

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: P776410

Luminaire Tested: HCDJBL3040CSD-HCD6TSQC-4000lm-2700K

Issue Date: 2/7/2024

Test Information

Test Method: LM-79-2019
Report Number: P776410
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: HCDJBL3040CSD-HCD6TSQC-4000lm-2700K
Description: 6 INCH SQUARE MEDIUM SPECULAR CLEAR TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 2700K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4338.8 lumens
Efficiency: N/A
Efficacy: 112.7 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 0.94 / 0.99
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')

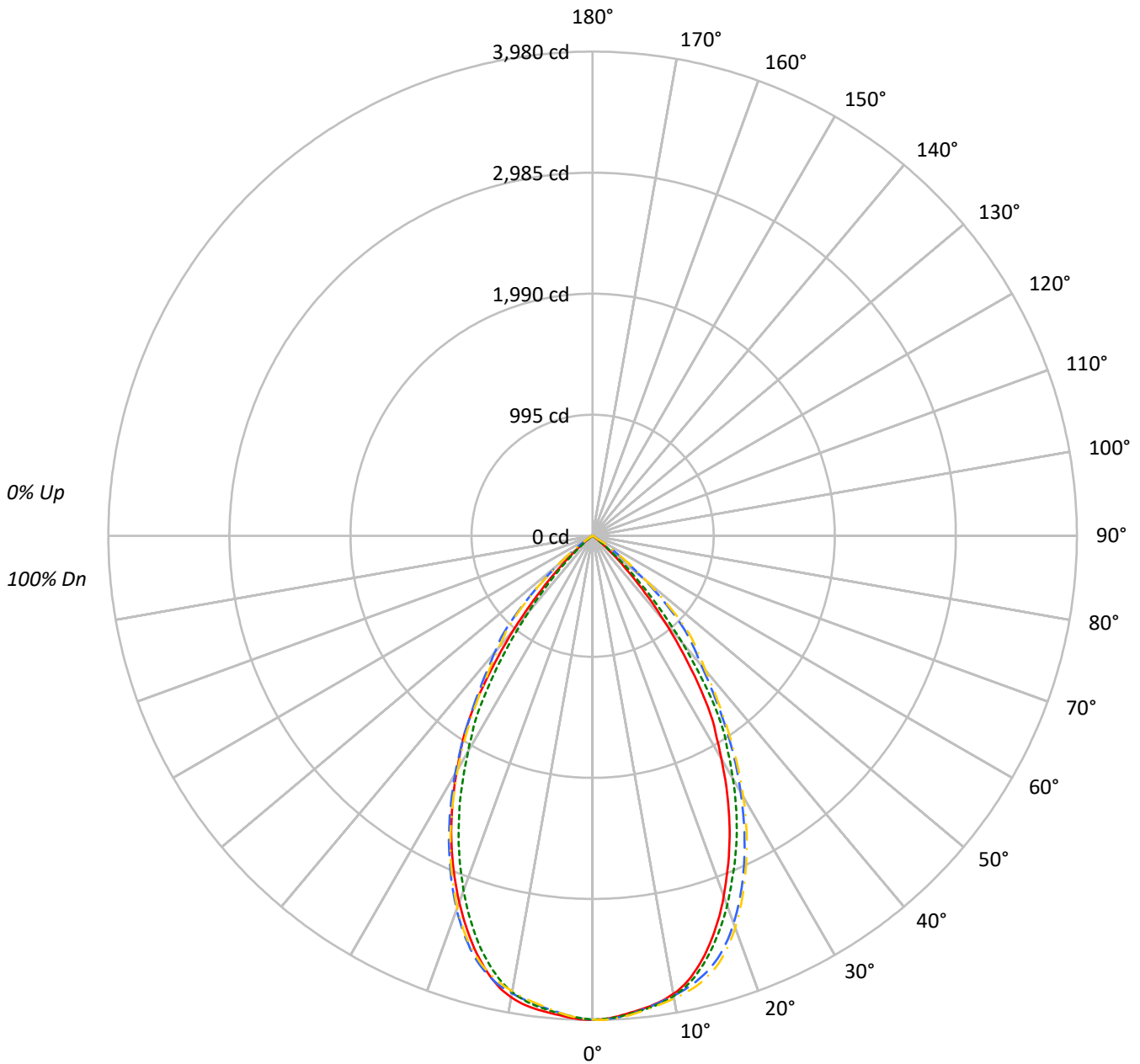
CIE Type: Direct

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	108	105	111	108	106	104	104	102	100	100	99	97	97	96	95	93	93	93	93
2	107	102	98	94	105	100	96	93	97	94	91	94	91	89	91	89	87	85	85	85	85
3	101	94	89	85	99	93	88	84	90	86	83	88	84	81	86	83	80	79	79	79	79
4	96	87	82	77	94	86	81	77	84	79	76	82	78	75	80	77	74	72	72	72	72
5	90	81	75	70	89	80	74	70	78	73	69	77	72	69	75	71	68	67	67	67	67
6	85	76	69	65	84	75	69	64	73	68	64	72	67	64	71	66	63	62	62	62	62
7	81	71	64	60	79	70	64	60	69	63	59	67	63	59	66	62	59	57	57	57	57
8	76	66	60	55	75	65	59	55	64	59	55	63	58	55	62	58	54	53	53	53	53
9	72	62	56	51	71	61	55	51	60	55	51	60	55	51	59	54	51	49	49	49	49
10	69	58	52	48	68	58	52	48	57	51	48	56	51	48	55	51	47	46	46	46	46

