

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: P776389

Luminaire Tested: HCDJBL3040CSD-HCD6TRC-4000lm-5000K

Issue Date: 2/7/2024

Test Information

Test Method: LM-79-2019
Report Number: P776389
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-5000K
Description: 6 INCH ROUND MEDIUM SPECULAR CLEAR TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 5000K CCT
Ballast/Driver: -

Summary

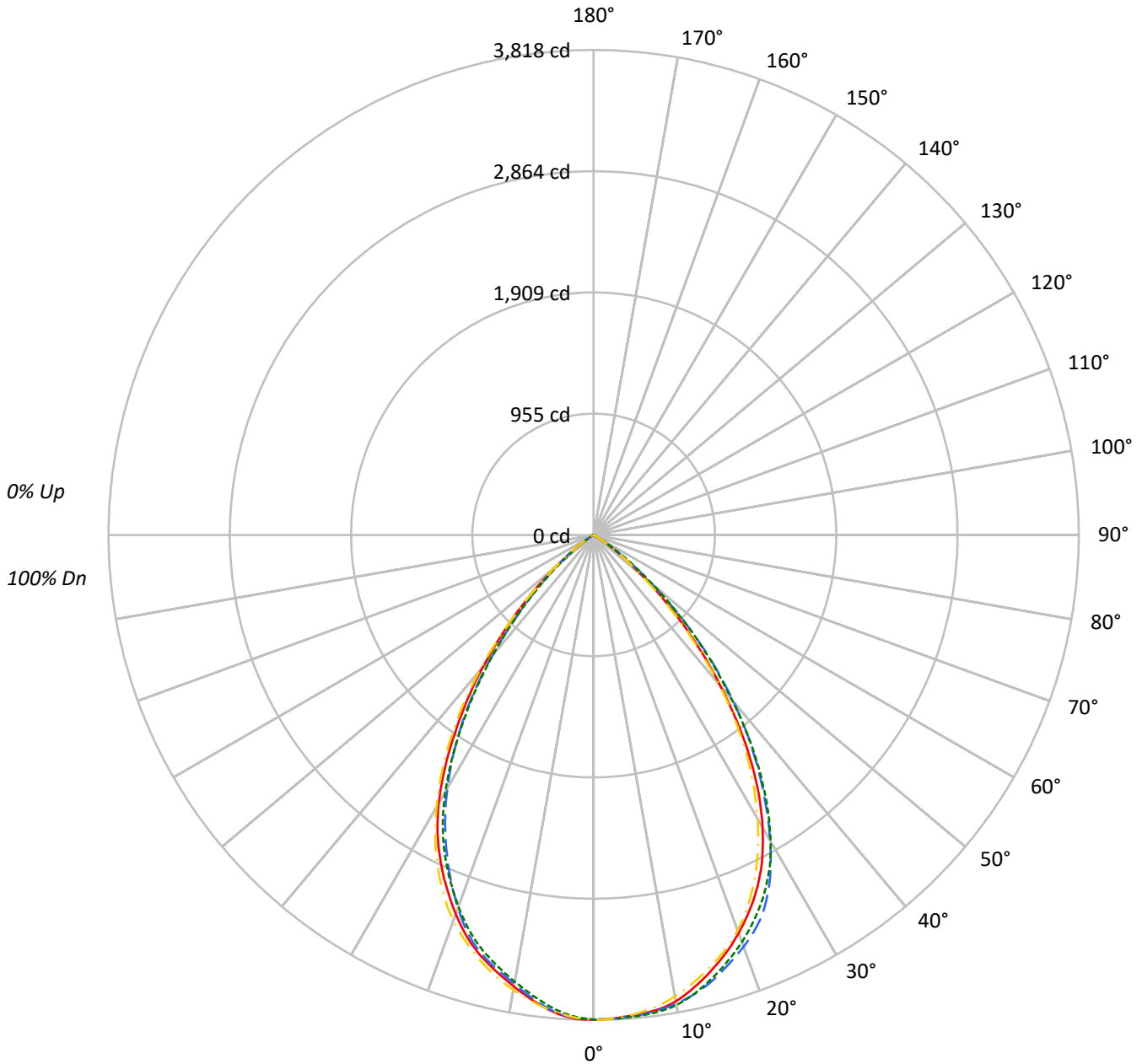
Lumens per Lamp: N/A
Luminaire Lumens: 4822.3 lumens
Efficiency: N/A
Efficacy: 125.3 lumens/watt
Spacing Criteria (0/90/45): 1.05 / 1.05 / 1.05
Luminous Opening: Circular (Dia: 0.5' x H: 0')
CIE Type: Direct

