

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: P776262

Luminaire Tested: HCDJBL3040CSD-HCD42TRC-4000lm-3500K

Issue Date: 2/13/2024

Test Information

Test Method: LM-79-2019
Report Number: P776262
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2312156B049)
Test Lab:
Issue Date: 2/13/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBS3040CSD-HCD42TRC-4000lm-3500K
Description: 4 INCH ROUND NARROW SPECULAR CLEAR TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 3500K CCT
Ballast/Driver: -

Summary

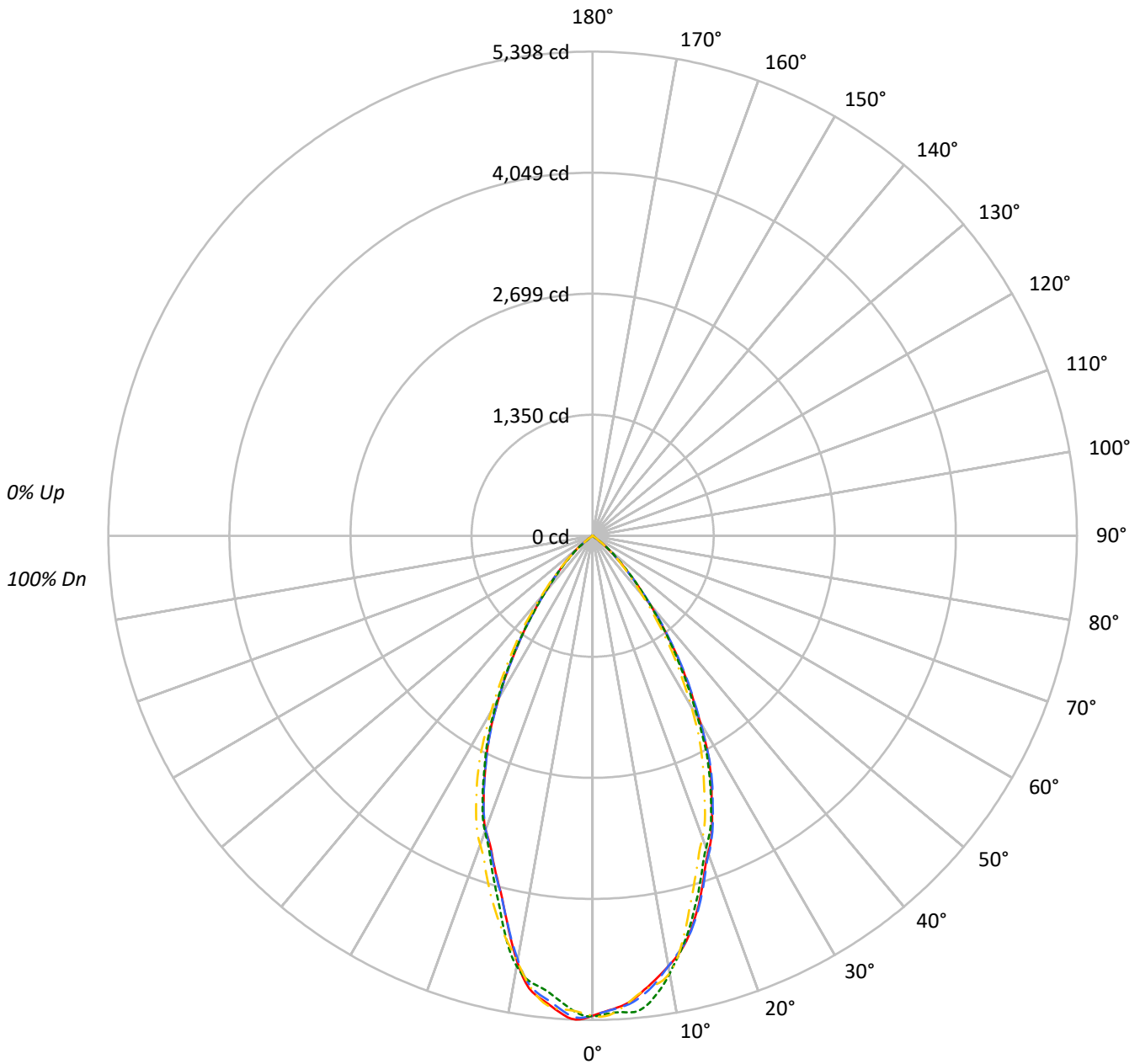
Lumens per Lamp: N/A
Luminaire Lumens: 4404.3 lumens
Efficiency: N/A
Efficacy: 114.4 lumens/watt
Spacing Criteria (0/90/45): 0.82 / 0.81 / 0.84
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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								
1	114	111	108	106	111	109	106	104	105	103	101	101	99	98	97	96	95	93								
2	108	103	99	96	106	101	98	94	98	95	92	95	93	90	92	90	89	87								
3	102	96	91	87	100	95	90	86	92	88	85	89	86	84	87	85	82	81								
4	97	90	84	80	95	88	83	79	86	82	78	84	80	77	82	79	76	75								
5	92	84	78	74	90	83	77	73	81	76	73	79	75	72	78	74	71	70								
6	87	78	72	68	86	78	72	68	76	71	67	75	70	67	73	70	66	65								
7	83	74	68	63	82	73	67	63	72	67	63	71	66	63	69	65	62	61								
8	79	69	63	59	78	69	63	59	68	62	59	67	62	59	66	61	58	57								
9	75	65	59	55	74	65	59	55	64	59	55	63	58	55	62	58	55	53								
10	72	62	56	52	71	61	56	52	61	55	52	60	55	52	59	55	52	50								