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	171280	171280	171280	171280
5°	169678	170041	170292	169445
10°	167159	167897	168400	166538
15°	158895	160673	160366	157134
20°	144357	148087	146854	142071
25°	126591	132738	130639	123655
30°	105081	114621	110957	101705
35°	81922	94510	88098	76818
40°	51641	63939	56818	46617
45°	24983	34141	28490	21360
50°	7582	11956	8969	6095
55°	1006	923	893	781
60°	698	723	723	594
65°	591	591	621	509
70°	478	529	529	390
75°	449	449	449	383
80°	372	372	372	298
85°	198	395	198	198

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 135°
 Vertical Angle: 45°
 Luminance: 66206 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	372.0	8.6
10°-20°	1008.0	23.2
20°-30°	1274.3	29.4
30°-40°	1076.7	24.8
40°-50°	519.7	12.0
50°-60°	77.9	1.8
60°-70°	6.5	0.2
70°-80°	2.9	0.1
80°-90°	0.7	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°	2654.4	61.2
0°-40°	3731.1	86.0
0°-60°	4328.7	99.8
0°-90°	4338.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4338.8	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	3978	3978	3978	3978	3978	
5°	3926	3934	3940	3920	3926	372
15°	3565	3605	3598	3525	3565	993
25°	2665	2794	2750	2603	2665	1213
35°	1559	1798	1676	1462	1559	953
45°	410	561	468	351	410	334
55°	13	12	12	10	13	26
65°	6	6	6	5	6	6
75°	3	3	3	2	3	3
85°	0	1	0	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°	3978.1	3978.1	3978.1	3978.1	3978.1	3978.1	3978.1	3978.1	3978.1	3978.1	3978.1
0.5°	3978.5	3978.9	3978.5	3978.9	3974.6	3977.3	3980.0	3982.3	3979.6	3976.9	3975.8
1°	3976.2	3978.1	3978.1	3978.9	3974.2	3978.1	3980.4	3981.5	3978.9	3973.5	3971.9
1.5°	3972.3	3975.8	3976.5	3978.1	3972.7	3976.5	3980.0	3979.6	3976.2	3969.6	3967.3
2°	3968.1	3972.7	3974.2	3976.5	3969.3	3974.6	3978.1	3975.8	3971.6	3964.3	3961.6
2.5°	3962.0	3969.3	3970.8	3973.5	3965.4	3971.2	3974.6	3971.6	3967.3	3958.1	3955.1
3°	3956.2	3963.5	3965.8	3969.6	3960.8	3967.0	3970.0	3965.8	3962.0	3951.2	3947.0
3.5°	3948.1	3957.4	3959.7	3964.3	3955.1	3961.2	3964.3	3960.8	3956.2	3944.3	3939.3
4°	3940.1	3950.1	3952.8	3957.7	3948.1	3955.8	3957.7	3954.3	3950.1	3937.0	3930.1
4.5°	3932.4	3941.6	3944.7	3950.8	3941.6	3948.5	3951.2	3948.5	3945.8	3929.7	3921.3
5°	3925.9	3933.6	3935.5	3943.2	3934.3	3941.2	3943.5	3943.2	3940.1	3922.8	3912.5
5.5°	3918.6	3925.9	3926.7	3934.7	3927.8	3933.9	3935.9	3937.0	3934.3	3915.5	3904.4
6°	3910.9	3918.6	3916.3	3925.5	3920.9	3926.7	3928.2	3930.5	3928.2	3907.8	3897.1
6.5°	3902.9	3911.3	3907.1	3916.7	3913.6	3919.4	3919.7	3923.6	3923.2	3900.2	3888.3
7°	3895.6	3902.9	3897.9	3908.2	3905.9	3911.3	3912.1	3917.1	3916.3	3891.3	3879.4
7.5°	3885.6	3894.0	3888.3	3899.0	3897.9	3902.9	3904.0	3909.4	3908.6	3881.8	3870.2
8°	3876.8	3885.2	3879.4	3889.4	3888.7	3894.4	3896.3	3901.7	3900.2	3871.8	3861.0
8.5°	3865.2	3875.2	3869.5	3879.4	3879.1	3884.4	3888.3	3892.9	3891.0	3861.0	3851.8
9°	3852.2	3864.9	3859.5	3869.1	3867.6	3874.1	3880.2	3882.9	3879.8	3849.1	3841.8
9.5°	3838.0	3852.6	3849.9	3857.6	3854.9	3863.7	3871.8	3872.9	3866.4	3835.7	3830.7
10°	3823.4	3839.1	3839.1	3846.1	3840.3	3851.4	3863.3	3859.5	3851.8	3820.3	3818.8
10.5°	3807.7	3825.3	3828.4	3833.4	3825.7	3837.6	3854.1	3845.7	3836.5	3805.0	3808.1
11°	3788.9	3810.7	3817.3	3819.2	3809.2	3822.6	3844.1	3829.6	3818.0	3788.5	3795.0
11.5°	3767.4	3794.6	3805.8	3805.0	3791.2	3807.7	3833.4	3814.2	3798.1	3768.9	3780.4
12°	3744.7	3777.0	3792.3	3788.9	3770.4	3791.6	3821.9	3795.8	3774.7	3747.8	3764.3
12.5°	3719.8	3756.6	3778.5	3772.4	3747.0	3772.4	3810.7	3775.8	3749.3	3724.4	3747.4
13°	3692.2	3734.4	3763.5	3753.9	3722.1	3752.8	3796.9	3753.6	3722.5	3698.3	3727.5
13.5°	3662.2	3710.6	3747.4	3735.1	3694.8	3729.8	3782.0	3729.8	3693.7	3671.4	3707.1
14°	3631.5	3685.2	3730.5	3713.6	3666.1	3706.0	3765.1	3703.7	3662.6	3643.0	3684.1
14.5°	3599.3	3658.0	3711.7	3689.5	3636.1	3679.5	3747.4	3675.7	3630.7	3613.1	3660.3
15°	3564.7	3628.4	3691.4	3663.4	3604.6	3652.2	3729.0	3647.2	3597.7	3581.6	3633.0
15.5°	3528.3	3598.5	3669.9	3636.9	3572.4	3623.8	3708.3	3617.7	3563.2	3550.9	3604.6
16°	3491.0	3566.3	3646.9	3609.3	3538.3	3595.1	3685.2	3587.4	3527.5	3516.8	3573.6
16.5°	3452.3	3533.3	3620.8	3579.3	3503.7	3564.7	3659.9	3554.8	3491.0	3482.2	3540.2
17°	3413.5	3498.7	3593.9	3548.2	3468.0	3532.5	3632.3	3520.2	3452.7	3446.1	3504.9
17.5°	3371.7	3462.6	3564.7	3516.4	3431.2	3499.9	3602.3	3486.1	3412.0	3410.4	3470.3
18°	3331.0	3426.9	3533.3	3484.1	3392.0	3466.5	3570.1	3450.7	3372.4	3371.7	3431.2
18.5°	3288.8	3389.3	3500.3	3450.0	3353.3	3431.9	3536.7	3413.9	3331.8	3332.5	3391.3
19°	3244.6	3350.6	3464.6	3415.1	3314.1	3396.2	3500.6	3375.9	3290.3	3293.0	3351.0
19.5°	3198.2	3311.0	3428.5	3378.2	3274.2	3359.8	3463.8	3337.9	3247.7	3254.2	3311.4
20°	3150.6	3269.6	3390.1	3342.5	3232.0	3322.2	3425.8	3298.4	3205.1	3211.6	3266.1
20.5°	3103.0	3229.3	3350.6	3305.3	3188.6	3284.2	3385.9	3258.1	3161.4	3169.4	3222.4
21°	3053.5	3186.3	3309.9	3267.3	3144.9	3243.9	3344.4	3217.4	3116.5	3128.0	3177.1

