.2	204.1	378.0	957.3	420.6	185.3	313.8	789.6
50°	84.7	166.9	702.0	346.9	170.6	331.4	891.0	374.7	152.2	268.4	723.3
50.5°	66.3	136.6	636.6	301.5	139.9	285.1	825.6	329.3	123.1	229.9	660.3
51°	51.5	118.2	572.7	261.4	112.5	238.5	759.3	283.9	97.4	194.7	599.3
51.5°	37.2	99.8	513.0	223.0	89.6	202.1	695.1	238.5	81.0	162.8	540.4
52°	23.3	81.0	456.6	187.8	74.9	168.6	630.0	201.3	64.2	131.7	482.3
52.5°	14.3	62.6	403.4	155.9	60.1	137.1	569.9	166.9	47.9	104.3	434.1
53°	12.7	48.3	352.2	132.6	45.0	110.0	509.7	136.2	31.1	80.6	385.4
53.5°	11.9	34.8	304.4	109.6	30.3	87.1	453.3	108.0	15.1	66.7	337.1
54°	11.0	21.3	260.6	86.3	16.0	72.0	403.8	83.5	14.3	52.8	288.4
54.5°	10.2	11.9	220.9	63.0	15.1	57.3	354.3	69.1	13.9	38.9	240.1
55°	9.8	11.0	184.9	40.1	14.7	42.5	305.2	54.8	13.5	25.0	203.3
55.5°	9.4	10.2	153.0	23.3	13.9	27.8	255.7	40.1	13.1	11.5	169.8
56°	9.0	9.8	131.3	12.7	13.5	13.1	215.2	25.8	12.7	11.0	139.1
56.5°	9.0	9.0	110.0	11.9	13.1	12.3	178.0	11.9	12.3	10.6	112.5
57°	8.6	8.6	88.4	11.5	12.7	11.9	144.8	11.5	11.9	10.2	89.2
57.5°	8.2	8.6	67.1	11.0	12.3	11.5	115.4	11.0	11.5	10.2	70.4
58°	7.8	8.2	45.8	10.6	11.9	11.0	90.0	11.0	11.0	9.8	59.3
58.5°	7.8	7.8	35.2	10.2	11.5	10.6	69.1	10.6	10.6	9.4	48.7
59°	7.4	7.8	27.0	9.8	11.0	10.6	58.1	10.2	10.2	9.0	37.6
59.5°	7.4	7.4	20.9	9.4	10.6	10.2	47.5	9.8	9.8	9.0	27.0
60°	7.0	7.4	16.0	9.4	10.2	9.8	37.2	9.4	9.4	8.6	16.4
60.5°	6.5	7.0	13.5	9.0	9.8	9.4	26.6	9.4	9.4	8.2	12.3
61°	6.5	7.0	11.5	8.6	9.8	9.0	16.0	9.0	9.0	8.2	9.0
61.5°	6.1	6.5	9.4	8.6	9.4	9.0	11.9	8.6	8.6	7.8	7.4
62°	6.1	6.5	7.0	8.2	9.0	8.6	9.4	8.6	8.2	7.4	6.5
62.5°	5.7	6.1	7.0	7.8	8.6	8.2	7.8	8.2	8.2	7.4	6.5
63°	5.7	6.1	6.5	7.8	8.6	8.2	7.4	7.8	7.8	7.0	6.1
63.5°	5.3	5.7	6.5	7.4	8.2	7.8	7.4	7.8	7.4	7.0	6.1
64°	5.3	5.7	6.1	7.4	7.8	7.8	7.0	7.4	7.4	6.5	5.7
64.5°	4.9	5.3	6.1	7.0	7.8	7.4	7.0	7.0	7.0	6.5	5.7
65°	4.9	5.3	5.7	6.5	7.4	7.0	6.5	7.0	6.5	6.1	5.3
65.5°	4.5	5.3	5.7	6.5	7.0	7.0	6.5	6.5	6.5	6.1	5.3
66°	4.5	4.9	5.3	6.1	7.0	6.5	6.1	6.5	6.1	5.7	4.9



