

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: P776368

Luminaire Tested: HCDJBL3040CSD-HCD62TRH-4000lm-4000K

Issue Date: 2/13/2024

Test Information

Test Method: LM-79-2019
Report Number: P776368
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2312156B056)
Test Lab:
Issue Date: 2/13/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBL3040CSD-HCD62TRH-4000lm-4000K
Description: 6 INCH ROUND NARROW HAZE TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 4000K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4248.5 lumens
Efficiency: N/A
Efficacy: 110.4 lumens/watt
Spacing Criteria (0/90/45): 0.83 / 0.82 / 0.91
Luminous Opening: Circular (Dia: 0.5' x H: 0')
CIE Type: Direct

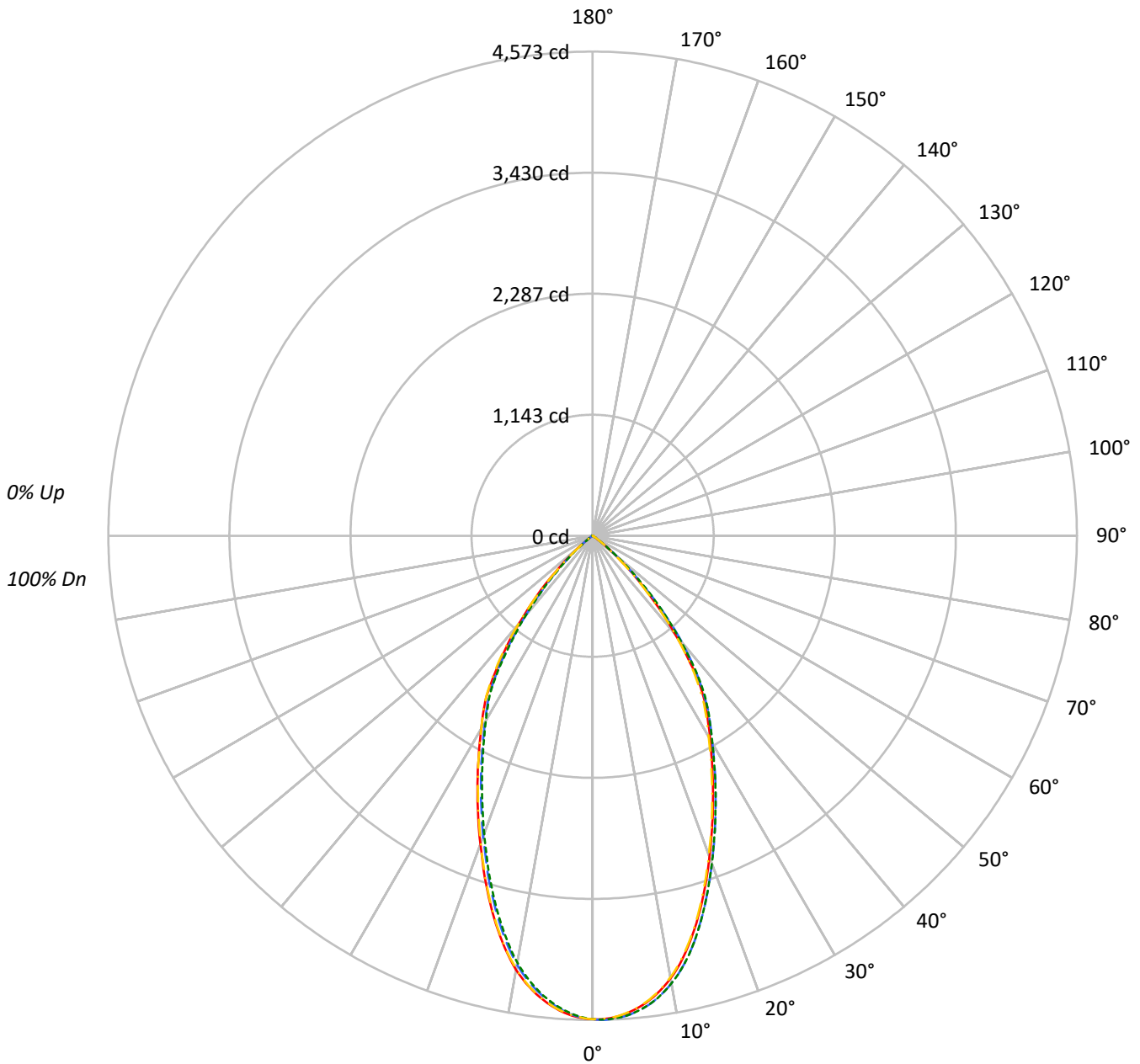
Input Watts (W): 38.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	108	106	111	108	106	104	104	102	101	100	99	98	97	96	95	93					93			
2	107	102	98	95	105	101	97	93	97	94	91	94	92	89	92	89	88	86					86			
3	102	95	90	86	100	93	89	85	91	87	83	88	85	82	86	83	81	79					79			
4	96	88	82	78	94	87	82	77	85	80	77	83	79	76	81	78	75	73					73			
5	91	82	76	71	89	81	75	71	79	74	70	78	73	70	76	72	69	68					68			
6	86	77	70	66	84	76	70	66	74	69	65	73	68	65	71	67	64	63					63			
7	81	72	65	61	80	71	65	61	70	64	60	68	64	60	67	63	60	58					58			
8	77	67	61	57	76	67	61	56	65	60	56	64	59	56	63	59	56	54					54			
9	73	63	57	53	72	63	57	53	62	56	52	61	56	52	60	55	52	51					51			
10	70	59	53	49	69	59	53	49	58	53	49	57	52	49	57	52	49	47					47			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	250303	250303	250303	250303
5°	247396	248794	245223	243407
10°	236235	238907	231681	227818
15°	214888	218753	208072	202646
20°	188293	192079	180791	174630
25°	162826	166262	155507	149271
30°	140465	143149	133274	127684
35°	120723	123553	110008	104186
40°	86970	92223	77195	70446
45°	51501	57533	43943	38159
50°	21347	24954	15095	12580
55°	3622	4779	3622	2389
60°	1502	1414	1458	1195
65°	895	830	895	726
70°	577	577	577	513
75°	424	339	424	339
80°	253	253	253	253
85°	0	252	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°