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	673586	673586	673586	673586
5°	655719	673443	665257	649389
10°	622446	632860	616950	622906
15°	574459	566537	525978	538199
20°	504126	495555	466962	469988
25°	435520	431757	392126	396209
30°	348010	340322	305257	309762
35°	253758	246552	215026	216486
40°	162199	160819	137901	134829
45°	90573	93065	82440	80108
50°	41174	43993	40861	39314
55°	2435	2348	1909	2172
60°	705	906	805	805
65°	357	476	476	476
70°	294	294	294	294
75°	194	194	194	194
80°	0	0	0	0
85°	0	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 93065 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	488.4	11.1
10°-20°	1181.7	26.8
20°-30°	1355.6	30.8
30°-40°	947.5	21.5
40°-50°	386.5	8.8
50°-60°	42.6	1.0
60°-70°	1.7	0.0
70°-80°	0.4	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°	3025.7	68.7
0°-40°	3973.3	90.2
0°-60°	4402.3	100.0
0°-90°	4404.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4404.3	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	5352	5352	5352	5352	5352	
5°	5190	5331	5266	5140	5190	484
15°	4409	4348	4037	4131	4409	1222
25°	3136	3109	2824	2853	3136	1428
35°	1652	1605	1400	1409	1652	1025
45°	509	523	463	450	509	408
55°	11	11	9	10	11	41
65°	1	2	2	2	1	1
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°	5352.3	5352.3	5352.3	5352.3	5352.3	5352.3	5352.3	5352.3	5352.3	5352.3	5352.3
0.5°	5335.2	5334.8	5334.8	5336.0	5354.7	5356.3	5361.0	5365.8	5367.8	5367.4	5362.2
1°	5320.9	5319.7	5321.7	5324.8	5345.1	5351.9	5363.0	5374.9	5382.9	5382.5	5372.6
1.5°	5307.0	5305.4	5308.9	5315.3	5336.4	5343.5	5358.2	5377.3	5393.6	5394.4	5377.3
2°	5293.8	5290.3	5297.0	5308.5	5327.6	5332.0	5345.9	5371.0	5397.6	5400.8	5373.4
2.5°	5281.1	5274.4	5285.1	5304.6	5322.1	5318.9	5326.8	5354.3	5390.1	5397.6	5359.8
3°	5268.0	5255.7	5274.4	5304.6	5320.1	5304.6	5303.4	5330.8	5373.8	5382.9	5338.0
3.5°	5253.7	5234.2	5262.8	5309.3	5321.7	5289.9	5275.9	5303.0	5350.7	5362.2	5311.7
4°	5237.4	5211.1	5250.5	5315.7	5326.8	5273.6	5245.3	5272.0	5324.1	5335.6	5283.9
4.5°	5216.3	5182.5	5235.4	5322.9	5330.8	5254.5	5213.1	5240.2	5295.4	5307.8	5254.9
5°	5190.5	5151.5	5217.5	5325.6	5330.8	5230.6	5180.9	5208.7	5266.0	5280.3	5226.6
5.5°	5160.2	5118.9	5193.6	5320.1	5321.7	5202.8	5149.5	5180.5	5239.0	5252.1	5200.4
6°	5128.4	5086.3	5165.8	5304.6	5301.8	5170.2	5121.3	5155.5	5213.9	5224.3	5176.5
6.5°	5095.4	5057.3	5136.0	5277.5	5274.4	5140.0	5097.4	5134.8	5189.3	5196.8	5153.1