TEST NUMBER: P776489

CATALOG NUMBER: HCDJBL3040CSD-HCD8TRC-4000lm-5000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	4.1	4.5	4.9	5.7	6.1	6.1	5.7	5.7	5.3	5.3	4.5
68°	3.7	4.1	4.9	5.3	5.7	5.7	5.3	5.3	5.3	4.9	4.5
68.5°	3.7	4.1	4.5	5.3	5.7	5.7	5.3	5.3	4.9	4.9	4.1
69°	3.7	3.7	4.5	4.9	5.3	5.3	4.9	4.9	4.9	4.5	4.1
69.5°	3.3	3.7	4.1	4.9	5.3	5.3	4.9	4.9	4.5	4.5	4.1
70°	3.3	3.7	4.1	4.5	4.9	4.9	4.5	4.5	4.5	4.1	3.7
70.5°	3.3	3.3	3.7	4.5	4.9	4.9	4.5	4.5	4.5	4.1	3.7
71°	2.9	3.3	3.7	4.1	4.9	4.5	4.1	4.1	4.1	4.1	3.3
71.5°	2.9	3.3	3.7	4.1	4.5	4.5	4.1	4.1	4.1	3.7	3.3
72°	2.9	2.9	3.3	4.1	4.5	4.1	3.7	4.1	3.7	3.7	3.3
72.5°	2.9	2.9	3.3	3.7	4.1	4.1	3.7	3.7	3.7	3.3	2.9
73°	2.5	2.9	2.9	3.7	4.1	4.1	3.3	3.7	3.7	3.3	2.9
73.5°	2.5	2.9	2.9	3.3	3.7	3.7	3.3	3.3	3.3	3.3	2.5
74°	2.5	2.5	2.9	3.3	3.7	3.7	3.3	3.3	3.3	2.9	2.5
74.5°	2.5	2.5	2.5	3.3	3.7	3.7	2.9	3.3	3.3	2.9	2.5
75°	2.0	2.5	2.5	2.9	3.3	3.3	2.9	2.9	2.9	2.9	2.0
75.5°	2.0	2.0	2.5	2.9	3.3	3.3	2.5	2.9	2.9	2.5	2.0
76°	2.0	2.0	2.0	2.9	3.3	2.9	2.5	2.9	2.9	2.5	2.0
76.5°	2.0	2.0	2.0	2.5	2.9	2.9	2.5	2.5	2.5	2.5	2.0
77°	1.6	2.0	2.0	2.5	2.9	2.9	2.0	2.5	2.5	2.0	1.6
77.5°	1.6	1.6	1.6	2.5	2.9	2.5	2.0	2.5	2.5	2.0	1.6
78°	1.6	1.6	1.6	2.0	2.5	2.5	2.0	2.0	2.0	2.0	1.6
78.5°	1.6	1.6	1.6	2.0	2.5	2.5	1.6	2.0	2.0	2.0	1.6
79°	1.6	1.6	1.6	2.0	2.5	2.0	1.6	2.0	2.0	1.6	1.2
79.5°	1.2	1.2	1.2	2.0	2.0	2.0	1.6	1.6	2.0	1.6	1.2
80°	1.2	1.2	1.2	1.6	2.0	2.0	1.6	1.6	1.6	1.6	1.2
80.5°	1.2	1.2	1.2	1.6	2.0	1.6	1.2	1.6	1.6	1.2	1.2
81°	1.2	1.2	1.2	1.6	1.6	1.6	1.2	1.2	1.6	1.2	0.8
81.5°	0.8	1.2	0.8	1.2	1.6	1.6	1.2	1.2	1.6	1.2	0.8
82°	0.8	0.8	0.8	1.2	1.6	1.6	1.2	1.2	1.2	1.2	0.8
82.5°	0.8	0.8	0.8	1.2	1.6	1.2	0.8	1.2	1.2	0.8	0.8
83°	0.8	0.8	0.8	0.8	1.2	1.2	0.8	0.8	1.2	0.8	0.8
83.5°	0.8	0.8	0.8	0.8	1.2	1.2	0.8	0.8	1.2	0.8	0.4
84°	0.4	0.4	0.4	0.8	1.2	0.8	0.8	0.8	0.8	0.8	0.4
84.5°	0.4	0.4	0.4	0.8	1.2	0.8	0.8	0.8	0.8	0.4	0.4
85°	0.4	0.4	0.4	0.4	0.8	0.8	0.4	0.4	0.8	0.4	0.4
85.5°	0.4	0.4	0.4	0.4	0.8	0.8	0.4	0.4	0.8	0.4	0.4
86°	0.4	0.4	0.4	0.4	0.8	0.4	0.4	0.4	0.4	0.4	0.4
86.5°	0.4	0.0	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
87°	0.0	0.0	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.4	0.4	0.4	0.0	0.4	0.0	0.0
88°	0.0	0.0	0.0	0.0	0.4	0.4	0.0	0.0	0.4	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: P776489
CATALOG NUMBER: HCDJBL3040CSD-HCD8TRC-4000lm-5000K