Vertical Angle: 45°

Luminance: 61223 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	418.4	9.8
10°-20°	1034.0	24.3
20°-30°	1202.9	28.3
30°-40°	1046.2	24.6
40°-50°	481.2	11.3
50°-60°	56.8	1.3
60°-70°	6.8	0.2
70°-80°	2.0	0.0
80°-90°	0.3	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°	2655.3	62.5
0°-40°	3701.4	87.1
0°-60°	4239.4	99.8
0°-90°	4248.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4248.5	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	4566	4566	4566	4566	4566	
5°	4496	4521	4456	4423	4496	421
15°	3786	3854	3666	3571	3786	1053
25°	2692	2749	2571	2468	2692	1236
35°	1804	1846	1644	1557	1804	1096
45°	664	742	567	492	664	522
55°	38	50	38	25	38	63
65°	7	6	7	6	7	7
75°	2	2	2	2	2	2
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°	4565.9	4565.9	4565.9	4565.9	4565.9	4565.9	4565.9	4565.9	4565.9	4565.9	4565.9
0.5°	4567.9	4571.1	4571.5	4567.9	4568.7	4566.3	4564.7	4565.5	4564.7	4565.1	4564.3
1°	4567.1	4571.5	4573.1	4571.1	4569.9	4566.3	4564.3	4562.6	4560.2	4559.8	4558.2
1.5°	4563.4	4569.9	4573.1	4572.3	4569.9	4565.1	4561.4	4557.8	4553.8	4551.8	4549.3
2°	4559.4	4567.5	4571.1	4571.9	4567.9	4562.6	4557.4	4550.9	4545.7	4542.1	4538.1
2.5°	4553.0	4562.6	4567.1	4569.9	4564.7	4557.4	4550.5	4542.1	4535.6	4530.4	4525.2
3°	4544.9	4556.2	4561.0	4566.7	4559.0	4551.4	4542.1	4532.4	4523.1	4516.7	4510.2
3.5°	4535.6	4547.7	4554.2	4561.4	4552.6	4543.7	4532.0	4520.7	4509.4	4500.6	4494.1
4°	4523.9	4537.6	4544.9	4554.2	4544.5	4533.6	4520.7	4506.2	4493.3	4483.2	4476.0
4.5°	4510.6	4526.0	4534.8	4544.9	4534.0	4521.5	4507.0	4490.9	4475.6	4463.9	4455.8
5°	4495.7	4512.7	4521.5	4534.8	4521.1	4508.2	4491.3	4473.6	4456.2	4442.5	4432.8
5.5°	4479.6	4497.7	4507.8	4521.9	4507.4	4492.1	4474.0	4455.0	4435.7	4419.9	4409.5
6°	4460.7	4480.4	4492.5	4508.2	4491.3	4474.8	4455.4	4432.4	4411.9	4395.0	4383.7
6.5°	4440.9	4462.7	4474.8	4492.1	4473.2	4455.8	4434.5	4409.5	4387.7	4370.0	4356.7
7°	4417.9	4441.3	4454.6	4474.8	4454.2	4435.3	4411.5	4385.3	4361.5	4342.5	4328.4
7.5°	4393.3	4418.7	4432.8	4454.6	4432.0	4410.7	4386.5	4359.9	4332.5	4311.9	4297.4
8°	4367.1	4393.3	4407.9	4432.8	4408.3	4384.9	4359.9	4330.5	4302.6	4280.5	4264.3
8.5°	4339.3	4367.5	4382.5	4409.1	4381.6	4359.1	4331.3	4299.4	4270.4	4247.0	4230.1
9°	4309.1	4338.9	4353.8	4382.1	4353.8	4330.1	4301.0	4267.2	4236.5	4211.1	4193.4
9.5°	4277.2	4307.9	4324.8	4353.8	4324.0	4298.6	4268.0	4234.5	4200.3	4174.1	4154.7
10°	4243.8	4274.8	4292.2	4323.6	4291.8	4265.6	4234.1	4196.2	4162.0	4134.6	4113.2
10.5°	4207.1	4241.8	4258.7	4291.8	4259.1	4231.7	4196.6	4157.9	4120.4	4089.8	4068.0
11°	4169.2	4204.7	4222.4	4258.3	4222.4	4193.8	4158.3	4116.0	4076.5	4041.8	4020.5
11.5°	4128.1	4164.4	4183.3	4222.0	4184.1	4154.3	4116.8	4072.5	4029.7	3995.1	3972.5
12°	4083.8	4122.9	4141.4	4182.5	4143.0	4111.6	4071.7	4024.9	3982.6	3947.1	3922.5
12.5°	4038.2	4077.7	4098.3	4140.6	4100.3	4066.8	4025.3	3978.2	3932.2	3895.5	3870.5
13°	3991.1	4031.8	4053.5	4097.1	4054.7	4020.9	3978.6	3929.0	3881.8	3843.1	3817.3
13.5°	3942.3	3984.2	4006.8	4051.9	4007.6	3972.1	3929.0	3878.2	3829.4	3789.5	3762.1
14°	3891.5	3935.0	3957.2	4006.0	3957.6	3922.9	3877.8	3825.4	3775.8	3736.7	3708.5
14.5°	3839.9	3883.8	3907.2	3954.4	3906.4	3870.1	3824.6	3771.8	3722.2	3679.5	3652.4
15°	3786.3	3831.8	3853.6	3905.6	3854.4	3816.9	3771.4	3717.8	3666.2	3624.6	3596.0
15.5°	3731.9	3777.8	3799.6	3852.8	3801.6	3763.3	3717.8	3662.9	3610.5	3568.2	3538.8
16°	3677.4	3723.8	3746.0	3798.8	3746.4	3708.5	3663.3	3606.5	3554.5	3512.2	3482.3
16.5°	3623.0	3669.4	3692.4	3744.8	3691.1	3653.7	3608.1	3551.7	3499.3	3454.5	3425.5
17°	3568.2	3613.8	3635.5	3689.9	3635.9	3597.6	3550.5	3494.8	3442.0	3396.9	3367.1
17.5°	3511.0	3557.7	3579.1	3633.1	3578.7	3539.6	3494.0	3439.2	3384.4	3340.1	3307.8
18°	3454.5	3500.5	3522.7	3576.7	3521.8	3482.7	3437.2	3382.0	3326.3	3281.2	3248.1
18.5°	3398.1	3444.5	3465.4	3519.0	3464.2	3426.3	3380.4	3322.7	3269.1	3222.7	3189.7
19°	3340.9	3388.0	3407.0	3461.0	3407.4	3369.5	3321.9	3265.5	3210.3	3163.9	3131.7
19.5°	3284.8	3330.8	3350.5	3403.3	3349.7	3312.2	3263.9	3209.9	3152.6	3109.5	3077.2
20°	3227.6	3273.1	3292.1	3346.1	3292.5	3254.2	3207.8	3151.4	3099.0	3055.1	3022.4
20.5°	3170.8	3217.5	3236.1	3287.6	3234.4	3196.5	3150.6	3097.8	3045.4	3000.6	2967.6
21°	3115.1	3161.5	3180.8	3232.4	3177.6	3140.5	3097.0	3044.2	2991.8	2946.2	2912.8