7°	5064.8	5033.0	5105.0	5240.2	5240.2	5110.5	5079.5	5116.9	5161.8	5166.6	5127.6
7.5°	5033.4	5011.5	5072.0	5193.2	5200.0	5082.3	5065.6	5100.6	5131.2	5128.8	5096.6
8°	5003.2	4992.4	5036.2	5137.2	5157.9	5056.5	5052.5	5081.1	5091.8	5081.5	5056.9
8.5°	4969.4	4975.7	4996.0	5072.4	5111.7	5029.4	5038.6	5055.3	5039.4	5023.1	5006.0
9°	4936.4	4960.2	4954.3	5003.6	5063.2	5000.0	5016.7	5019.9	4977.3	4953.5	4947.1
9.5°	4902.6	4945.5	4912.5	4934.8	5008.3	4969.8	4987.3	4973.8	4903.8	4873.6	4876.3
10°	4870.8	4932.8	4870.8	4866.8	4952.3	4936.0	4949.9	4918.1	4827.8	4787.7	4803.2
10.5°	4837.4	4920.1	4830.6	4806.0	4895.0	4897.8	4901.8	4855.7	4747.9	4693.8	4727.6
11°	4804.8	4905.4	4792.4	4749.9	4838.2	4853.7	4845.7	4787.7	4665.2	4599.2	4650.9
11.5°	4768.6	4883.5	4754.3	4700.2	4784.1	4802.8	4778.9	4716.9	4579.3	4504.2	4570.2
12°	4730.0	4850.9	4716.5	4654.9	4727.6	4744.3	4708.1	4644.1	4495.4	4408.0	4488.3
12.5°	4685.9	4806.4	4676.7	4613.1	4670.0	4677.5	4629.0	4568.6	4410.3	4315.3	4404.8
13°	4639.8	4751.9	4636.6	4571.4	4612.3	4607.2	4549.1	4491.1	4326.0	4229.0	4327.2
13.5°	4586.5	4690.3	4590.1	4525.6	4549.9	4529.6	4466.0	4408.3	4245.7	4147.5	4248.1
14°	4531.2	4623.1	4540.0	4474.7	4483.1	4450.9	4384.1	4332.0	4169.8	4074.0	4173.8
14.5°	4471.6	4553.1	4484.7	4421.9	4415.9	4369.4	4303.0	4253.3	4099.0	4004.4	4105.4
15°	4409.1	4479.1	4426.2	4366.2	4348.3	4290.7	4227.0	4180.1	4037.0	3940.0	4043.7
15.5°	4347.5	4409.1	4365.0	4310.9	4280.7	4216.7	4153.9	4108.1	3974.6	3881.1	3983.3
16°	4283.5	4337.6	4302.2	4252.5	4213.9	4144.7	4081.5	4038.6	3914.5	3823.1	3923.7
16.5°	4217.5	4263.6	4237.4	4191.3	4147.1	4072.4	4008.0	3966.2	3851.7	3764.6	3861.2
17°	4147.5	4189.3	4169.8	4125.6	4077.5	4000.0	3938.8	3893.8	3790.1	3706.2	3800.0
17.5°	4078.3	4112.5	4101.0	4059.6	4006.8	3927.2	3869.2	3822.3	3727.2	3648.5	3737.6
18°	4006.8	4037.0	4029.4	3992.4	3938.8	3855.3	3801.2	3755.1	3668.0	3594.4	3679.5
18.5°	3937.2	3964.2	3958.6	3925.6	3870.0	3787.7	3736.4	3689.1	3615.5	3546.3	3624.7
19°	3872.4	3896.6	3892.2	3863.2	3807.6	3726.4	3679.1	3633.8	3569.8	3504.6	3579.3
19.5°	3815.5	3837.0	3833.0	3809.1	3749.5	3674.4	3629.0	3583.7	3528.4	3464.8	3532.8
20°	3764.2	3782.9	3780.5	3760.6	3700.2	3625.8	3581.7	3535.2	3486.7	3422.7	3486.7
20.5°	3718.1	3732.0	3732.0	3716.5	3654.1	3577.7	3532.0	3481.9	3438.6	3373.4	3433.8
21°	3665.6	3677.9	3677.9	3670.4	3607.6	3525.2	3473.6	3421.5	3382.9	3317.7	3374.9