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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°	2914.6	3048.9	3181.7	3147.2	3013.6	3120.3	3217.0	3092.7	2982.1	2995.2	3038.5
23°	2865.8	3002.5	3136.8	3104.9	2972.1	3076.2	3171.0	3049.7	2935.7	2951.4	2989.8
23.5°	2815.2	2956.8	3090.7	3062.7	2927.6	3032.4	3126.4	3006.7	2889.2	2904.2	2941.1
24°	2766.0	2912.7	3043.9	3019.0	2883.1	2989.4	3080.0	2962.6	2842.8	2857.0	2892.3
24.5°	2715.8	2867.4	2997.1	2975.2	2838.6	2948.3	3032.8	2915.7	2796.4	2809.4	2843.6
25°	2664.7	2820.2	2949.1	2932.2	2794.1	2902.7	2983.3	2869.3	2749.9	2762.2	2794.8
25.5°	2612.5	2771.0	2900.8	2889.6	2749.5	2857.4	2934.9	2822.5	2700.4	2717.3	2746.1
26°	2559.6	2721.9	2850.1	2844.7	2703.1	2811.7	2886.9	2775.6	2651.3	2667.8	2690.8
26.5°	2506.2	2671.2	2799.4	2797.9	2654.7	2766.0	2838.6	2729.2	2599.9	2617.9	2639.0
27°	2452.5	2621.7	2748.8	2751.8	2606.4	2724.2	2790.2	2679.7	2549.2	2567.6	2584.9
27.5°	2396.8	2569.9	2696.2	2705.8	2557.6	2677.0	2741.9	2629.8	2497.8	2517.3	2531.5
28°	2340.8	2519.6	2644.8	2658.2	2508.5	2627.9	2688.5	2580.3	2445.6	2467.8	2475.9
28.5°	2284.0	2466.3	2590.3	2611.0	2459.4	2579.5	2637.1	2530.0	2392.2	2417.2	2423.3
29°	2227.6	2415.6	2536.9	2561.1	2408.7	2530.8	2583.0	2478.2	2340.0	2365.0	2369.6
29.5°	2170.8	2361.9	2484.0	2511.2	2358.1	2484.0	2528.1	2426.8	2285.1	2314.7	2316.2
30°	2113.6	2310.9	2432.9	2464.0	2305.5	2432.9	2473.2	2375.3	2231.8	2262.9	2259.8
30.5°	2060.6	2255.6	2379.9	2413.7	2253.3	2383.8	2421.8	2323.9	2179.6	2211.1	2205.7
31°	2008.4	2202.2	2326.2	2366.5	2202.6	2333.5	2368.8	2272.1	2130.9	2158.1	2148.9
31.5°	1952.0	2147.4	2272.9	2316.2	2154.7	2286.7	2314.3	2219.1	2076.4	2107.1	2092.9
32°	1902.5	2093.6	2220.7	2266.3	2102.1	2234.5	2259.4	2168.1	2029.9	2057.6	2035.7
32.5°	1860.7	2038.7	2166.5	2214.5	2051.0	2185.4	2204.5	2115.9	1978.1	2010.3	1979.3
33°	1812.3	1988.9	2110.9	2166.5	2010.7	2134.3	2147.7	2068.3	1927.1	1959.3	1922.8
33.5°	1752.4	1938.6	2056.0	2117.0	1962.8	2089.8	2093.2	2017.3	1869.1	1913.6	1866.8
34°	1693.3	1886.0	2001.9	2068.3	1910.6	2038.0	2037.2	1967.7	1808.1	1865.3	1812.3
34.5°	1625.8	1839.2	1947.0	2019.6	1856.8	1986.5	1981.9	1924.4	1744.4	1816.5	1757.8
35°	1558.6	1798.9	1893.3	1970.8	1798.1	1945.1	1927.1	1871.8	1676.1	1763.6	1703.7
35.5°	1492.6	1753.2	1837.2	1920.9	1737.8	1904.8	1873.7	1823.0	1606.2	1707.1	1651.5
36°	1428.5	1696.4	1782.7	1882.2	1671.1	1851.5	1820.7	1768.2	1536.0	1645.7	1599.7
36.5°	1357.9	1641.9	1730.2	1833.4	1603.5	1804.6	1769.3	1709.1	1464.6	1584.3	1550.2
37°	1294.6	1577.4	1677.6	1785.1	1532.5	1749.0	1717.1	1648.0	1396.6	1520.2	1501.8
37.5°	1231.6	1515.2	1626.5	1735.5	1465.3	1692.6	1667.6	1584.3	1330.6	1455.4	1455.4
38°	1168.3	1453.8	1575.1	1680.3	1396.3	1631.1	1619.6	1519.1	1265.0	1390.5	1409.3
38.5°	1105.3	1394.7	1526.8	1622.7	1330.6	1570.5	1573.2	1451.5	1202.4	1325.6	1366.3
39°	1040.9	1334.5	1478.4	1560.9	1265.8	1505.6	1528.7	1387.1	1139.5	1263.9	1325.6
39.5°	978.7	1274.2	1432.3	1497.6	1202.1	1441.2	1484.2	1323.0	1075.4	1204.0	1290.0
40°	918.8	1214.0	1390.5	1434.3	1137.6	1376.7	1442.3	1261.5	1010.9	1146.0	1253.5
40.5°	859.3	1153.7	1355.2	1368.2	1074.6	1314.5	1402.8	1202.1	948.0	1089.2	1215.9
41°	803.7	1093.8	1319.9	1308.0	1011.7	1252.0	1368.6	1143.0	886.2	1030.5	1191.7
41.5°	749.6	1034.0	1284.6	1247.3	949.1	1192.8	1334.1	1084.6	826.3	973.3	1158.7
42°	695.8	974.9	1249.3	1187.1	887.3	1133.7	1295.7	1026.7	769.1	915.7	1119.5
42.5°	642.5	915.7	1214.0	1126.8	826.7	1076.9	1266.9	968.3	715.0	859.3	1081.2
43°	591.8	860.5	1179.0	1069.6	769.9	1017.5	1242.7	909.6	661.7	804.1	1030.9
43.5°	543.1	807.5	1142.2	1012.5	714.6	958.3	1205.1	851.3	610.6	750.3	979.8