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
22.5°	2951.9	2995.8	3013.5	3061.9	3014.8	2978.9	2936.6	2883.3	2829.3	2783.8	2749.9
23°	2898.7	2941.0	2959.5	3007.1	2960.7	2924.9	2882.9	2828.9	2776.9	2729.8	2697.9
23.5°	2846.7	2887.8	2905.9	2952.7	2907.1	2870.8	2828.1	2776.5	2724.1	2678.2	2645.9
24°	2793.5	2835.8	2852.3	2897.9	2853.1	2817.6	2774.9	2724.9	2672.5	2626.6	2593.5
24.5°	2743.1	2783.8	2799.1	2844.2	2800.7	2762.8	2722.9	2673.3	2620.9	2576.2	2543.1
25°	2691.9	2732.2	2747.5	2792.6	2748.7	2711.6	2670.5	2621.3	2570.9	2525.8	2493.1
25.5°	2641.5	2681.0	2696.3	2741.1	2696.3	2661.6	2619.7	2571.8	2521.8	2475.8	2444.8
26°	2591.9	2632.6	2645.9	2689.1	2645.5	2612.1	2570.1	2522.6	2472.6	2427.4	2396.4
26.5°	2543.5	2581.0	2596.3	2636.6	2595.5	2560.9	2520.6	2473.0	2423.4	2379.1	2346.4
27°	2494.4	2531.8	2546.0	2587.1	2545.5	2510.1	2471.0	2424.6	2375.4	2331.5	2299.3
27.5°	2446.0	2483.5	2496.8	2537.9	2496.0	2463.7	2423.0	2376.2	2327.9	2284.7	2252.5
28°	2398.8	2437.1	2448.4	2489.1	2446.8	2414.9	2374.6	2329.9	2281.5	2237.6	2206.9
28.5°	2351.7	2390.0	2400.8	2440.7	2399.6	2366.6	2327.9	2282.7	2234.8	2192.0	2161.4
29°	2306.9	2342.4	2354.1	2392.0	2352.5	2320.2	2283.1	2237.6	2191.2	2148.1	2117.1
29.5°	2263.0	2297.6	2307.3	2345.6	2306.9	2275.1	2237.6	2193.6	2147.3	2105.4	2074.7
30°	2219.0	2254.1	2263.8	2300.9	2261.4	2231.1	2193.6	2150.5	2105.4	2062.6	2033.2
30.5°	2176.3	2210.6	2220.7	2256.5	2217.8	2187.2	2150.9	2107.4	2063.0	2021.1	1992.5
31°	2134.8	2168.3	2177.9	2212.2	2175.9	2145.7	2108.6	2066.3	2021.5	1980.4	1951.4
31.5°	2092.9	2125.9	2135.6	2169.9	2134.0	2104.6	2067.5	2026.0	1981.6	1940.9	1912.7
32°	2053.8	2086.8	2095.3	2127.9	2093.7	2063.0	2028.4	1986.9	1942.1	1901.4	1872.8
32.5°	2014.7	2046.5	2055.0	2086.8	2052.6	2023.1	1987.7	1945.7	1902.6	1861.5	1834.1
33°	1975.6	2007.0	2015.5	2046.9	2014.3	1983.6	1947.8	1904.2	1859.9	1817.6	1788.9
33.5°	1934.5	1965.9	1973.6	2006.6	1973.6	1944.1	1905.0	1857.1	1811.9	1766.8	1735.7
34°	1893.7	1924.0	1928.4	1965.9	1933.6	1902.6	1859.9	1807.5	1759.9	1714.0	1683.3
34.5°	1848.2	1878.4	1879.6	1922.0	1891.3	1859.1	1810.7	1755.9	1701.9	1659.5	1626.1
35°	1803.9	1830.1	1830.9	1873.6	1846.2	1814.3	1761.5	1704.7	1643.8	1603.9	1570.5
35.5°	1754.7	1780.1	1782.1	1826.0	1799.8	1768.0	1711.5	1650.7	1583.0	1542.2	1516.0
36°	1702.3	1728.1	1732.5	1776.4	1751.5	1718.4	1661.6	1596.3	1526.1	1481.0	1461.2
36.5°	1644.6	1674.5	1682.9	1728.1	1698.2	1664.4	1608.8	1540.2	1469.7	1420.9	1402.0
37°	1582.2	1619.6	1632.9	1678.5	1643.8	1607.1	1554.7	1483.8	1415.7	1361.7	1344.7
37.5°	1517.3	1563.2	1581.7	1627.7	1586.2	1549.5	1499.5	1424.9	1360.9	1303.2	1284.7
38°	1454.4	1507.6	1528.1	1575.7	1526.9	1491.1	1443.5	1368.9	1306.8	1246.0	1225.8
38.5°	1394.7	1449.1	1473.3	1523.7	1466.1	1428.6	1385.4	1312.5	1250.4	1191.1	1163.3
39°	1335.1	1389.1	1418.1	1470.9	1405.6	1364.9	1327.8	1257.3	1194.8	1138.3	1106.5
39.5°	1275.0	1329.0	1362.5	1414.5	1347.1	1304.0	1267.3	1201.6	1137.1	1081.9	1047.2
40°	1215.3	1268.9	1306.8	1358.0	1288.7	1246.0	1206.5	1146.8	1078.7	1025.5	991.2
40.5°	1155.7	1209.3	1251.2	1301.6	1230.7	1187.5	1144.4	1092.0	1021.4	971.5	933.2