Input Watts (W): 38.5
Input Voltage (V): NR
Input Current (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	110	108	105	103	104	102	100	100	98	97	97	95	94	92					92			
2	107	101	97	93	104	99	95	92	96	93	90	93	90	88	90	88	86	84					84			
3	100	93	88	83	98	92	87	83	89	85	81	87	83	80	84	81	79	77					77			
4	94	86	80	75	93	85	79	75	83	78	74	81	76	73	79	75	72	70					70			
5	89	80	73	68	87	79	72	68	77	71	67	75	70	67	73	69	66	64					64			
6	84	74	67	62	82	73	67	62	71	66	62	70	65	61	68	64	61	59					59			
7	79	68	62	57	77	68	61	57	66	61	57	65	60	56	64	59	56	54					54			
8	74	64	57	53	73	63	57	52	62	56	52	61	56	52	60	55	52	50					50			
9	70	60	53	49	69	59	53	48	58	52	48	57	52	48	56	51	48	46					46			
10	66	56	49	45	65	55	49	45	54	49	45	54	48	45	53	48	45	43					43			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	209172	209172	209172	209172
5°	208755	209360	207153	205601
10°	207478	209209	201009	198822
15°	201851	204939	194678	191936
20°	194623	199016	185172	181543
25°	184589	190680	172268	167689
30°	168260	176211	154353	147801
35°	143751	152732	127348	119351
40°	111115	121041	96796	88566
45°	76791	86908	64169	56525
50°	43478	52024	33321	27598
55°	16344	21858	13256	10399
60°	1162	3772	537	625
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: 89893 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	356.9	7.4
10°-20°	983.3	20.4
20°-30°	1351.0	28.0
30°-40°	1256.0	26.0
40°-50°	709.2	14.7
50°-60°	163.6	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°	2691.2	55.8
0°-40°	3947.2	81.9
0°-60°	4820.1	100.0
0°-90°	4822.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4822.3	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	3816	3816	3816	3816	3816	
5°	3794	3804	3764	3736	3794	360
15°	3557	3611	3430	3382	3557	1000
25°	3052	3152	2848	2772	3052	1394
35°	2148	2282	1903	1783	2148	1325
45°	990	1121	828	729	990	766
55°	171	229	139	109	171	177
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	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	3815.6	3815.6	3815.6	3815.6	3815.6	3815.6	3815.6	3815.6	3815.6	3815.6	3815.6
0.5°	3816.8	3814.8	3814.8	3816.4	3814.4	3816.4	3818.0	3818.9	3817.6	3814.8	3813.1
1°	3815.2	3814.8	3814.8	3816.4	3814.8	3816.8	3817.6	3818.0	3817.2	3814.8	3812.3
1.5°	3812.7	3812.7	3813.9	3816.4	3813.9	3816.8	3815.6	3816.4	3815.2	3812.7	3809.9
2°	3810.7	3811.5	3813.1	3816.4	3813.5	3816.4	3813.1	3813.1	3812.7	3810.7	3806.6
2.5°	3808.2	3810.3	3812.3	3815.2	3812.7	3814.4	3809.9	3809.0	3808.2	3806.6	3802.5
3°	3804.9	3808.2	3810.3	3813.5	3811.5	3812.3	3805.8	3803.7	3802.1	3801.7	3797.2
3.5°	3802.1	3806.2	3808.2	3812.3	3810.3	3809.9	3801.3	3797.2	3794.3	3794.3	3789.8
4°	3799.6	3804.1	3806.2	3810.3	3808.2	3807.4	3796.4	3789.4	3786.1	3785.3	3781.2