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: P776489

CATALOG NUMBER: HCDJBL3040CSD-HCD8TRC-4000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	3755.6	3755.6	3755.6	3755.6	3755.6	3755.6
0.5°	3752.3	3749.9	3750.7	3751.5	3753.6	3755.2
1°	3747.8	3744.6	3743.7	3745.8	3749.1	3751.5
1.5°	3741.3	3736.4	3736.0	3738.0	3742.5	3745.8
2°	3733.5	3727.4	3725.7	3728.6	3733.9	3739.2
2.5°	3724.5	3716.3	3714.7	3718.0	3724.5	3731.5
3°	3713.5	3704.5	3703.2	3706.1	3713.9	3721.6
3.5°	3701.6	3692.6	3689.3	3693.4	3701.2	3711.0
4°	3689.7	3680.7	3677.5	3678.3	3687.7	3697.9
4.5°	3678.3	3668.9	3664.0	3663.1	3673.0	3686.5
5°	3666.0	3655.8	3650.0	3648.4	3658.6	3673.8
5.5°	3652.9	3641.5	3634.9	3632.0	3643.5	3661.1
6°	3638.6	3628.0	3619.8	3615.3	3627.1	3648.0
6.5°	3624.3	3612.0	3604.2	3598.9	3611.6	3636.5
7°	3609.5	3596.0	3586.2	3581.7	3596.9	3623.9
7.5°	3592.8	3577.2	3567.8	3563.7	3580.5	3608.7
8°	3574.8	3558.4	3548.6	3546.5	3563.7	3593.6
8.5°	3555.1	3538.0	3527.3	3526.9	3546.1	3577.6
9°	3535.1	3516.7	3506.0	3508.1	3527.7	3558.8
9.5°	3513.8	3495.4	3483.1	3488.9	3508.5	3539.6
10°	3492.1	3472.9	3461.0	3468.8	3488.0	3519.5
10.5°	3470.4	3450.0	3436.9	3448.4	3466.8	3498.7
11°	3447.5	3427.5	3412.8	3427.1	3445.1	3477.8
11.5°	3424.6	3405.4	3388.6	3405.0	3423.4	3457.8
12°	3402.1	3382.5	3366.1	3382.1	3400.9	3436.9
12.5°	3380.4	3357.9	3342.4	3358.8	3379.2	3415.6
13°	3358.4	3333.4	3319.5	3335.0	3357.1	3393.5
13.5°	3334.2	3308.4	3293.3	3310.5	3335.4	3369.4
14°	3311.3	3283.1	3267.5	3284.7	3312.9	3345.3
14.5°	3286.4	3258.1	3241.4	3259.8	3289.2	3320.3
15°	3262.2	3232.8	3216.4	3234.8	3264.3	3295.8
15.5°	3236.9	3206.6	3189.8	3209.4	3238.5	3270.0
16°	3212.3	3179.6	3163.6	3183.7	3212.7	3243.8
16.5°	3186.9	3153.4	3136.6	3157.1	3186.5	3216.4
17°	3161.2	3125.6	3110.0	3131.3	3159.5	3188.2
17.5°	3134.6	3096.9	3082.6	3103.5	3132.1	3159.5
18°	3108.0	3067.5	3054.0	3075.7	3103.5	3129.7
18.5°	3079.3	3038.8	3025.8	3047.4	3074.0	3099.0
19°	3050.7	3008.6	2995.9	3017.2	3044.2	3068.3
19.5°	3022.1	2977.9	2966.0	2987.7	3013.1	3037.2
20°	2993.4	2946.8	2934.9	2957.0	2980.3	3005.3
20.5°	2964.4	2914.1	2904.7	2925.5	2948.0	2973.0
21°	2933.3	2880.9	2873.6	2893.2	2914.9	2938.6