41°	1098.8	1149.2	1196.0	1245.2	1175.0	1130.7	1082.7	1036.8	968.2	917.4	877.9
41.5°	1040.4	1090.8	1137.5	1188.7	1119.4	1071.4	1022.3	980.7	915.4	864.2	821.9
42°	984.8	1036.0	1078.7	1129.5	1065.0	1015.8	963.4	923.9	864.2	811.4	767.9
42.5°	927.5	981.9	1020.6	1071.0	1009.4	961.0	906.2	867.9	814.7	760.6	716.7
43°	872.3	927.1	961.4	1014.2	954.5	906.2	850.9	813.0	764.7	713.5	668.3
43.5°	816.7	870.3	901.7	956.9	900.1	850.1	796.1	758.2	713.9	663.5	619.6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	664.3	712.7	733.2	789.7	742.1	692.9	643.3	601.0	566.8	524.0	488.6
45.5°	615.1	661.9	678.8	736.5	691.7	643.3	594.2	552.2	520.0	479.3	447.8
46°	569.2	612.3	627.2	683.2	644.1	594.6	547.8	505.1	475.2	437.4	409.9
46.5°	523.2	563.9	576.4	631.7	594.2	547.4	502.3	459.1	431.7	401.1	376.5
47°	478.9	517.6	526.4	580.5	545.4	504.7	458.3	420.0	391.8	365.2	343.4
47.5°	435.7	472.4	479.7	532.1	499.4	461.9	416.8	381.3	352.3	328.9	310.0
48°	395.4	428.1	434.9	483.7	455.9	420.0	379.7	342.6	312.4	293.1	276.5
48.5°	356.7	384.2	392.6	437.4	415.2	382.5	342.6	303.9	272.5	256.8	247.9
49°	320.1	343.4	352.3	395.4	374.1	345.0	305.9	265.2	238.2	227.3	220.9
49.5°	285.0	303.9	313.2	352.7	333.4	307.6	268.9	233.8	206.0	198.7	195.9
50°	250.3	266.4	276.5	313.6	292.6	270.5	237.4	204.8	177.0	173.7	172.5
50.5°	218.5	231.4	242.3	275.7	251.9	237.4	207.2	178.2	151.6	150.0	150.4
51°	188.2	199.5	210.4	241.5	218.1	205.6	180.2	153.6	129.4	129.4	130.2
51.5°	160.0	170.1	180.6	207.6	187.8	177.0	156.0	132.2	111.3	110.9	112.5
52°	133.8	144.3	152.8	177.8	159.2	149.5	133.4	112.1	95.1	94.3	95.9
52.5°	115.3	125.8	133.0	150.4	132.6	125.4	112.9	94.3	81.0	79.4	80.2
53°	96.7	107.2	113.3	131.0	109.6	103.6	93.9	79.0	68.9	66.5	66.5
53.5°	78.2	89.1	93.5	111.7	89.5	84.2	77.8	65.7	58.0	55.2	54.4
54°	60.1	70.5	73.8	92.3	72.2	68.1	63.7	54.0	48.4	48.8	48.0
54.5°	47.6	52.4	54.0	73.0	57.6	54.4	55.2	47.6	43.1	42.3	41.1
55°	37.9	41.1	42.3	53.6	50.0	47.6	46.8	41.1	37.9	35.5	34.3
55.5°	30.2	32.2	32.7	41.9	42.7	40.7	38.7	34.7	32.7	29.0	27.8
56°	25.4	26.2	25.8	32.2	35.1	33.9	30.6	28.6	27.4	22.6	21.0
56.5°	22.6	23.0	22.6	25.4	27.4	27.0	22.6	22.2	22.2	20.6	19.3
57°	21.0	21.0	20.6	21.8	20.2	20.2	20.6	20.6	20.6	19.3	18.1
57.5°	19.8	19.8	18.9	19.8	18.5	18.5	18.9	19.3	18.9	18.1	16.9
58°	18.1	18.1	17.7	18.1	17.3	17.3	17.7	18.1	17.7	16.9	15.7
58.5°	16.9	16.9	16.1	16.9	16.1	16.1	16.5	16.9	16.5	15.7	14.5
59°	15.7	15.7	15.3	15.7	14.9	14.9	15.3	15.7	15.3	14.5	13.7
59.5°	14.9	14.5	14.1	14.5	13.7	13.7	14.1	14.5	14.5	13.7	12.5
60°	13.7	13.7	13.3	13.7	12.9	12.9	13.3	13.3	13.3	12.5	11.7
60.5°	12.9	12.5	12.1	12.5	12.1	12.1	12.1	12.5	12.5	11.7	10.9
61°	11.7	11.7	11.3	11.7	10.9	11.3	11.3	11.7	11.7	10.9	10.1
61.5°	10.9	10.9	10.5	10.9	10.5	10.5	10.5	10.9	10.9	10.1	9.7
62°	10.1	10.1	9.7	10.1	9.7	9.7	10.1	10.1	10.1	9.7	8.9
62.5°	9.7	9.7	8.9	9.3	8.9	8.9	9.3	9.7	9.7	8.9	8.5
63°	8.9	8.9	8.5	8.9	8.5	8.5	8.5	8.9	8.9	8.5	7.7
63.5°	8.5	8.5	8.1	8.1	7.7	8.1	8.1	8.5	8.5	8.1	7.3
64°	8.1	7.7	7.3	7.7	7.3	7.3	7.7	8.1	8.1	7.7	6.9
64.5°	7.3	7.3	6.9	7.3	6.9	6.9	7.3	7.3	7.3	6.9	6.4
65°	6.9	6.9	6.4	6.9	6.4	6.4	6.9	6.9	6.9	6.4	6.0
65.5°	6.4	6.4	6.0	6.4	6.0	6.0	6.4	6.4	6.4	6.0	5.6
66°	6.0	6.0	5.6	6.0	5.6	5.6	6.0	6.0	6.0	5.6	5.2