4.5°	3796.4	3801.3	3803.7	3808.2	3806.6	3804.9	3790.2	3780.8	3775.9	3775.1	3770.2
5°	3793.5	3798.8	3800.9	3805.4	3804.5	3802.1	3784.5	3771.4	3764.4	3763.6	3757.9
5.5°	3791.0	3795.5	3797.6	3802.5	3802.5	3799.2	3777.5	3760.8	3751.8	3750.1	3744.4
6°	3786.9	3791.9	3793.5	3799.6	3800.9	3795.9	3770.6	3750.1	3739.1	3736.6	3729.3
6.5°	3783.3	3787.4	3789.4	3795.9	3797.6	3793.1	3763.2	3738.3	3724.3	3721.1	3714.1
7°	3778.4	3782.9	3784.5	3792.3	3794.7	3789.0	3755.9	3726.4	3709.6	3705.9	3697.3
7.5°	3772.6	3777.1	3779.6	3787.8	3791.4	3785.3	3746.9	3714.1	3694.1	3689.6	3680.2
8°	3766.5	3770.6	3773.9	3783.3	3786.9	3780.8	3737.0	3700.2	3678.1	3672.8	3662.2
8.5°	3759.1	3763.2	3767.7	3777.1	3781.2	3774.7	3726.8	3686.7	3661.3	3655.2	3644.6
9°	3749.7	3755.0	3761.2	3771.8	3774.3	3768.1	3715.8	3672.8	3645.4	3638.8	3626.6
9.5°	3739.1	3745.2	3754.2	3764.9	3766.5	3759.9	3703.1	3659.3	3628.2	3621.7	3609.0
10°	3727.2	3735.4	3746.4	3757.5	3758.3	3750.1	3689.6	3644.6	3611.0	3603.7	3591.4
10.5°	3714.1	3723.9	3738.7	3748.9	3747.7	3739.1	3676.1	3629.0	3593.4	3586.1	3573.0
11°	3699.0	3711.3	3729.3	3739.9	3735.8	3726.4	3661.8	3613.5	3575.8	3568.1	3555.0
11.5°	3684.3	3697.3	3720.3	3730.5	3723.1	3712.1	3645.8	3598.7	3558.6	3550.1	3537.4
12°	3667.5	3683.4	3709.2	3720.3	3708.8	3696.5	3629.8	3582.8	3541.5	3531.6	3520.6
12.5°	3650.3	3668.3	3698.6	3708.8	3694.5	3679.8	3612.7	3566.0	3523.5	3512.0	3503.4
13°	3632.3	3652.7	3685.9	3697.3	3678.9	3663.0	3597.1	3548.8	3505.9	3492.8	3486.6
13.5°	3614.7	3636.0	3673.6	3685.5	3662.6	3645.4	3579.1	3531.2	3487.5	3471.9	3468.6
14°	3595.1	3619.2	3659.7	3672.8	3645.8	3626.6	3562.7	3512.8	3469.0	3450.6	3450.6
14.5°	3576.7	3602.8	3644.6	3659.3	3628.2	3607.3	3544.3	3492.8	3450.2	3428.1	3431.4
15°	3556.6	3584.8	3628.2	3645.8	3611.0	3587.7	3526.7	3472.7	3430.2	3406.0	3411.8
15.5°	3537.0	3566.8	3611.8	3630.2	3593.0	3568.5	3507.9	3452.3	3410.1	3382.3	3390.9
16°	3516.9	3548.8	3594.7	3614.7	3574.2	3549.2	3490.3	3429.4	3388.9	3358.2	3368.8
16.5°	3496.5	3530.4	3576.7	3597.9	3555.8	3529.6	3470.7	3406.5	3365.9	3334.0	3343.9
17°	3474.8	3511.6	3559.1	3581.6	3536.1	3509.6	3451.0	3383.9	3341.8	3307.8	3317.7
17.5°	3454.3	3492.8	3541.1	3563.6	3516.1	3489.5	3431.4	3359.4	3316.4	3280.0	3289.4
18°	3431.8	3474.0	3523.1	3546.4	3495.6	3468.6	3409.7	3335.3	3291.1	3253.8	3259.2
18.5°	3409.3	3455.1	3505.1	3528.4	3475.6	3448.2	3388.4	3309.1	3262.8	3225.6	3226.8
19°	3385.2	3435.5	3487.1	3510.0	3454.3	3427.7	3365.1	3283.7	3234.6	3197.4	3193.7
19.5°	3360.6	3415.0	3468.6	3490.7	3433.5	3405.6	3339.8	3257.5	3204.7	3167.1	3159.7
20°	3336.1	3394.2	3449.4	3469.9	3411.4	3383.5	3314.0	3229.7	3174.1	3138.1	3124.6
20.5°	3310.3	3372.1	3430.6	3449.0	3387.6	3359.0	3286.6	3200.7	3143.0	3107.4	3087.7
21°	3284.9	3349.2	3410.5	3427.3	3364.3	3334.0	3258.3	3172.4	3111.9	3075.9	3050.9