TEST NUMBER: P776489

CATALOG NUMBER: HCDJBL3040CSD-HCD8TRC-4000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	2833.9	2775.8	2773.7	2794.2	2812.2	2833.1
23°	2799.9	2739.4	2739.4	2758.6	2776.2	2795.0
23.5°	2763.5	2706.6	2702.6	2724.2	2740.2	2758.2
24°	2727.1	2673.5	2666.1	2686.6	2703.4	2722.2
24.5°	2689.1	2640.4	2632.2	2649.8	2664.5	2687.8
25°	2653.5	2607.2	2598.6	2611.3	2624.8	2653.9
25.5°	2618.7	2573.7	2567.6	2574.1	2588.0	2617.5
26°	2586.4	2538.9	2534.4	2533.6	2551.6	2579.8
26.5°	2554.9	2502.5	2501.7	2493.5	2517.6	2541.4
27°	2523.4	2464.5	2469.0	2452.2	2482.9	2500.9
27.5°	2490.2	2424.4	2434.2	2409.6	2446.5	2459.5
28°	2456.3	2382.6	2399.0	2366.3	2409.6	2415.8
28.5°	2420.3	2340.9	2361.8	2323.7	2371.6	2372.4
29°	2383.5	2298.4	2323.3	2280.0	2331.9	2326.6
29.5°	2344.6	2253.4	2284.0	2237.0	2290.6	2280.8
30°	2305.7	2208.8	2242.7	2193.6	2248.4	2233.3
30.5°	2264.8	2162.1	2200.6	2152.7	2205.5	2185.0
31°	2224.3	2114.3	2156.8	2111.8	2161.3	2132.7
31.5°	2180.9	2065.6	2113.0	2072.1	2116.3	2086.0
32°	2139.2	2016.9	2068.4	2032.0	2070.5	2034.1
32.5°	2095.4	1965.3	2023.8	1994.8	2024.3	1983.3
33°	2050.9	1914.2	1976.8	1957.6	1978.0	1928.9
33.5°	2006.3	1861.4	1928.1	1922.0	1931.4	1878.2
34°	1960.8	1807.4	1880.3	1886.4	1884.8	1822.6
34.5°	1913.0	1753.4	1828.7	1849.2	1835.7	1768.6
35°	1866.3	1699.8	1778.0	1811.5	1787.4	1712.5
35.5°	1818.9	1649.1	1726.8	1773.9	1739.1	1661.4
36°	1771.0	1600.0	1675.7	1734.2	1690.0	1609.0
36.5°	1721.5	1549.7	1623.7	1695.3	1641.3	1558.7
37°	1672.4	1485.9	1574.2	1657.3	1591.8	1493.2
37.5°	1623.7	1411.0	1525.1	1618.8	1542.7	1420.0
38°	1575.9	1336.1	1482.2	1580.4	1494.1	1346.8
38.5°	1530.9	1261.7	1415.5	1541.5	1441.7	1274.0
39°	1489.1	1186.8	1348.4	1505.1	1389.3	1200.7
39.5°	1443.7	1112.0	1281.3	1463.0	1336.6	1127.5
40°	1386.1	1037.1	1214.6	1429.4	1284.2	1051.8
40.5°	1319.8	963.0	1148.0	1395.5	1231.4	976.5
41°	1252.7	892.3	1080.9	1361.5	1168.8	907.4
41.5°	1186.0	823.5	1012.1	1327.6	1106.6	838.3
42°	1121.4	760.5	943.4	1293.2	1045.3	774.8
42.5°	1055.9	700.4	875.5	1258.4	981.0	713.1
43°	989.6	639.8	810.8	1224.5	917.2	653.3
43.5°	922.1	579.7	749.5	1189.7	854.2	591.6