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	410.3	652.5	1019.0	842.1	560.7	789.9	1087.3	692.8	467.9	601.4	824.4
45.5°	369.2	603.3	974.1	787.9	513.1	736.1	1040.1	644.0	423.7	553.8	772.2
46°	330.5	555.4	926.1	735.0	467.5	684.7	990.2	594.9	386.9	507.8	721.5
46.5°	293.6	508.9	878.1	684.7	422.6	636.0	938.0	548.1	350.0	463.6	672.0
47°	258.3	464.0	829.0	635.6	385.3	586.4	882.4	502.8	313.2	422.9	624.4
47.5°	224.9	421.4	779.5	588.7	347.7	539.6	827.9	459.0	276.3	386.5	576.9
48°	194.6	380.0	728.1	543.1	310.5	494.0	775.7	416.8	239.9	350.0	532.3
48.5°	167.7	342.3	677.0	498.2	273.3	450.6	725.0	381.1	209.9	313.6	489.0
49°	143.9	304.7	626.4	454.4	236.0	406.8	675.9	345.4	182.7	277.5	447.1
49.5°	128.2	269.4	579.9	413.0	206.1	369.6	627.9	309.7	157.4	241.0	406.8
50°	113.2	236.0	533.5	373.8	178.5	332.0	582.6	274.0	133.9	211.5	371.5
50.5°	97.9	206.1	490.9	336.6	152.8	294.8	538.9	238.3	113.6	183.1	336.2
51°	82.5	177.7	447.9	299.7	129.3	257.5	497.0	207.3	94.0	157.7	300.9
51.5°	67.5	152.4	408.7	265.6	108.6	225.7	454.4	180.4	77.1	133.2	265.2
52°	56.0	129.7	370.0	234.1	89.4	195.7	413.0	153.9	64.5	111.7	235.7
52.5°	45.3	114.4	334.7	204.6	71.8	167.7	377.3	130.9	51.8	91.7	207.3
53°	34.5	99.0	300.1	176.5	59.9	142.4	341.6	108.2	39.1	74.8	181.2
53.5°	24.2	83.7	266.7	151.2	48.0	119.0	305.5	89.4	26.1	62.2	157.0
54°	16.5	68.3	235.3	127.4	35.7	98.6	269.8	71.8	13.8	49.5	135.5
54.5°	14.6	57.2	207.6	108.6	23.8	79.8	234.1	59.9	12.7	36.8	115.5
55°	13.4	46.1	180.8	89.8	12.3	66.4	206.1	47.6	11.9	24.6	97.5
55.5°	11.9	35.7	157.0	71.0	11.5	53.0	178.1	35.7	11.5	12.7	81.7
56°	10.7	25.3	135.1	52.6	11.1	39.9	152.8	23.4	11.1	11.5	67.9
56.5°	10.4	16.9	119.0	38.0	10.7	26.9	129.3	11.5	10.7	11.1	56.0
57°	10.0	15.4	102.9	25.3	10.4	13.4	108.6	10.7	10.4	10.7	48.7
57.5°	9.6	13.8	87.1	15.0	10.0	11.1	89.4	10.7	10.0	10.4	41.5
58°	9.2	12.3	71.0	13.4	9.6	10.7	72.9	10.4	10.0	10.0	34.2
58.5°	8.8	11.1	54.9	11.9	9.2	10.4	58.7	10.0	9.6	9.6	27.2
59°	8.8	9.6	44.5	10.7	8.8	10.0	50.7	9.6	9.2	9.2	20.0
59.5°	8.4	9.2	36.1	9.2	8.8	9.6	42.6	9.2	8.8	9.2	16.1
60°	8.1	8.8	29.2	8.8	8.4	9.2	34.5	8.8	8.4	8.8	13.4
60.5°	7.7	8.8	23.8	8.8	8.1	8.8	26.9	8.8	8.4	8.4	11.1
61°	7.7	8.4	19.2	8.4	7.7	8.8	18.8	8.4	8.1	8.1	9.6
61.5°	7.3	8.1	15.7	8.1	7.7	8.4	15.4	8.1	7.7	8.1	8.4
62°	7.3	8.1	14.2	8.1	7.3	8.1	12.7	8.1	7.3	7.7	8.1
62.5°	6.9	7.7	12.7	7.7	6.9	8.1	10.7	7.7	7.3	7.3	7.7
63°	6.5	7.3	10.7	7.3	6.9	7.7	9.2	7.3	6.9	7.3	7.3
63.5°	6.5	7.3	9.2	7.3	6.5	7.3	8.4	7.3	6.9	6.9	6.9
64°	6.1	6.9	7.7	6.9	6.5	7.3	7.7	6.9	6.5	6.5	6.9
64.5°	6.1	6.5	7.3	6.9	6.1	6.9	7.7	6.9	6.1	6.5	6.5
65°	5.8	6.5	7.3	6.5	5.8	6.5	7.3	6.5	6.1	6.1	6.5
65.5°	5.8	6.1	6.9	6.1	5.8	6.5	6.9	6.1	5.8	6.1	6.1
66°	5.4	6.1	6.5	6.1	5.4	6.1	6.9	6.1	5.8	5.8	6.1