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
22.5°	3202.7	3273.9	3344.7	3355.3	3290.7	3253.8	3165.9	3082.8	3015.7	2981.0	2940.0
23°	3174.9	3246.1	3319.3	3327.9	3263.7	3224.4	3133.1	3051.3	2983.8	2949.0	2900.8
23.5°	3145.0	3217.4	3293.5	3300.5	3237.5	3195.3	3098.8	3020.2	2951.9	2913.4	2860.7
24°	3114.7	3187.6	3264.1	3270.6	3210.1	3164.2	3064.4	2989.1	2917.5	2877.8	2820.6
24.5°	3083.2	3157.3	3233.4	3238.7	3181.4	3132.7	3030.0	2958.0	2882.8	2841.8	2780.1
25°	3051.7	3125.4	3201.1	3206.8	3152.4	3100.8	2995.3	2924.1	2848.0	2804.6	2740.0
25.5°	3018.6	3091.0	3166.7	3172.8	3122.1	3066.9	2960.9	2889.3	2811.6	2767.0	2699.1
26°	2983.4	3056.2	3129.9	3137.2	3088.6	3032.9	2919.2	2852.9	2774.7	2729.7	2658.1
26.5°	2947.8	3021.0	3092.2	3100.4	3055.0	2999.0	2879.5	2815.3	2737.1	2690.1	2617.2
27°	2911.0	2983.4	3052.1	3062.0	3021.5	2965.4	2840.6	2777.6	2697.8	2650.4	2575.5
27.5°	2872.5	2942.9	3010.8	3022.7	2987.9	2929.8	2798.5	2737.9	2658.6	2609.0	2531.7
28°	2831.2	2902.0	2965.8	2981.0	2953.9	2889.7	2757.6	2696.6	2618.5	2565.7	2487.9
28.5°	2791.1	2859.0	2921.2	2938.4	2913.9	2851.7	2714.2	2653.6	2575.5	2520.3	2441.7
29°	2747.7	2814.4	2873.8	2893.4	2872.1	2809.1	2670.8	2610.3	2531.3	2474.4	2396.7
29.5°	2703.1	2771.1	2826.7	2848.0	2828.3	2767.8	2625.4	2564.9	2484.7	2427.8	2348.4
30°	2658.1	2722.8	2777.2	2801.3	2783.7	2724.4	2580.8	2519.0	2438.4	2379.9	2300.2
30.5°	2612.3	2677.0	2728.5	2755.1	2737.9	2680.6	2534.2	2471.2	2389.3	2330.8	2251.5
31°	2564.5	2629.1	2677.4	2704.8	2691.7	2634.4	2486.7	2422.1	2339.4	2280.9	2203.6
31.5°	2514.5	2580.0	2626.2	2655.7	2643.4	2589.0	2438.8	2373.0	2288.3	2230.2	2154.5
32°	2466.3	2529.3	2574.3	2603.7	2594.3	2541.5	2391.4	2323.1	2235.1	2179.0	2105.8
32.5°	2416.3	2478.5	2522.7	2552.2	2544.8	2494.5	2341.9	2271.5	2181.1	2125.0	2055.9
33°	2365.6	2427.4	2468.7	2499.8	2494.1	2443.3	2292.8	2219.1	2126.7	2070.6	2006.8
33.5°	2312.4	2375.4	2418.4	2447.8	2443.3	2393.4	2242.9	2166.4	2071.4	2016.6	1957.7
34°	2260.5	2321.4	2364.8	2394.3	2389.3	2341.9	2193.4	2112.4	2015.4	1960.6	1907.4
34.5°	2204.8	2267.8	2312.4	2341.9	2336.2	2289.5	2142.2	2059.2	1958.1	1906.2	1855.8
35°	2148.0	2211.4	2259.2	2288.3	2282.2	2234.7	2091.9	2004.3	1902.9	1850.9	1803.1
35.5°	2090.7	2155.7	2206.5	2235.1	2227.3	2181.1	2040.8	1949.9	1847.6	1794.9	1750.3
36°	2033.8	2099.7	2153.7	2181.9	2171.7	2125.0	1987.6	1894.7	1793.2	1740.5	1696.3
36.5°	1974.5	2042.4	2098.9	2127.9	2113.2	2069.0	1932.3	1839.9	1738.4	1684.8	1641.0
37°	1914.7	1986.8	2046.5	2073.1	2054.7	2012.9	1877.9	1785.5	1684.0	1630.0	1584.2
37.5°	1853.4	1927.8	1993.3	2017.4	1995.3	1955.3	1821.5	1730.6	1630.0	1575.2	1528.5
38°	1792.4	1869.7	1938.1	1961.8	1935.6	1895.9	1765.4	1674.6	1576.4	1518.7	1471.7
38.5°	1731.0	1811.2	1882.0	1904.1	1874.7	1836.6	1708.1	1619.4	1522.4	1463.9	1416.0
39°	1669.3	1752.7	1825.6	1848.5	1814.1	1777.3	1649.2	1563.7	1465.9	1408.2	1359.1
39.5°	1611.2	1694.2	1769.5	1790.8	1752.3	1716.7	1591.5	1508.1	1409.5	1353.0	1300.6
40°	1552.7	1633.3	1711.4	1734.3	1691.4	1654.9	1533.0	1451.6	1352.6	1296.5	1245.0
40.5°	1495.4	1573.5	1654.1	1675.8	1632.4	1594.8	1473.7	1396.0	1295.7	1241.7	1187.3
41°	1438.5	1514.2	1595.6	1617.3	1572.7	1534.3	1412.7	1340.3	1239.7	1187.3	1130.8
41.5°	1381.6	1447.9	1537.9	1558.0	1515.0	1474.1	1352.2	1284.3	1183.6	1132.5	1074.8
42°	1325.2	1394.7	1481.5	1499.5	1456.9	1415.2	1292.0	1227.8	1130.8	1079.3	1020.4
42.5°	1268.3	1341.6	1423.4	1441.0	1402.1	1356.3	1233.9	1172.6	1080.5	1026.5	969.6
43°	1211.4	1288.4	1365.3	1383.3	1346.1	1299.4	1174.6	1113.7	1029.4	974.1	917.7
43.5°	1155.0	1235.2	1307.2	1346.9	1288.8	1242.1	1116.5	1058.0	979.5	923.4	869.4