TEST NUMBER: P776489

CATALOG NUMBER: HCDJBL3040CSD-HCD8TRC-4000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	736.0	416.9	579.3	1091.1	681.2	426.3
45.5°	678.7	368.6	524.5	1052.2	627.2	376.0
46°	621.8	322.0	473.3	1009.7	574.0	329.7
46.5°	566.6	277.4	423.0	956.1	519.2	283.9
47°	513.0	235.2	376.0	904.5	469.2	241.8
47.5°	460.7	198.0	328.9	855.0	419.3	202.5
48°	415.2	165.7	285.1	803.5	372.7	169.8
48.5°	369.8	138.3	244.2	748.3	326.5	141.1
49°	324.8	119.0	206.6	684.4	284.7	121.9
49.5°	279.4	100.2	173.1	621.0	242.6	103.5
50°	234.0	81.8	143.2	563.3	205.0	84.7
50.5°	196.8	63.4	124.4	507.3	170.6	66.3
51°	163.6	48.7	106.0	455.7	141.6	51.5
51.5°	135.0	34.4	87.1	405.8	123.1	37.2
52°	111.3	20.9	68.7	358.8	104.7	23.3
52.5°	91.2	12.3	49.9	314.6	86.3	14.3
53°	74.5	11.5	35.6	273.3	67.9	12.7
53.5°	61.8	11.0	22.1	234.0	49.9	11.9
54°	49.1	10.2	12.3	199.6	35.6	11.0
54.5°	36.0	9.8	11.5	168.1	22.5	10.2
55°	23.3	9.4	10.2	139.5	12.7	9.8
55.5°	10.6	9.0	9.4	118.6	11.5	9.4
56°	8.6	8.6	8.6	97.8	10.2	9.0
56.5°	8.6	8.6	8.2	76.9	9.0	9.0
57°	8.2	8.2	7.8	56.0	8.2	8.6
57.5°	7.8	7.8	7.8	42.5	7.8	8.2
58°	7.8	7.8	7.4	32.3	7.4	7.8
58.5°	7.4	7.4	7.4	23.7	7.4	7.8
59°	7.4	7.0	7.0	17.6	7.0	7.4
59.5°	7.0	7.0	7.0	15.5	7.0	7.4
60°	7.0	6.5	6.5	13.1	6.5	7.0
60.5°	6.5	6.5	6.5	10.6	6.5	6.5
61°	6.5	6.1	6.1	8.2	6.1	6.5
61.5°	6.1	6.1	6.1	6.1	6.1	6.1
62°	6.1	5.7	5.7	5.7	5.7	6.1
62.5°	5.7	5.7	5.7	5.7	5.7	5.7
63°	5.7	5.3	5.3	5.3	5.7	5.7
63.5°	5.3	4.9	5.3	5.3	5.3	5.3
64°	5.3	4.9	4.9	5.3	5.3	5.3
64.5°	4.9	4.5	4.9	4.9	4.9	4.9
65°	4.9	4.5	4.9	4.9	4.9	4.9
65.5°	4.9	4.5	4.5	4.5	4.9	4.5
66°	4.5	4.1	4.5	4.5	4.5	4.5