TEST NUMBER: P776410

CATALOG NUMBER: HCDJBL3040CSD-HCD6TSQC-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	5.0	5.4	6.1	5.4	5.0	5.8	6.1	5.4	5.0	5.4	5.4
68°	4.6	5.4	5.8	5.4	4.6	5.4	5.8	5.4	5.0	5.0	5.0
68.5°	4.6	5.0	5.8	5.0	4.6	5.0	5.8	5.0	4.6	4.6	5.0
69°	4.2	5.0	5.4	5.0	4.2	5.0	5.4	5.0	4.6	4.6	4.6
69.5°	4.2	4.6	5.4	5.0	4.2	4.6	5.4	4.6	4.2	4.2	4.6
70°	3.8	4.6	5.0	4.6	4.2	4.6	5.0	4.6	4.2	4.2	4.2
70.5°	3.8	4.2	5.0	4.6	3.8	4.6	5.0	4.2	3.8	4.2	4.2
71°	3.8	4.2	4.6	4.2	3.8	4.2	4.6	4.2	3.8	3.8	3.8
71.5°	3.5	3.8	4.6	4.2	3.5	4.2	4.6	3.8	3.5	3.8	3.8
72°	3.5	3.8	4.2	3.8	3.5	3.8	4.2	3.8	3.5	3.5	3.5
72.5°	3.1	3.5	4.2	3.8	3.5	3.8	4.2	3.8	3.5	3.5	3.5
73°	3.1	3.5	3.8	3.8	3.1	3.5	3.8	3.5	3.1	3.1	3.5
73.5°	3.1	3.5	3.8	3.5	3.1	3.5	3.8	3.5	3.1	3.1	3.1
74°	2.7	3.1	3.5	3.5	3.1	3.5	3.5	3.1	3.1	3.1	3.1
74.5°	2.7	3.1	3.5	3.1	2.7	3.1	3.5	3.1	2.7	2.7	2.7
75°	2.7	2.7	3.1	3.1	2.7	3.1	3.5	3.1	2.7	2.7	2.7
75.5°	2.3	2.7	3.1	3.1	2.7	3.1	3.1	2.7	2.7	2.7	2.3
76°	2.3	2.7	3.1	2.7	2.7	2.7	3.1	2.7	2.3	2.3	2.3
76.5°	2.3	2.3	2.7	2.7	2.3	2.7	2.7	2.7	2.3	2.3	2.3
77°	2.3	2.3	2.7	2.7	2.3	2.7	2.7	2.3	2.3	2.3	1.9
77.5°	1.9	2.3	2.3	2.3	2.3	2.3	2.3	2.3	1.9	1.9	1.9
78°	1.9	1.9	2.3	2.3	1.9	2.3	2.3	1.9	1.9	1.9	1.5
78.5°	1.9	1.9	1.9	2.3	1.9	2.3	2.3	1.9	1.9	1.9	1.5
79°	1.5	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.5	1.5
79.5°	1.5	1.9	1.9	1.9	1.9	1.9	1.9	1.5	1.5	1.5	1.2
80°	1.5	1.5	1.5	1.9	1.5	1.9	1.9	1.5	1.5	1.5	1.2
80.5°	1.5	1.5	1.5	1.5	1.5	1.9	1.5	1.5	1.5	1.2	1.2
81°	1.2	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.2	1.2	1.2
81.5°	1.2	1.2	1.2	1.5	1.5	1.5	1.5	1.2	1.2	1.2	0.8
82°	1.2	1.2	1.2	1.5	1.2	1.5	1.2	1.2	1.2	0.8	0.8
82.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	0.8	0.8
83°	0.8	1.2	1.2	1.2	1.2	1.2	1.2	0.8	0.8	0.8	0.8
83.5°	0.8	0.8	0.8	1.2	1.2	1.2	0.8	0.8	0.8	0.4	0.8
84°	0.8	0.8	0.8	1.2	0.8	1.2	0.8	0.8	0.8	0.4	0.4
84.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.4	0.8	0.4	0.4
85°	0.4	0.4	0.8	0.8	0.8	0.8	0.8	0.4	0.4	0.4	0.4
85.5°	0.4	0.4	0.4	0.8	0.8	0.8	0.8	0.4	0.4	0.4	0.4
86°	0.4	0.4	0.4	0.8	0.8	0.8	0.4	0.4	0.4	0.0	0.4
86.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.0	0.0
87°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.4	0.4	0.4	0.4	0.4	0.0	0.0	0.0	0.0
88°	0.0	0.0	0.4	0.4	0.4	0.4	0.4	0.0	0.0	0.0	0.0
88.5°	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P776410
CATALOG NUMBER: HCDJBL3040CSD-HCD6TSQC-4000lm-2700K