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	990.5	1070.3	1134.1	1159.5	1121.0	1071.9	953.3	895.2	827.7	778.2	728.7
45.5°	937.3	1015.5	1076.0	1097.3	1064.6	1017.1	900.5	841.2	779.0	729.9	685.7
46°	887.0	961.5	1017.9	1042.1	1010.6	962.7	847.7	789.6	730.7	684.5	642.7
46.5°	835.5	908.3	961.9	987.6	959.4	909.9	797.4	739.3	683.3	640.7	602.2
47°	784.3	857.1	906.6	932.8	906.2	858.4	746.7	689.0	636.6	597.7	562.6
47.5°	734.0	805.2	853.0	878.8	855.1	809.3	698.4	642.7	594.1	556.0	526.1
48°	686.9	754.4	799.9	825.6	805.6	760.6	651.8	594.9	549.5	515.9	489.3
48.5°	639.5	704.1	747.5	773.7	755.7	713.5	606.7	551.1	506.5	477.9	455.4
49°	595.3	656.7	697.6	723.3	705.3	668.1	562.6	508.1	464.4	441.5	421.8
49.5°	551.1	608.8	648.1	672.6	656.3	623.9	522.1	468.9	425.5	406.7	392.8
50°	509.8	561.7	601.8	625.2	610.0	580.6	481.1	430.4	390.7	376.0	363.7
50.5°	467.6	516.3	556.4	578.1	563.8	538.0	443.9	398.5	356.4	345.3	334.7
51°	429.2	472.1	511.8	532.7	520.4	497.5	408.3	367.0	322.0	315.0	305.6
51.5°	391.1	429.2	469.3	488.5	477.9	457.8	376.8	335.1	287.6	284.3	276.6
52°	353.9	389.5	428.4	446.0	437.0	419.8	345.3	303.2	259.8	256.9	250.8
52.5°	317.9	351.9	389.1	407.1	401.0	385.0	313.8	271.3	234.8	232.0	226.7
53°	284.8	316.7	351.9	368.2	365.4	350.2	282.3	245.1	212.7	208.7	203.3
53.5°	252.8	282.7	315.0	330.6	329.4	315.9	255.3	221.8	193.1	187.0	181.2
54°	222.6	252.0	281.9	295.8	293.8	281.1	229.1	199.2	173.5	166.1	159.2
54.5°	195.6	222.2	249.2	263.9	258.2	251.6	205.4	178.4	155.9	147.3	139.1
55°	171.0	195.2	219.7	233.6	228.7	223.8	181.7	158.7	138.7	128.9	119.5
55.5°	148.1	170.2	191.9	205.0	200.9	196.8	159.6	139.9	121.9	110.9	101.5
56°	129.7	146.1	165.3	178.0	175.5	172.7	139.1	121.9	106.0	94.5	84.3
56.5°	111.7	127.6	140.7	154.2	151.8	149.7	119.1	105.1	90.4	79.0	69.1
57°	93.3	109.2	122.3	135.4	129.7	128.5	100.6	88.8	75.7	65.1	56.9
57.5°	75.3	90.8	103.9	116.6	109.6	108.4	83.5	73.6	62.6	51.6	44.2
58°	56.9	72.4	85.5	98.2	90.8	90.0	68.7	60.6	49.1	38.0	31.5
58.5°	40.5	54.0	67.1	79.4	74.9	74.1	56.1	47.5	36.0	24.1	19.2
59°	25.0	38.0	50.7	61.0	61.4	60.6	43.4	34.4	22.9	10.6	6.5
59.5°	13.5	23.3	34.4	44.2	47.9	47.5	31.1	21.3	9.8	5.7	4.5
60°	10.6	12.3	20.5	28.2	34.4	34.0	18.4	8.2	4.9	4.1	3.7
60.5°	8.2	9.8	10.6	16.0	20.9	20.9	5.7	4.5	3.7	3.3	3.3
61°	5.3	7.8	8.6	12.7	7.8	7.4	3.7	3.3	3.3	2.9	2.9
61.5°	2.9	5.3	6.5	9.4	4.5	4.1	2.9	2.9	2.9	2.5	2.5
62°	2.5	3.3	4.9	6.5	3.3	3.3	2.5	2.5	2.5	2.5	2.0
62.5°	2.0	2.9	3.3	3.3	2.9	2.9	2.0	2.0	2.0	2.0	2.0
63°	2.0	2.5	2.9	2.9	2.5	2.5	2.0	2.0	1.6	1.6	1.6
63.5°	1.6	2.0	2.5	2.5	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: P776389