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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°	3480.3	3493.0	3499.4	3511.7	3446.5	3347.5	3271.2	3200.8	3175.3	3120.5	3176.1
23°	3406.8	3424.3	3429.8	3448.1	3380.5	3280.3	3196.0	3122.1	3105.0	3056.1	3104.6
23.5°	3335.2	3357.1	3361.8	3383.7	3312.5	3215.5	3119.7	3049.7	3034.6	2991.3	3033.4
24°	3266.0	3290.3	3292.6	3314.9	3245.3	3152.3	3054.1	2977.3	2964.6	2926.8	2962.2
24.5°	3200.0	3227.8	3228.2	3243.7	3176.5	3085.5	2988.5	2905.0	2894.2	2862.0	2891.1
25°	3136.4	3166.2	3161.4	3168.2	3109.3	3021.1	2922.9	2832.6	2823.9	2797.2	2819.5
25.5°	3075.5	3106.2	3099.0	3095.4	3039.8	2957.1	2857.3	2765.0	2756.7	2734.0	2748.3
26°	3011.5	3045.7	3032.2	3017.9	2970.2	2892.6	2791.6	2699.8	2690.7	2666.4	2681.9
26.5°	2945.9	2982.1	2965.0	2941.9	2900.2	2828.2	2726.0	2633.0	2621.1	2596.8	2611.9
27°	2877.1	2913.7	2892.2	2861.2	2830.2	2753.9	2658.8	2567.0	2551.5	2525.2	2541.2
27.5°	2805.2	2842.9	2817.5	2784.9	2760.2	2680.3	2588.9	2498.2	2479.5	2451.7	2469.6
28°	2728.0	2768.6	2738.0	2705.0	2677.1	2603.6	2517.3	2423.5	2406.0	2376.5	2394.8
28.5°	2646.9	2691.8	2654.9	2628.6	2592.0	2525.2	2438.6	2347.9	2328.4	2297.0	2317.7
29°	2561.4	2616.3	2570.2	2549.5	2507.8	2447.7	2359.4	2271.6	2252.5	2218.3	2242.5
29.5°	2478.7	2536.4	2486.3	2472.8	2424.3	2367.4	2279.1	2192.0	2176.5	2139.6	2165.4
30°	2394.8	2455.7	2404.4	2395.6	2341.9	2287.1	2199.6	2114.1	2100.6	2064.8	2089.5
30.5°	2312.5	2374.9	2324.1	2318.9	2260.8	2207.6	2119.7	2039.8	2025.0	1986.9	2013.1
31°	2233.0	2292.6	2246.5	2239.8	2186.5	2132.4	2042.9	1968.2	1951.9	1912.5	1941.9
31.5°	2155.9	2213.1	2173.0	2163.0	2104.2	2055.7	1970.2	1897.0	1879.5	1840.2	1868.8
32°	2081.5	2134.0	2100.2	2085.9	2029.8	1980.1	1898.2	1829.0	1807.2	1774.6	1798.0
32.5°	2008.3	2054.9	2028.6	2010.3	1955.1	1901.8	1827.4	1759.4	1733.6	1705.0	1728.0
33°	1938.0	1978.1	1959.0	1936.4	1886.7	1828.2	1756.7	1692.2	1664.0	1639.0	1658.1
33.5°	1866.8	1902.2	1886.3	1864.4	1810.7	1753.1	1688.3	1626.2	1593.6	1573.0	1590.5
34°	1795.6	1826.6	1814.3	1794.4	1739.2	1682.3	1619.1	1559.4	1529.2	1512.1	1522.9
34.5°	1723.3	1749.9	1741.9	1726.0	1670.8	1609.1	1550.3	1490.3	1462.8	1447.7	1458.4
35°	1651.7	1674.8	1670.4	1656.5	1604.8	1539.6	1479.5	1423.9	1399.6	1386.1	1394.8
35.5°	1580.9	1601.2	1599.2	1588.5	1536.4	1470.4	1410.7	1359.0	1337.6	1324.9	1332.4
36°	1510.5	1529.2	1527.6	1519.7	1470.0	1406.0	1341.9	1295.4	1278.3	1266.8	1270.0
36.5°	1438.6	1458.4	1458.4	1448.5	1405.2	1336.8	1273.6	1229.4	1216.7	1206.4	1209.5
37°	1372.2	1392.8	1392.0	1382.5	1343.9	1272.0	1206.8	1165.4	1157.1	1151.5	1149.9
37.5°	1305.8	1327.2	1325.6	1316.5	1277.9	1208.3	1143.5	1106.2	1098.6	1096.6	1092.2
38°	1239.4	1261.2	1259.6	1250.1	1216.7	1149.1	1081.9	1046.9	1043.3	1043.3	1035.4
38.5°	1173.0	1195.6	1193.2	1184.1	1155.5	1089.5	1023.5	988.5	989.7	991.6	981.7
39°	1106.6	1130.0	1126.8	1118.1	1097.8	1032.2	966.6	931.6	937.6	942.3	929.6
39.5°	1044.9	1067.6	1064.4	1058.4	1035.4	977.3	911.3	877.1	886.7	893.0	879.9
40°	987.3	1008.0	1002.4	1000.8	978.9	924.9	858.1	823.9	839.4	846.5	831.0
40.5°	929.6	950.7	941.2	945.5	923.7	874.0	806.8	774.2	794.4	801.6	786.1
41°	872.4	895.8	884.3	890.7	871.6	825.8	758.6	726.0	751.1	759.4	742.3
41.5°	818.3	841.7	829.4	837.8	819.9	778.9	713.3	683.1	709.7	718.5	700.6
42°	769.8	791.6	778.1	786.1	773.8	734.8	670.8	642.1	669.2	679.5	660.8
42.5°	722.1	742.3	728.0	734.8	726.8	692.6	631.4	605.6	632.2	642.1	622.3
43°	675.9	694.2	680.7	687.1	683.1	651.7	594.8	571.4	595.6	606.0	586.1
43.5°	629.8	646.5	635.8	639.8	640.6	612.3	560.2	540.0	560.2	570.6	551.5