TEST NUMBER: P776368

CATALOG NUMBER: HCDJBL3040CSD-HCD62TRH-4000lm-4000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	5.2	4.8	4.8	4.8	4.8	4.8	4.8	5.2	5.2	4.8	4.4
68°	4.8	4.8	4.4	4.4	4.4	4.4	4.4	4.8	4.8	4.4	4.4
68.5°	4.4	4.4	4.0	4.4	4.0	4.0	4.4	4.4	4.4	4.4	4.0
69°	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.4	4.4	4.0	3.6
69.5°	4.0	4.0	3.6	3.6	3.6	3.6	4.0	4.0	4.0	3.6	3.6
70°	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.2
70.5°	3.6	3.2	3.2	3.2	3.2	3.2	3.2	3.6	3.6	3.2	3.2
71°	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	2.8
71.5°	3.2	2.8	2.8	2.8	2.8	2.8	2.8	3.2	3.2	2.8	2.8
72°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.4
72.5°	2.8	2.8	2.4	2.4	2.4	2.4	2.8	2.8	2.8	2.4	2.4
73°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
73.5°	2.4	2.4	2.4	2.4	2.0	2.4	2.4	2.4	2.4	2.4	2.0
74°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.4	2.4	2.0	2.0
74.5°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
75°	2.0	2.0	1.6	2.0	1.6	2.0	2.0	2.0	2.0	2.0	1.6
75.5°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	2.0	2.0	1.6	1.6
76°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
76.5°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.2
77°	1.6	1.2	1.2	1.6	1.2	1.2	1.6	1.6	1.6	1.2	1.2
77.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
78°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
78.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
79°	1.2	0.8	0.8	1.2	1.2	1.2	1.2	1.2	1.2	0.8	0.8
79.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
80°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
80.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
81°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
81.5°	0.8	0.4	0.4	0.8	0.8	0.8	0.8	0.8	0.8	0.4	0.4
82°	0.4	0.4	0.4	0.8	0.4	0.4	0.4	0.4	0.4	0.4	0.4
82.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
83°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
83.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
84°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
84.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.0	0.4
85°	0.0	0.0	0.4	0.4	0.4	0.4	0.4	0.0	0.0	0.0	0.0
85.5°	0.0	0.0	0.0	0.4	0.4	0.4	0.4	0.0	0.0	0.0	0.0
86°	0.0	0.0	0.0	0.4	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: P776368