TEST NUMBER: P776489

CATALOG NUMBER: HCDJBL3040CSD-HCD8TRC-4000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	4.1	3.7	4.1	4.1	4.1	4.1
68°	3.7	3.7	3.7	4.1	4.1	3.7
68.5°	3.7	3.3	3.7	3.7	3.7	3.7
69°	3.7	3.3	3.7	3.7	3.7	3.7
69.5°	3.3	3.3	3.3	3.7	3.7	3.3
70°	3.3	2.9	3.3	3.3	3.3	3.3
70.5°	3.3	2.9	3.3	3.3	3.3	3.3
71°	2.9	2.9	2.9	2.9	3.3	2.9
71.5°	2.9	2.9	2.9	2.9	2.9	2.9
72°	2.9	2.5	2.9	2.9	2.9	2.9
72.5°	2.9	2.5	2.5	2.5	2.9	2.9
73°	2.5	2.5	2.5	2.5	2.9	2.5
73.5°	2.5	2.5	2.5	2.5	2.5	2.5
74°	2.5	2.0	2.5	2.0	2.5	2.5
74.5°	2.0	2.0	2.0	2.0	2.5	2.5
75°	2.0	2.0	2.0	2.0	2.0	2.0
75.5°	2.0	2.0	2.0	2.0	2.0	2.0
76°	2.0	1.6	2.0	1.6	2.0	2.0
76.5°	2.0	1.6	1.6	1.6	2.0	2.0
77°	1.6	1.6	1.6	1.6	1.6	1.6
77.5°	1.6	1.6	1.6	1.6	1.6	1.6
78°	1.6	1.6	1.6	1.2	1.6	1.6
78.5°	1.6	1.6	1.6	1.2	1.6	1.6
79°	1.2	1.2	1.2	1.2	1.6	1.6
79.5°	1.2	1.2	1.2	1.2	1.2	1.2
80°	1.2	1.2	1.2	1.2	1.2	1.2
80.5°	1.2	1.2	1.2	0.8	1.2	1.2
81°	1.2	1.2	1.2	0.8	1.2	1.2
81.5°	0.8	0.8	0.8	0.8	0.8	0.8
82°	0.8	0.8	0.8	0.8	0.8	0.8
82.5°	0.8	0.8	0.8	0.8	0.8	0.8
83°	0.8	0.8	0.8	0.4	0.8	0.8
83.5°	0.8	0.8	0.8	0.4	0.4	0.8
84°	0.4	0.8	0.4	0.4	0.4	0.4
84.5°	0.4	0.4	0.4	0.4	0.4	0.4
85°	0.4	0.4	0.4	0.4	0.4	0.4
85.5°	0.4	0.4	0.4	0.4	0.4	0.4
86°	0.4	0.4	0.4	0.4	0.4	0.4
86.5°	0.4	0.4	0.4	0.0	0.0	0.4
87°	0.0	0.4	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: P776489
CATALOG NUMBER: HCDJBL3040CSD-HCD8TRC-4000lm-5000K

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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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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Scaled Data Report



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Scaled Data Report





21.5°	2904.7	2938.2	2988.1	3022.5	3073.2	3086.7	3110.8	3081.4	3052.8	3015.9	2963.6
22°	2869.9	2905.5	2956.2	2990.6	3045.0	3058.5	3080.6	3052.8	3024.5	2986.1	2931.2



44°	533.5	754.4	1281.7	1017.9	770.8	1023.6	1429.0	1064.5	726.2	912.7	1286.2
44.5°	477.8	694.7	1245.7	954.4	709.4	956.9	1391.4	1001.1	664.4	849.3	1251.0



66.5°	4.1	4.9	5.3	6.1	6.5	6.5	5.7	6.1	5.7	5.7	4.9
67°	4.1	4.5	5.3	5.7	6.1	6.1	5.7	5.7	5.7	5.3	4.9



89°	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

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21.5°	2901.4	2847.4	2840.0	2861.7	2881.7	2904.7
22°	2867.8	2811.4	2806.5	2828.2	2847.4	2869.9



44°	856.7	523.7	692.6	1155.3	792.8	533.5
44.5°	795.3	468.0	635.3	1121.0	736.0	477.8



66.5°	4.5	4.1	4.1	4.5	4.5	4.1
67°	4.1	3.7	4.1	4.1	4.1	4.1

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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)