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	508.9	517.3	513.3	515.3	522.9	506.6	467.6	451.3	463.2	471.6	457.3
45.5°	469.6	478.3	475.5	479.5	487.9	472.0	439.4	424.7	433.8	440.6	428.6
46°	435.8	442.9	440.2	444.9	452.5	439.8	411.5	398.4	405.2	410.3	400.8
46.5°	400.8	407.6	405.6	410.7	420.3	409.5	385.7	373.8	378.9	383.3	375.0
47°	369.4	374.2	373.4	379.3	388.9	382.1	360.2	349.1	353.1	356.7	349.5
47.5°	336.8	341.6	341.6	348.7	359.8	354.3	334.8	324.5	326.8	329.6	323.7
48°	308.2	312.1	311.7	318.9	330.8	326.8	309.3	299.8	300.6	302.6	298.2
48.5°	280.7	284.3	284.3	291.5	301.8	299.0	283.9	275.5	274.8	275.5	272.8
49°	256.9	258.8	258.8	265.2	273.2	271.6	260.8	252.9	252.1	253.3	250.5
49.5°	233.4	234.2	234.6	239.4	248.1	247.3	239.0	231.4	229.8	231.4	229.0
50°	210.3	210.3	210.7	215.5	224.7	223.9	215.5	209.5	208.7	209.9	207.2
50.5°	186.1	186.1	185.7	190.1	200.0	199.2	192.4	186.5	186.5	187.3	184.5
51°	159.8	159.4	158.6	162.2	173.0	172.6	166.2	161.0	161.4	161.4	158.6
51.5°	130.8	130.4	130.0	130.4	144.3	143.9	139.6	135.2	135.6	134.8	132.4
52°	107.0	106.6	106.6	107.0	114.9	113.3	110.1	107.8	108.2	106.6	104.2
52.5°	83.1	82.7	83.5	83.5	87.9	85.5	83.1	81.9	81.1	80.3	78.3
53°	59.2	59.2	60.0	59.6	72.4	70.4	68.0	67.2	66.4	66.0	64.4
53.5°	35.4	35.8	37.0	36.6	56.9	55.3	53.3	52.5	52.1	51.7	50.1
54°	21.5	21.9	22.7	22.7	41.0	39.8	38.6	37.8	37.8	37.4	36.2
54.5°	12.7	13.1	13.9	13.5	25.4	24.7	23.9	23.5	23.5	23.1	21.9
55°	11.1	11.1	11.5	11.5	10.7	9.9	9.1	8.7	8.7	8.7	8.7
55.5°	9.1	9.1	9.5	9.5	8.3	8.0	7.2	7.2	6.8	6.8	7.2
56°	7.2	7.2	7.6	8.0	7.2	6.8	6.4	6.0	6.0	6.0	6.4
56.5°	5.2	5.2	5.6	6.0	6.4	6.0	5.6	5.6	5.2	5.6	5.6
57°	4.8	4.8	5.2	5.6	6.0	5.6	5.2	4.8	4.8	4.8	5.2
57.5°	4.4	4.4	4.8	5.2	5.2	5.2	4.8	4.4	4.4	4.4	4.8
58°	4.0	4.0	4.4	4.8	4.8	4.8	4.4	4.4	4.0	4.0	4.4
58.5°	3.6	3.6	4.0	4.4	4.4	4.4	4.0	4.0	3.6	4.0	4.0
59°	3.2	3.6	3.6	4.0	4.4	4.0	3.6	3.6	3.6	3.6	3.6
59.5°	3.2	3.2	3.6	3.6	4.0	3.6	3.6	3.2	3.2	3.2	3.6
60°	2.8	2.8	3.2	3.6	3.6	3.6	3.2	3.2	3.2	3.2	3.2
60.5°	2.8	2.8	2.8	3.2	3.2	3.2	2.8	2.8	2.8	2.8	2.8
61°	2.4	2.4	2.8	2.8	3.2	2.8	2.8	2.8	2.4	2.8	2.8
61.5°	2.4	2.4	2.4	2.8	2.8	2.8	2.4	2.4	2.4	2.4	2.4
62°	2.0	2.0	2.4	2.4	2.8	2.4	2.4	2.4	2.4	2.4	2.4
62.5°	2.0	2.0	2.0	2.4	2.4	2.4	2.4	2.0	2.0	2.0	2.4
63°	2.0	2.0	2.0	2.0	2.4	2.4	2.0	2.0	2.0	2.0	2.0
63.5°	1.6	1.6	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
64°	1.6	1.6	1.6	2.0	2.0	2.0	1.6	1.6	1.6	1.6	2.0
64.5°	1.6	1.6	1.6	1.6	2.0	1.6	1.6	1.6	1.6	1.6	1.6
65°	1.2	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
65.5°	1.2	1.2	1.6	1.6	1.6	1.6	1.6	1.2	1.2	1.6	1.6
66°	1.2	1.2	1.2	1.6	1.6	1.6	1.2	1.2	1.2	1.2	1.2