CATALOG NUMBER: HCDJBL3040CSD-HCD6TRC-4000lm-5000K

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: P776389
CATALOG NUMBER: HCDJBL3040CSD-HCD6TRC-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: P776389

CATALOG NUMBER: HCDJBL3040CSD-HCD6TRC-4000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	3815.6	3815.6	3815.6	3815.6	3815.6	3815.6
0.5°	3813.1	3811.1	3812.3	3815.6	3816.8	3816.8
1°	3810.7	3808.2	3808.2	3813.1	3814.8	3815.2
1.5°	3807.4	3803.7	3803.3	3809.9	3811.5	3812.7
2°	3802.5	3798.0	3796.8	3804.9	3808.2	3810.7
2.5°	3796.8	3791.0	3789.4	3799.2	3804.1	3808.2
3°	3789.0	3782.9	3780.8	3792.7	3799.6	3804.9
3.5°	3780.4	3773.0	3771.4	3784.9	3794.7	3802.1
4°	3770.2	3762.0	3760.8	3777.5	3789.8	3799.6
4.5°	3758.3	3749.7	3749.3	3768.9	3784.5	3796.4
5°	3745.2	3736.2	3736.2	3759.9	3778.8	3793.5
5.5°	3730.1	3722.3	3723.1	3750.1	3773.0	3791.0
6°	3715.8	3707.2	3709.2	3739.9	3766.5	3786.9
6.5°	3699.4	3691.2	3694.9	3729.3	3758.7	3783.3
7°	3683.4	3674.8	3679.8	3718.2	3751.8	3778.4
7.5°	3666.7	3658.9	3664.6	3705.5	3742.8	3772.6
8°	3648.7	3641.3	3649.1	3693.7	3734.6	3766.5
8.5°	3631.1	3624.5	3633.1	3680.6	3723.5	3759.1
9°	3613.9	3606.9	3616.3	3667.1	3712.5	3749.7
9.5°	3596.3	3589.3	3599.2	3652.7	3700.2	3739.1
10°	3578.3	3571.7	3583.2	3638.8	3687.1	3727.2
10.5°	3559.9	3554.1	3566.8	3623.3	3673.2	3714.1
11°	3542.7	3536.6	3550.1	3608.6	3658.1	3699.0
11.5°	3523.5	3518.6	3532.5	3593.0	3642.5	3684.3
12°	3505.5	3499.7	3514.9	3576.2	3626.6	3667.5
12.5°	3486.2	3481.7	3497.3	3559.1	3609.8	3650.3
13°	3467.0	3462.5	3479.3	3541.5	3593.8	3632.3
13.5°	3445.7	3443.3	3460.0	3523.1	3576.7	3614.7
14°	3425.3	3422.8	3440.8	3504.2	3559.5	3595.1
14.5°	3403.6	3403.2	3420.8	3483.8	3542.7	3576.7
15°	3381.9	3381.9	3399.9	3463.7	3525.1	3556.6
15.5°	3358.6	3359.8	3379.0	3442.0	3506.3	3537.0
16°	3334.9	3336.9	3356.5	3421.6	3487.9	3516.9
16.5°	3309.9	3313.2	3332.8	3399.9	3468.6	3496.5
17°	3284.5	3287.8	3308.3	3377.4	3449.0	3474.8
17.5°	3256.3	3260.8	3282.1	3354.5	3428.1	3454.3
18°	3229.3	3233.0	3255.1	3331.2	3405.6	3431.8
18.5°	3199.4	3203.9	3226.8	3307.4	3381.5	3409.3
19°	3169.2	3174.5	3197.8	3282.1	3356.1	3385.2
19.5°	3138.1	3143.4	3168.3	3256.3	3329.9	3360.6
20°	3106.1	3111.9	3138.1	3229.7	3302.1	3336.1
20.5°	3072.6	3080.0	3106.6	3201.1	3273.9	3310.3
21°	3038.2	3047.6	3074.6	3172.8	3243.6	3284.9