CANDELA DISTRIBUTION (continued):

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



TEST NUMBER: P776410

CATALOG NUMBER: HCDJBL3040CSD-HCD6TSQC-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	3978.1	3978.1	3978.1	3978.1	3978.1	3978.1
0.5°	3974.2	3972.3	3974.2	3976.2	3980.0	3978.5
1°	3969.6	3969.6	3970.8	3971.9	3976.9	3976.2
1.5°	3965.0	3965.4	3966.2	3967.3	3973.9	3972.3
2°	3959.3	3960.4	3960.0	3961.6	3969.6	3968.1
2.5°	3952.8	3954.3	3953.9	3954.3	3962.7	3962.0
3°	3945.5	3947.8	3946.6	3946.6	3956.6	3956.2
3.5°	3938.6	3940.1	3938.2	3938.2	3948.1	3948.1
4°	3931.3	3933.9	3930.1	3929.0	3939.3	3940.1
4.5°	3924.4	3927.4	3922.0	3918.2	3930.5	3932.4
5°	3916.7	3920.5	3914.4	3907.5	3921.7	3925.9
5.5°	3908.2	3914.0	3905.9	3897.5	3913.2	3918.6
6°	3899.0	3906.7	3897.1	3887.9	3904.8	3910.9
6.5°	3890.2	3898.6	3887.9	3878.7	3895.6	3902.9
7°	3879.8	3889.8	3878.3	3869.5	3886.0	3895.6
7.5°	3869.1	3880.2	3867.2	3859.5	3875.6	3885.6
8°	3857.2	3869.5	3855.3	3848.7	3865.2	3876.8
8.5°	3843.8	3856.8	3842.6	3838.0	3853.7	3865.2
9°	3828.4	3841.5	3828.8	3826.5	3841.5	3852.2
9.5°	3812.7	3825.7	3813.8	3815.4	3827.6	3838.0
10°	3795.0	3809.2	3797.3	3802.7	3813.8	3823.4
10.5°	3775.4	3788.9	3778.9	3789.6	3798.9	3807.7
11°	3754.7	3767.8	3759.7	3775.8	3782.7	3788.9
11.5°	3732.5	3743.6	3739.0	3760.5	3765.5	3767.4
12°	3708.3	3717.5	3715.6	3744.0	3746.3	3744.7
12.5°	3682.2	3689.5	3690.6	3725.5	3724.4	3719.8
13°	3654.5	3660.7	3663.4	3706.7	3701.4	3692.2
13.5°	3625.4	3629.2	3635.4	3686.4	3676.8	3662.2
14°	3595.1	3595.8	3605.8	3664.5	3649.9	3631.5
14.5°	3564.0	3561.3	3574.7	3640.7	3622.3	3599.3
15°	3531.0	3525.2	3541.7	3614.2	3591.6	3564.7
15.5°	3497.2	3488.0	3507.2	3586.2	3560.1	3528.3
16°	3461.5	3449.6	3471.9	3555.9	3527.1	3491.0
16.5°	3425.0	3408.9	3435.4	3524.0	3493.0	3452.3
17°	3387.8	3368.2	3398.9	3490.7	3458.0	3413.5
17.5°	3349.8	3326.4	3360.2	3454.2	3420.4	3371.7
18°	3309.9	3284.6	3319.9	3417.4	3382.8	3331.0
18.5°	3271.9	3240.0	3279.2	3378.6	3344.0	3288.8
19°	3230.1	3194.4	3238.5	3338.3	3304.5	3244.6
19.5°	3188.6	3147.9	3196.3	3296.5	3263.8	3198.2
20°	3144.1	3100.7	3153.7	3253.5	3222.0	3150.6
20.5°	3101.1	3051.6	3107.2	3206.3	3179.8	3103.0
21°	3055.8	3004.0	3062.7	3162.5	3134.9	3053.5