CATALOG NUMBER: HCDJBL3040CSD-HCD62TRH-4000lm-4000K

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: P776368

CATALOG NUMBER: HCDJBL3040CSD-HCD62TRH-4000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	4565.9	4565.9	4565.9	4565.9	4565.9	4565.9
0.5°	4556.2	4559.4	4559.4	4561.4	4564.7	4567.9
1°	4547.7	4552.6	4553.4	4557.0	4561.4	4567.1
1.5°	4536.8	4542.5	4544.5	4549.7	4557.0	4563.4
2°	4523.5	4531.6	4534.8	4541.7	4550.5	4559.4
2.5°	4508.6	4517.9	4521.9	4531.6	4542.9	4553.0
3°	4491.7	4502.6	4508.2	4519.1	4532.8	4544.9
3.5°	4472.7	4486.5	4492.5	4505.4	4520.7	4535.6
4°	4452.6	4466.3	4475.2	4489.3	4507.0	4523.9
4.5°	4430.0	4446.1	4455.4	4471.5	4491.7	4510.6
5°	4406.2	4423.2	4434.1	4451.8	4474.8	4495.7
5.5°	4379.6	4399.4	4410.7	4430.4	4456.2	4479.6
6°	4352.6	4374.0	4386.5	4407.4	4436.1	4460.7
6.5°	4323.2	4345.4	4360.3	4383.3	4413.5	4440.9
7°	4292.6	4315.9	4332.1	4357.1	4388.9	4417.9
7.5°	4260.3	4284.1	4301.4	4328.0	4362.3	4393.3
8°	4224.4	4250.6	4268.8	4297.8	4333.7	4367.1
8.5°	4187.0	4215.2	4235.3	4264.8	4303.9	4339.3
9°	4147.9	4176.5	4197.8	4230.1	4270.8	4309.1
9.5°	4105.9	4137.0	4159.1	4193.8	4236.9	4277.2
10°	4061.2	4092.6	4116.0	4155.1	4201.9	4243.8
10.5°	4012.8	4047.9	4072.9	4113.6	4163.2	4207.1
11°	3962.8	4001.1	4026.9	4068.4	4122.1	4169.2
11.5°	3913.3	3949.9	3980.6	4022.5	4077.7	4128.1
12°	3861.3	3899.5	3928.2	3975.7	4031.8	4083.8
12.5°	3808.0	3846.3	3876.6	3925.7	3984.6	4038.2
13°	3754.0	3793.1	3826.2	3875.8	3936.6	3991.1
13.5°	3698.8	3738.3	3773.0	3822.2	3885.0	3942.3
14°	3643.2	3684.3	3716.9	3768.1	3833.4	3891.5
14.5°	3585.5	3628.3	3661.3	3715.7	3779.8	3839.9
15°	3530.3	3570.6	3605.3	3659.7	3726.2	3786.3
15.5°	3472.3	3513.4	3549.7	3604.1	3671.4	3731.9
16°	3413.8	3455.7	3492.0	3545.6	3615.8	3677.4
16.5°	3356.2	3398.5	3435.2	3490.8	3560.1	3623.0
17°	3297.3	3340.9	3377.1	3434.0	3504.9	3568.2
17.5°	3239.7	3282.0	3319.1	3376.3	3448.1	3511.0
18°	3178.4	3222.7	3259.4	3317.1	3390.8	3454.5
18.5°	3121.6	3163.1	3201.0	3258.6	3333.6	3398.1
19°	3065.1	3105.9	3142.5	3203.4	3276.0	3340.9
19.5°	3008.7	3049.8	3086.9	3147.8	3220.3	3284.8
20°	2952.3	2993.4	3032.5	3090.9	3163.9	3227.6
20.5°	2896.2	2938.6	2977.3	3035.3	3108.7	3170.8
21°	2846.7	2881.7	2920.8	2979.3	3051.8	3115.1