TEST NUMBER: P776389

CATALOG NUMBER: HCDJBL3040CSD-HCD6TRC-4000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	2936.4	2947.4	2977.7	3076.7	3145.8	3202.7
23°	2900.4	2914.3	2945.4	3043.1	3110.2	3174.9
23.5°	2861.9	2879.9	2911.0	3008.8	3074.2	3145.0
24°	2823.8	2845.1	2877.0	2972.4	3039.0	3114.7
24.5°	2785.0	2808.3	2840.6	2937.2	3002.2	3083.2
25°	2746.5	2772.3	2805.4	2899.1	2964.2	3051.7
25.5°	2706.0	2735.1	2767.4	2861.1	2925.3	3018.6
26°	2664.7	2696.2	2730.6	2821.8	2886.4	2983.4
26.5°	2622.5	2656.1	2691.3	2782.9	2846.8	2947.8
27°	2579.6	2614.8	2650.0	2741.6	2806.7	2911.0
27.5°	2535.0	2571.8	2607.0	2699.1	2766.2	2872.5
28°	2490.0	2527.6	2562.8	2654.5	2722.4	2831.2
28.5°	2443.3	2481.0	2517.8	2610.3	2679.8	2791.1
29°	2396.3	2434.3	2470.8	2564.0	2635.2	2747.7
29.5°	2347.6	2384.8	2421.3	2519.4	2590.6	2703.1
30°	2298.5	2334.9	2372.2	2470.8	2543.6	2658.1
30.5°	2249.4	2282.6	2321.4	2423.7	2497.8	2612.3
31°	2199.1	2230.6	2269.1	2374.2	2450.3	2564.5
31.5°	2148.0	2176.2	2213.4	2325.1	2402.4	2514.5
32°	2096.8	2121.0	2159.0	2277.2	2352.5	2466.3
32.5°	2045.7	2064.5	2104.6	2226.1	2303.8	2416.3
33°	1992.1	2009.7	2048.9	2176.2	2252.7	2365.6
33.5°	1939.7	1953.2	1992.5	2123.8	2203.6	2312.4
34°	1884.9	1897.6	1937.7	2071.9	2152.9	2260.5
34.5°	1832.1	1839.1	1881.2	2019.1	2100.9	2204.8
35°	1778.9	1783.4	1826.0	1964.3	2046.5	2148.0
35.5°	1724.5	1727.8	1771.6	1910.7	1993.3	2090.7
36°	1670.5	1673.4	1715.9	1855.8	1937.7	2033.8
36.5°	1614.0	1620.2	1662.3	1801.0	1882.0	1974.5
37°	1558.0	1564.9	1607.9	1743.3	1823.9	1914.7
37.5°	1501.9	1510.9	1553.1	1686.0	1765.8	1853.4
38°	1445.5	1451.6	1497.8	1628.8	1707.3	1792.4
38.5°	1389.4	1398.0	1442.2	1569.4	1648.0	1731.0
39°	1332.1	1344.4	1386.1	1513.0	1587.8	1669.3
39.5°	1276.5	1290.8	1330.1	1449.6	1527.7	1611.2
40°	1221.7	1237.6	1274.0	1393.9	1463.9	1552.7
40.5°	1167.3	1182.8	1218.0	1337.9	1404.1	1495.4
41°	1113.7	1128.4	1161.9	1282.2	1344.4	1438.5
41.5°	1060.1	1076.4	1106.3	1226.2	1285.1	1381.6
42°	1006.5	1024.9	1053.1	1168.9	1225.4	1325.2
42.5°	954.9	974.1	1001.2	1112.4	1166.0	1268.3
43°	903.0	923.4	948.4	1055.6	1109.6	1211.4
43.5°	852.6	875.1	896.8	998.7	1053.1	1155.0