TEST NUMBER: P776262

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRC-4000lm-3500K

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	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
68°	0.8	0.8	0.8	1.2	1.2	1.2	1.2	0.8	0.8	0.8	1.2
68.5°	0.8	0.8	0.8	0.8	1.2	1.2	0.8	0.8	0.8	0.8	0.8
69°	0.8	0.8	0.8	0.8	1.2	0.8	0.8	0.8	0.8	0.8	0.8
69.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
70°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
70.5°	0.4	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
71°	0.4	0.4	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
71.5°	0.4	0.4	0.4	0.8	0.8	0.8	0.8	0.4	0.4	0.4	0.8
72°	0.4	0.4	0.4	0.4	0.8	0.8	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°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
74.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
75°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
75.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
76°	0.0	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
76.5°	0.0	0.0	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
77°	0.0	0.0	0.0	0.4	0.4	0.4	0.4	0.4	0.0	0.4	0.4
77.5°	0.0	0.0	0.0	0.4	0.4	0.4	0.4	0.0	0.0	0.0	0.4
78°	0.0	0.0	0.0	0.0	0.4	0.4	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: P776262
CATALOG NUMBER: HCDJBL3040CSD-HCD42TRC-4000lm-3500K

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: P776262

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRC-4000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	5352.3	5352.3	5352.3	5352.3	5352.3	5352.3
0.5°	5354.7	5359.4	5347.9	5341.9	5338.0	5335.2
1°	5357.9	5352.3	5337.2	5329.2	5324.5	5320.9
1.5°	5353.5	5337.6	5323.3	5316.5	5312.5	5307.0
2°	5340.0	5316.9	5305.8	5305.4	5302.6	5293.8
2.5°	5317.3	5290.3	5287.9	5297.4	5295.8	5281.1
3°	5289.5	5260.8	5270.4	5292.6	5291.8	5268.0
3.5°	5257.7	5230.2	5252.5	5290.7	5290.7	5253.7
4°	5226.2	5200.8	5233.8	5289.5	5290.7	5237.4
4.5°	5194.8	5170.6	5211.9	5287.1	5288.3	5216.3
5°	5165.8	5140.4	5187.3	5278.7	5279.9	5190.5
5.5°	5139.2	5112.5	5157.5	5260.4	5263.6	5160.2
6°	5115.7	5089.1	5126.4	5233.4	5238.6	5128.4
6.5°	5097.4	5069.6	5094.6	5198.8	5205.2	5095.4
7°	5082.3	5052.9	5063.6	5158.6	5165.4	5064.8
7.5°	5068.0	5037.8	5032.6	5112.1	5113.3	5033.4
8°	5051.7	5019.5	4999.6	5064.4	5061.6	5003.2
8.5°	5027.0	4994.8	4966.6	5008.3	5000.0	4969.4
9°	4993.2	4963.0	4929.6	4947.9	4938.4	4936.4
9.5°	4947.5	4922.5	4889.5	4884.3	4873.2	4902.6
10°	4891.8	4874.4	4846.1	4823.9	4813.9	4870.8
10.5°	4826.6	4822.3	4799.6	4765.0	4759.4	4837.4
11°	4756.7	4760.6	4748.7	4711.3	4708.5	4804.8
11.5°	4684.3	4687.9	4692.2	4658.8	4660.8	4768.6
12°	4606.0	4609.9	4631.0	4608.0	4618.3	4730.0
12.5°	4524.8	4528.8	4565.0	4555.1	4576.1	4685.9
13°	4444.9	4444.9	4496.2	4502.2	4534.4	4639.8
13.5°	4361.8	4361.0	4421.9	4443.7	4488.7	4586.5
14°	4276.3	4279.9	4344.7	4384.5	4441.0	4531.2
14.5°	4196.8	4203.6	4269.2	4323.7	4388.9	4471.6
15°	4120.9	4130.8	4194.4	4263.2	4336.0	4409.1
15.5°	4048.5	4060.4	4122.5	4202.8	4282.7	4347.5
16°	3977.3	3990.5	4050.5	4140.8	4225.8	4283.5
16.5°	3906.2	3922.5	3978.9	4075.9	4166.2	4217.5
17°	3833.8	3853.7	3909.3	4010.3	4102.6	4147.5
17.5°	3761.8	3784.5	3837.8	3944.7	4038.2	4078.3
18°	3692.2	3717.7	3768.6	3878.3	3972.6	4006.8
18.5°	3627.0	3659.2	3703.8	3813.1	3907.0	3937.2
19°	3570.6	3604.8	3648.1	3755.5	3847.3	3872.4
19.5°	3519.7	3557.5	3598.8	3707.8	3796.8	3815.5
20°	3470.4	3509.3	3549.9	3664.8	3752.7	3764.2
20.5°	3416.3	3460.4	3500.6	3620.7	3708.5	3718.1
21°	3356.3	3404.4	3446.9	3571.4	3660.8	3665.6