TEST NUMBER: P776368

CATALOG NUMBER: HCDJBL3040CSD-HCD62TRH-4000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	2687.4	2721.7	2761.2	2820.5	2890.2	2951.9
23°	2635.4	2669.7	2708.0	2766.4	2837.0	2898.7
23.5°	2584.2	2618.1	2657.6	2716.1	2785.4	2846.7
24°	2535.1	2568.1	2607.2	2663.7	2734.2	2793.5
24.5°	2483.9	2518.1	2556.4	2614.5	2682.2	2743.1
25°	2435.9	2467.8	2506.9	2562.5	2632.2	2691.9
25.5°	2386.3	2419.8	2458.9	2514.5	2582.6	2641.5
26°	2338.4	2371.8	2410.9	2466.1	2533.9	2591.9
26.5°	2291.6	2325.1	2363.8	2418.6	2485.1	2543.5
27°	2244.4	2277.9	2316.2	2371.4	2437.1	2494.4
27.5°	2198.1	2232.3	2269.4	2324.2	2389.6	2446.0
28°	2153.7	2186.4	2223.9	2276.7	2342.8	2398.8
28.5°	2110.6	2142.1	2179.9	2232.3	2296.8	2351.7
29°	2068.7	2099.7	2137.2	2189.6	2252.5	2306.9
29.5°	2025.6	2057.8	2093.7	2146.1	2208.2	2263.0
30°	1984.4	2017.1	2053.0	2104.2	2166.2	2219.0
30.5°	1944.9	1976.8	2012.3	2062.2	2124.3	2176.3
31°	1906.2	1937.3	1973.6	2023.1	2083.2	2134.8
31.5°	1866.7	1898.2	1934.9	1984.0	2042.1	2092.9
32°	1826.8	1859.5	1895.0	1944.5	2003.0	2053.8
32.5°	1783.3	1820.8	1856.3	1906.2	1964.7	2014.7
33°	1734.5	1775.2	1812.7	1863.1	1926.0	1975.6
33.5°	1681.3	1724.8	1764.3	1815.9	1883.3	1934.5
34°	1623.7	1671.6	1712.4	1766.0	1836.5	1893.7
34.5°	1566.4	1614.4	1655.5	1717.2	1788.9	1848.2
35°	1510.4	1556.8	1597.9	1664.0	1739.0	1803.9
35.5°	1454.0	1495.9	1540.2	1612.0	1687.4	1754.7
36°	1396.3	1429.4	1484.2	1557.6	1633.7	1702.3
36.5°	1336.3	1372.9	1448.7	1501.9	1579.3	1644.6
37°	1276.6	1317.3	1389.5	1446.7	1523.7	1582.2
37.5°	1218.2	1261.7	1329.8	1388.7	1465.3	1517.3
38°	1157.3	1205.7	1270.2	1330.6	1404.0	1454.4
38.5°	1098.4	1151.2	1210.5	1272.6	1342.7	1394.7
39°	1042.0	1095.6	1154.5	1214.5	1281.4	1335.1
39.5°	986.8	1040.0	1096.0	1156.5	1220.2	1275.0
40°	931.2	984.4	1038.0	1099.2	1158.5	1215.3
40.5°	877.9	929.9	980.7	1042.8	1096.8	1155.7
41°	824.7	876.3	924.3	986.4	1035.1	1098.8
41.5°	770.7	822.7	870.3	928.3	973.5	1040.4
42°	717.9	773.5	817.9	873.9	916.2	984.8
42.5°	669.5	722.3	767.9	817.1	859.0	927.5
43°	620.0	676.8	717.9	761.4	806.2	872.3
43.5°	573.6	628.8	667.5	704.6	751.8	816.7



TEST NUMBER: P776368

CATALOG NUMBER: HCDJBL3040CSD-HCD62TRH-4000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	446.6	492.2	522.0	549.0	603.8	664.3
45.5°	408.7	449.5	476.1	502.3	556.7	615.1
46°	374.9	407.1	431.7	457.1	512.3	569.2
46.5°	341.0	366.4	388.6	414.8	469.2	523.2
47°	307.2	328.9	348.3	374.9	427.7	478.9
47.5°	273.3	293.5	310.0	336.6	387.4	435.7
48°	244.7	259.2	274.1	300.7	349.1	395.4
48.5°	217.7	227.7	240.2	267.3	312.4	356.7
49°	191.5	199.1	208.4	236.6	277.3	320.1
49.5°	168.1	172.5	179.4	208.4	245.1	285.0
50°	146.7	147.5	153.6	181.4	214.4	250.3
50.5°	126.6	131.4	136.6	157.2	186.6	218.5
51°	108.4	114.9	119.7	135.0	161.2	188.2
51.5°	91.5	98.8	102.8	118.1	137.5	160.0
52°	77.0	82.6	85.9	101.6	119.7	133.8
52.5°	63.7	66.1	68.9	84.7	102.0	115.3
53°	52.0	55.2	58.0	68.1	84.7	96.7
53.5°	45.5	45.1	48.0	56.0	67.3	78.2
54°	39.5	37.1	39.5	45.1	54.0	60.1
54.5°	33.1	30.2	32.2	36.3	43.1	47.6
55°	26.6	25.0	26.2	29.0	34.3	37.9
55.5°	20.2	21.4	22.2	24.2	27.4	30.2
56°	18.5	19.3	20.2	21.4	23.8	25.4
56.5°	17.3	18.1	18.5	19.8	21.4	22.6
57°	16.1	16.9	17.3	18.5	19.8	21.0
57.5°	15.3	15.7	16.1	16.9	18.5	19.8
58°	14.1	14.9	15.3	15.7	17.3	18.1
58.5°	12.9	13.7	14.1	14.9	16.1	16.9
59°	12.1	12.9	13.3	13.7	14.9	15.7
59.5°	11.3	11.7	12.1	12.9	14.1	14.9
60°	10.5	10.9	11.3	11.7	12.9	13.7
60.5°	9.7	10.1	10.5	10.9	12.1	12.9
61°	9.3	9.7	9.7	10.1	10.9	11.7
61.5°	8.5	8.9	9.3	9.7	10.5	10.9
62°	8.1	8.5	8.5	8.9	9.7	10.1
62.5°	7.7	7.7	8.1	8.5	8.9	9.7
63°	7.3	7.3	7.7	7.7	8.5	8.9
63.5°	6.9	6.9	6.9	7.3	8.1	8.5
64°	6.4	6.4	6.4	6.9	7.7	8.1
64.5°	6.0	6.0	6.0	6.4	6.9	7.3
65°	5.6	5.6	5.6	6.0	6.4	6.9
65.5°	5.2	5.2	5.6	5.6	6.0	6.4
66°	4.8	5.2	5.2	5.2	5.6	6.0