TEST NUMBER: P776389

CATALOG NUMBER: HCDJBL3040CSD-HCD6TRC-4000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	710.3	729.1	744.6	831.8	892.3	990.5
45.5°	666.5	682.4	694.7	779.8	842.0	937.3
46°	622.7	635.8	646.8	729.5	793.3	887.0
46.5°	582.6	592.4	600.2	680.4	746.3	835.5
47°	542.9	549.1	555.6	634.6	699.6	784.3
47.5°	505.7	506.5	511.8	590.0	652.6	734.0
48°	468.9	465.6	469.7	545.8	608.8	686.9
48.5°	433.7	428.4	430.4	505.3	565.4	639.5
49°	401.0	391.1	392.8	466.0	524.1	595.3
49.5°	371.5	357.6	358.4	430.4	483.2	551.1
50°	342.4	323.6	324.4	395.2	445.1	509.8
50.5°	313.0	294.2	294.2	360.9	406.7	467.6
51°	283.5	265.5	265.9	328.5	371.5	429.2
51.5°	257.3	241.0	240.6	300.3	337.5	391.1
52°	232.4	217.7	218.1	272.1	306.4	353.9
52.5°	209.1	196.8	196.8	245.5	276.2	317.9
53°	186.6	176.3	176.7	220.1	247.9	284.8
53.5°	165.3	158.3	158.3	197.2	220.9	252.8
54°	145.2	141.2	140.3	175.1	196.4	222.6
54.5°	126.8	125.2	124.4	154.2	171.8	195.6
55°	108.4	108.8	108.0	136.2	150.2	171.0
55.5°	91.6	92.9	92.1	118.6	131.7	148.1
56°	75.7	76.9	75.7	101.1	113.7	129.7
56.5°	62.2	62.6	61.4	83.5	95.3	111.7
57°	49.1	47.1	45.8	65.9	77.3	93.3
57.5°	35.6	31.9	30.3	50.3	59.3	75.3
58°	22.5	18.8	17.2	33.5	42.5	56.9
58.5°	9.0	15.1	13.5	20.0	27.4	40.5
59°	4.9	11.9	9.8	10.2	15.5	25.0
59.5°	3.7	9.0	6.5	8.2	12.3	13.5
60°	3.3	5.7	2.9	6.1	9.0	10.6
60.5°	2.9	2.5	2.5	4.5	5.7	8.2
61°	2.5	2.0	2.0	2.5	2.9	5.3
61.5°	2.0	2.0	1.6	2.0	2.5	2.9
62°	1.6	1.6	1.6	2.0	2.0	2.5
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: P776389
 CATALOG NUMBER: HCDJBL3040CSD-HCD6TRC-4000lm-5000K

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: P776389
CATALOG NUMBER: HCDJBL3040CSD-HCD6TRC-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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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°	3257.9	3325.0	3389.7	3404.8	3340.2	3308.3	3229.3	3143.0	3080.0	3044.0	3013.7
22°	3230.5	3300.1	3367.6	3380.3	3315.6	3281.7	3198.6	3113.9	3047.6	3012.5	2976.9



44°	1098.1	1180.4	1249.1	1284.3	1231.5	1184.9	1062.1	1003.6	928.3	874.7	821.5
44.5°	1043.3	1124.3	1191.0	1221.7	1177.9	1128.8	1008.9	949.2	879.2	825.6	775.3



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
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°	3004.3	3014.5	3043.1	3142.2	3212.1	3257.9
22°	2970.3	2981.0	3010.8	3109.0	3179.8	3230.5



44°	802.7	824.8	844.9	941.8	998.3	1098.1
44.5°	756.1	776.9	794.9	885.4	944.7	1043.3

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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)