TEST NUMBER: P776262

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRC-4000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	3147.9	3207.6	3269.2	3393.6	3485.5	3480.3
23°	3077.1	3136.4	3202.8	3325.2	3415.1	3406.8
23.5°	3006.8	3065.6	3137.6	3254.9	3345.1	3335.2
24°	2936.0	2992.8	3072.0	3186.1	3272.4	3266.0
24.5°	2865.6	2922.5	3006.8	3118.1	3202.0	3200.0
25°	2794.8	2853.3	2936.8	3050.5	3130.8	3136.4
25.5°	2731.6	2787.7	2871.6	2982.5	3059.2	3075.5
26°	2666.8	2721.3	2802.8	2910.9	2984.9	3011.5
26.5°	2599.6	2654.9	2733.2	2837.0	2911.3	2945.9
27°	2532.0	2587.3	2658.1	2759.4	2833.4	2877.1
27.5°	2460.0	2515.3	2584.5	2678.3	2754.7	2805.2
28°	2386.9	2442.1	2505.4	2591.6	2675.1	2728.0
28.5°	2308.1	2366.2	2425.0	2508.1	2600.4	2646.9
29°	2229.4	2289.9	2342.7	2424.7	2519.3	2561.4
29.5°	2151.9	2209.1	2262.4	2343.1	2441.4	2478.7
30°	2077.5	2131.6	2183.7	2262.4	2361.0	2394.8
30.5°	2004.4	2053.3	2103.4	2185.3	2282.7	2312.5
31°	1935.6	1976.1	2027.4	2107.4	2204.4	2233.0
31.5°	1866.0	1900.6	1953.1	2031.8	2127.2	2155.9
32°	1801.2	1825.8	1879.9	1957.5	2049.7	2081.5
32.5°	1732.4	1755.1	1807.2	1880.7	1973.8	2008.3
33°	1666.8	1685.1	1736.8	1807.6	1901.4	1938.0
33.5°	1598.8	1617.1	1665.6	1736.0	1830.6	1866.8
34°	1530.4	1547.9	1594.8	1665.6	1759.8	1795.6
34.5°	1463.6	1477.5	1526.8	1598.4	1691.1	1723.3
35°	1398.8	1409.1	1457.3	1530.0	1621.9	1651.7
35.5°	1334.4	1343.9	1393.6	1466.0	1555.5	1580.9
36°	1272.8	1278.3	1330.0	1421.5	1486.3	1510.5
36.5°	1210.3	1213.1	1266.8	1355.1	1411.1	1438.6
37°	1152.7	1147.9	1203.2	1287.9	1345.9	1372.2
37.5°	1091.5	1087.1	1140.0	1221.1	1281.1	1305.8
38°	1032.6	1030.2	1081.1	1154.3	1215.9	1239.4
38.5°	974.9	974.2	1025.4	1094.6	1151.1	1173.0
39°	917.3	922.5	971.8	1037.0	1091.1	1106.6
39.5°	861.6	868.8	919.3	980.5	1031.0	1044.9
40°	808.7	820.7	868.0	924.5	974.6	987.3
40.5°	758.6	772.2	820.7	872.0	919.3	929.6
41°	713.3	728.8	774.6	821.1	866.0	872.4
41.5°	671.2	686.3	730.8	773.4	814.7	818.3
42°	631.8	646.1	691.5	727.6	763.8	769.8
42.5°	596.4	609.9	650.9	684.7	716.5	722.1
43°	563.0	574.2	612.3	641.0	670.0	675.9
43.5°	532.0	540.8	575.3	599.6	625.4	629.8