TEST NUMBER: P776368

CATALOG NUMBER: HCDJBL3040CSD-HCD62TRH-4000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	4.0	4.0	4.4	4.4	4.8	5.2
68°	4.0	4.0	4.0	4.0	4.4	4.8
68.5°	3.6	3.6	3.6	4.0	4.4	4.4
69°	3.2	3.6	3.6	3.6	4.0	4.0
69.5°	3.2	3.2	3.2	3.6	3.6	4.0
70°	2.8	3.2	3.2	3.2	3.6	3.6
70.5°	2.8	2.8	2.8	3.2	3.2	3.6
71°	2.8	2.8	2.8	2.8	3.2	3.2
71.5°	2.4	2.4	2.4	2.8	2.8	3.2
72°	2.4	2.4	2.4	2.4	2.8	2.8
72.5°	2.0	2.4	2.4	2.4	2.4	2.8
73°	2.0	2.0	2.0	2.4	2.4	2.4
73.5°	2.0	2.0	2.0	2.0	2.4	2.4
74°	2.0	2.0	2.0	2.0	2.0	2.0
74.5°	1.6	1.6	1.6	2.0	2.0	2.0
75°	1.6	1.6	1.6	1.6	1.6	2.0
75.5°	1.6	1.6	1.6	1.6	1.6	1.6
76°	1.2	1.6	1.6	1.6	1.6	1.6
76.5°	1.2	1.2	1.2	1.2	1.6	1.6
77°	1.2	1.2	1.2	1.2	1.2	1.6
77.5°	1.2	1.2	1.2	1.2	1.2	1.2
78°	1.2	1.2	1.2	1.2	1.2	1.2
78.5°	0.8	0.8	0.8	0.8	1.2	1.2
79°	0.8	0.8	0.8	0.8	0.8	1.2
79.5°	0.8	0.8	0.8	0.8	0.8	0.8
80°	0.8	0.8	0.8	0.8	0.8	0.8
80.5°	0.8	0.8	0.8	0.8	0.8	0.8
81°	0.4	0.8	0.8	0.8	0.8	0.8
81.5°	0.4	0.4	0.4	0.4	0.4	0.8
82°	0.4	0.4	0.4	0.4	0.4	0.4
82.5°	0.4	0.4	0.4	0.4	0.4	0.4
83°	0.4	0.4	0.4	0.4	0.4	0.4
83.5°	0.4	0.4	0.4	0.4	0.4	0.4
84°	0.4	0.4	0.4	0.4	0.4	0.4
84.5°	0.4	0.4	0.4	0.4	0.0	0.4
85°	0.0	0.0	0.4	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: P776368

CATALOG NUMBER: HCDJBL3040CSD-HCD62TRH-4000lm-4000K

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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Scaled Data Report





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

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21.5°	3060.7	3103.8	3124.8	3176.8	3122.4	3086.5	3043.4	2990.6	2937.8	2891.8	2858.4
22°	3005.1	3048.6	3067.6	3119.2	3068.8	3032.9	2990.2	2937.0	2884.1	2836.6	2803.9



44°	765.1	816.7	845.7	900.1	846.1	794.1	743.3	704.2	663.5	615.9	574.0
44.5°	715.1	764.3	788.9	843.7	793.3	742.9	692.9	651.0	614.3	568.4	530.1



66.5°	5.6	5.6	5.2	5.6	5.2	5.2	5.6	5.6	5.6	5.6	5.2
67°	5.2	5.2	5.2	5.2	4.8	5.2	5.2	5.2	5.6	5.2	4.8



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°	2793.9	2828.1	2868.0	2926.5	2997.8	3060.7
22°	2739.8	2774.1	2812.8	2871.7	2944.2	3005.1



44°	528.5	582.1	617.9	651.4	700.2	765.1
44.5°	486.9	536.1	569.6	597.8	651.0	715.1

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66.5°	4.4	4.8	4.8	5.2	5.6	5.6
67°	4.4	4.4	4.4	4.8	5.2	5.2

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Scaled Data Report



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)