TEST NUMBER: P776410

CATALOG NUMBER: HCDJBL3040CSD-HCD6TSQC-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	2919.2	2859.3	2921.5	3018.2	2994.0	2914.6
23°	2873.5	2809.8	2875.4	2971.8	2945.7	2865.8
23.5°	2827.5	2759.9	2829.4	2920.7	2899.2	2815.2
24°	2781.4	2708.1	2779.1	2869.7	2854.3	2766.0
24.5°	2735.3	2655.9	2728.8	2815.9	2807.9	2715.8
25°	2684.3	2602.9	2678.5	2766.0	2756.8	2664.7
25.5°	2632.1	2550.0	2626.7	2712.3	2706.9	2612.5
26°	2580.3	2495.1	2574.9	2657.4	2655.5	2559.6
26.5°	2528.5	2441.4	2523.1	2599.1	2605.6	2506.2
27°	2475.1	2384.9	2471.3	2546.5	2551.9	2452.5
27.5°	2421.0	2328.1	2416.4	2490.5	2499.7	2396.8
28°	2367.3	2270.9	2362.3	2433.3	2445.6	2340.8
28.5°	2312.4	2213.4	2308.6	2378.0	2392.2	2284.0
29°	2256.7	2155.4	2253.3	2323.5	2337.7	2227.6
29.5°	2200.7	2099.4	2198.0	2270.6	2285.1	2170.8
30°	2145.1	2045.7	2142.0	2216.4	2229.5	2113.6
30.5°	2090.2	1993.5	2086.7	2161.6	2174.6	2060.6
31°	2034.9	1937.0	2031.8	2105.1	2119.0	2008.4
31.5°	1983.5	1888.3	1977.3	2048.0	2064.8	1952.0
32°	1932.0	1844.2	1926.7	1990.8	2009.6	1902.5
32.5°	1878.3	1786.2	1876.0	1934.0	1955.1	1860.7
33°	1831.5	1730.9	1821.1	1877.9	1905.6	1812.3
33.5°	1788.1	1663.4	1777.4	1820.4	1853.8	1752.4
34°	1732.5	1594.3	1732.9	1763.6	1801.2	1693.3
34.5°	1681.0	1527.5	1675.7	1707.1	1758.6	1625.8
35°	1617.7	1461.5	1621.6	1651.9	1716.0	1558.6
35.5°	1554.0	1399.0	1557.1	1597.8	1662.6	1492.6
36°	1491.1	1333.7	1493.7	1545.9	1610.8	1428.5
36.5°	1429.7	1268.1	1432.7	1493.7	1550.6	1357.9
37°	1368.6	1202.4	1370.2	1444.6	1488.0	1294.6
37.5°	1308.8	1137.2	1311.1	1397.0	1424.7	1231.6
38°	1248.9	1071.6	1251.6	1356.0	1357.5	1168.3
38.5°	1187.5	1007.5	1192.5	1314.9	1301.8	1105.3
39°	1125.3	944.9	1133.4	1273.8	1245.8	1040.9
39.5°	1063.5	886.2	1073.5	1232.8	1190.2	978.7
40°	1002.5	829.4	1012.1	1191.7	1134.1	918.8
40.5°	944.5	774.9	953.7	1157.5	1074.3	859.3
41°	888.1	719.6	895.8	1128.0	1015.2	803.7
41.5°	833.6	666.7	842.4	1095.4	956.0	749.6
42°	780.3	613.3	789.5	1065.4	899.6	695.8
42.5°	728.1	566.1	739.6	1034.0	845.9	642.5
43°	677.0	518.9	689.3	986.0	794.1	591.8
43.5°	627.9	474.0	639.8	940.7	743.0	543.1



TEST NUMBER: P776410

CATALOG NUMBER: HCDJBL3040CSD-HCD6TSQC-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	487.8	350.8	500.5	789.1	598.0	410.3
45.5°	444.1	313.2	457.1	743.0	551.1	369.2
46°	402.6	277.5	416.4	697.0	506.6	330.5
46.5°	365.8	242.9	377.7	651.3	463.2	293.6
47°	328.9	211.5	340.4	605.6	422.2	258.3
47.5°	292.5	182.3	303.6	563.8	383.0	224.9
48°	255.6	157.0	269.8	520.8	345.0	194.6
48.5°	223.8	134.7	238.3	479.7	308.2	167.7
49°	193.8	120.1	208.4	440.6	274.8	143.9
49.5°	166.6	105.5	181.2	403.0	242.2	128.2
50°	143.2	91.0	155.8	366.9	211.5	113.2
50.5°	122.4	76.4	133.2	333.1	182.7	97.9
51°	104.4	62.2	118.2	301.7	158.1	82.5
51.5°	88.7	51.0	103.2	271.7	135.9	67.5
52°	75.2	40.3	88.3	243.3	120.5	56.0
52.5°	63.3	29.9	72.9	217.2	105.2	45.3
53°	53.3	20.0	58.3	191.9	90.2	34.5
53.5°	43.4	13.0	47.2	168.5	74.8	24.2
54°	33.4	11.9	36.5	147.0	59.9	16.5
54.5°	23.4	11.1	26.5	127.4	48.7	14.6
55°	13.8	10.4	17.3	109.4	38.0	13.4
55.5°	10.4	9.6	15.4	96.3	27.6	11.9
56°	10.0	9.2	13.8	83.3	18.4	10.7
56.5°	9.6	8.8	11.9	70.6	11.9	10.4
57°	9.2	8.4	10.0	57.6	11.1	10.0
57.5°	8.8	8.1	8.1	44.5	10.7	9.6
58°	8.4	8.1	8.1	35.7	10.0	9.2
58.5°	8.4	7.7	7.7	28.4	9.2	8.8
59°	8.1	7.3	7.7	22.6	8.8	8.8
59.5°	7.7	7.3	7.3	18.4	8.8	8.4
60°	7.7	6.9	6.9	14.6	8.4	8.1
60.5°	7.3	6.5	6.9	13.0	8.1	7.7
61°	6.9	6.5	6.5	11.1	8.1	7.7
61.5°	6.9	6.1	6.5	9.2	7.7	7.3
62°	6.5	6.1	6.1	7.3	7.3	7.3
62.5°	6.5	5.8	6.1	6.9	7.3	6.9
63°	6.1	5.8	5.8	6.9	6.9	6.5
63.5°	5.8	5.4	5.8	6.5	6.9	6.5
64°	5.8	5.4	5.4	6.5	6.5	6.1
64.5°	5.4	5.0	5.4	6.1	6.1	6.1
65°	5.4	5.0	5.0	6.1	6.1	5.8
65.5°	5.0	4.6	5.0	5.8	5.8	5.8
66°	5.0	4.6	4.6	5.8	5.8	5.4