TEST NUMBER: P776262

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRC-4000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	446.5	450.1	474.8	487.1	502.6	508.9
45.5°	419.9	422.3	442.9	452.9	466.4	469.6
46°	394.0	395.2	411.9	420.7	433.0	435.8
46.5°	369.4	367.8	381.7	388.9	400.0	400.8
47°	345.1	341.9	352.7	358.3	368.6	369.4
47.5°	320.9	316.5	324.1	329.2	338.8	336.8
48°	296.6	291.8	298.2	301.8	310.1	308.2
48.5°	272.0	268.8	273.2	275.5	282.7	280.7
49°	250.5	246.5	250.5	251.7	258.4	256.9
49.5°	229.0	224.3	227.8	227.8	234.6	233.4
50°	206.8	200.8	204.4	204.8	211.1	210.3
50.5°	183.7	176.1	180.1	180.1	186.5	186.1
51°	157.9	148.7	152.3	153.9	160.2	159.8
51.5°	132.0	125.2	128.4	129.6	131.2	130.8
52°	103.4	101.8	104.2	105.4	107.0	107.0
52.5°	79.1	78.3	80.3	81.1	82.7	83.1
53°	64.8	54.9	56.1	56.9	58.8	59.2
53.5°	50.9	31.4	32.2	33.0	34.6	35.4
54°	36.6	18.7	19.5	19.9	21.1	21.5
54.5°	22.7	11.1	11.9	11.9	12.3	12.7
55°	9.1	9.9	10.3	9.9	10.3	11.1
55.5°	7.6	8.7	8.7	8.7	8.7	9.1
56°	6.8	7.2	7.2	7.2	7.2	7.2
56.5°	6.0	6.0	5.6	5.6	5.2	5.2
57°	5.6	5.2	5.2	4.8	4.8	4.8
57.5°	5.2	4.8	4.8	4.4	4.4	4.4
58°	4.8	4.4	4.4	4.0	4.0	4.0
58.5°	4.4	4.4	4.0	4.0	3.6	3.6
59°	4.0	4.0	3.6	3.6	3.6	3.2
59.5°	3.6	3.6	3.6	3.2	3.2	3.2
60°	3.6	3.2	3.2	3.2	2.8	2.8
60.5°	3.2	3.2	3.2	2.8	2.8	2.8
61°	2.8	2.8	2.8	2.8	2.4	2.4
61.5°	2.8	2.8	2.8	2.4	2.4	2.4
62°	2.4	2.4	2.4	2.4	2.0	2.0
62.5°	2.4	2.4	2.4	2.0	2.0	2.0
63°	2.4	2.4	2.0	2.0	2.0	2.0
63.5°	2.0	2.0	2.0	2.0	1.6	1.6
64°	2.0	2.0	2.0	1.6	1.6	1.6
64.5°	2.0	2.0	1.6	1.6	1.6	1.6
65°	1.6	1.6	1.6	1.6	1.2	1.2
65.5°	1.6	1.6	1.6	1.2	1.2	1.2
66°	1.6	1.6	1.2	1.2	1.2	1.2



TEST NUMBER: P776262

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRC-4000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	1.2	1.2	1.2	1.2	0.8	0.8
68°	1.2	1.2	1.2	0.8	0.8	0.8
68.5°	1.2	1.2	0.8	0.8	0.8	0.8
69°	0.8	0.8	0.8	0.8	0.8	0.8
69.5°	0.8	0.8	0.8	0.8	0.8	0.8
70°	0.8	0.8	0.8	0.8	0.8	0.8
70.5°	0.8	0.8	0.8	0.8	0.8	0.4
71°	0.8	0.8	0.8	0.8	0.4	0.4
71.5°	0.8	0.8	0.8	0.4	0.4	0.4
72°	0.8	0.8	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	0.4	0.4	0.4	0.4
73.5°	0.4	0.4	0.4	0.4	0.4	0.4
74°	0.4	0.4	0.4	0.4	0.4	0.4
74.5°	0.4	0.4	0.4	0.4	0.4	0.4
75°	0.4	0.4	0.4	0.4	0.4	0.4
75.5°	0.4	0.4	0.4	0.4	0.4	0.4
76°	0.4	0.4	0.4	0.4	0.4	0.0
76.5°	0.4	0.4	0.4	0.4	0.0	0.0
77°	0.4	0.4	0.4	0.4	0.0	0.0
77.5°	0.4	0.4	0.4	0.0	0.0	0.0
78°	0.4	0.4	0.0	0.0	0.0	0.0
78.5°	0.4	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: P776262

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRC-4000lm-3500K

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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Scaled Data Report



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21.5°	3608.0	3620.7	3621.9	3623.9	3557.5	3470.4	3411.5	3353.5	3319.3	3254.5	3312.5
22°	3544.3	3557.1	3561.0	3571.0	3504.6	3411.9	3343.9	3279.9	3249.3	3189.3	3246.1



44°	588.5	602.0	592.4	594.8	599.6	574.6	528.0	507.8	526.4	536.4	518.9
44.5°	548.3	558.3	551.5	553.5	559.8	540.4	498.2	479.5	493.8	503.4	487.5



66.5°	1.2	1.2	1.2	1.2	1.6	1.2	1.2	1.2	1.2	1.2	1.2	1.2
67°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2



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

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21.5°	3292.6	3343.9	3391.6	3517.3	3608.3	3608.0
22°	3221.9	3277.1	3329.6	3459.2	3548.7	3544.3



44°	501.8	508.5	541.2	560.2	582.1	588.5
44.5°	473.6	479.1	506.6	522.9	540.8	548.3

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

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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)