TEST NUMBER: P776410

CATALOG NUMBER: HCDJBL3040CSD-HCD6TSQC-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	4.6	3.8	4.2	5.0	5.0	5.0
68°	4.2	3.8	4.2	5.0	5.0	4.6
68.5°	4.2	3.8	3.8	4.6	4.6	4.6
69°	3.8	3.5	3.8	4.6	4.6	4.2
69.5°	3.8	3.5	3.8	4.2	4.6	4.2
70°	3.5	3.1	3.5	4.2	4.2	3.8
70.5°	3.5	3.1	3.5	4.2	4.2	3.8
71°	3.5	3.1	3.1	3.8	3.8	3.8
71.5°	3.1	2.7	3.1	3.8	3.8	3.5
72°	3.1	2.7	3.1	3.5	3.5	3.5
72.5°	2.7	2.7	2.7	3.5	3.5	3.1
73°	2.7	2.7	2.7	3.1	3.5	3.1
73.5°	2.7	2.3	2.7	3.1	3.1	3.1
74°	2.3	2.3	2.7	3.1	3.1	2.7
74.5°	2.3	2.3	2.3	2.7	3.1	2.7
75°	2.3	2.3	2.3	2.7	2.7	2.7
75.5°	2.3	1.9	2.3	2.3	2.7	2.3
76°	1.9	1.9	1.9	2.3	2.3	2.3
76.5°	1.9	1.9	1.9	2.3	2.3	2.3
77°	1.9	1.9	1.9	1.9	2.3	2.3
77.5°	1.5	1.5	1.9	1.9	1.9	1.9
78°	1.5	1.5	1.5	1.9	1.9	1.9
78.5°	1.5	1.5	1.5	1.5	1.9	1.9
79°	1.5	1.5	1.5	1.5	1.9	1.5
79.5°	1.2	1.2	1.5	1.5	1.5	1.5
80°	1.2	1.2	1.2	1.2	1.5	1.5
80.5°	1.2	1.2	1.2	1.2	1.5	1.5
81°	1.2	1.2	1.2	1.2	1.2	1.2
81.5°	0.8	1.2	1.2	1.2	1.2	1.2
82°	0.8	0.8	0.8	0.8	1.2	1.2
82.5°	0.8	0.8	0.8	0.8	0.8	1.2
83°	0.8	0.8	0.8	0.8	0.8	0.8
83.5°	0.8	0.8	0.8	0.8	0.8	0.8
84°	0.4	0.8	0.8	0.4	0.8	0.8
84.5°	0.4	0.4	0.4	0.4	0.4	0.8
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°	0.0	0.4	0.4	0.4	0.4	0.4
87°	0.0	0.0	0.0	0.0	0.0	0.4
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: P776410

CATALOG NUMBER: HCDJBL3040CSD-HCD6TSQC-4000lm-2700K

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
1121 Highway 74 South
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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21.5°	3006.7	3141.4	3267.7	3228.5	3100.7	3202.8	3303.4	3176.7	3072.7	3085.8	3133.3
22°	2960.6	3095.7	3224.7	3188.2	3056.6	3161.7	3260.8	3135.6	3029.7	3039.3	3085.8



44°	496.3	755.7	1111.5	955.7	660.5	900.8	1171.4	796.4	561.5	698.9	928.8
44.5°	452.1	703.1	1065.4	898.1	610.6	845.9	1131.8	744.2	513.5	649.4	876.6



66.5°	5.4	5.8	6.5	5.8	5.4	6.1	6.5	5.8	5.4	5.8	5.8
67°	5.0	5.8	6.1	5.8	5.0	5.8	6.5	5.8	5.4	5.4	5.4



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°	3010.1	2957.6	3015.5	3116.1	3088.8	3006.7
22°	2965.2	2910.0	2969.5	3068.9	3040.5	2960.6



44°	579.5	429.9	590.7	890.8	694.7	496.3
44.5°	531.6	389.9	545.0	840.1	645.6	452.1

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66.5°	5.0	4.2	4.6	5.4	5.4	5.4
67°	4.6	4.2	4.6	5.4	5.4	5.0

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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)