

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: P776604

Luminaire Tested: HCDJBL54050CSD-HCD4TRH-5000lm-5000K

Issue Date: 2/7/2024

Test Information

Test Method: LM-79-2019
Report Number: P776604
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: HCDJBS4050CSD-HCD4TRH-5000lm-5000K
Description: 4 INCH ROUND MEDIUM HAZE TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 5000K CCT
Ballast/Driver: -

Summary

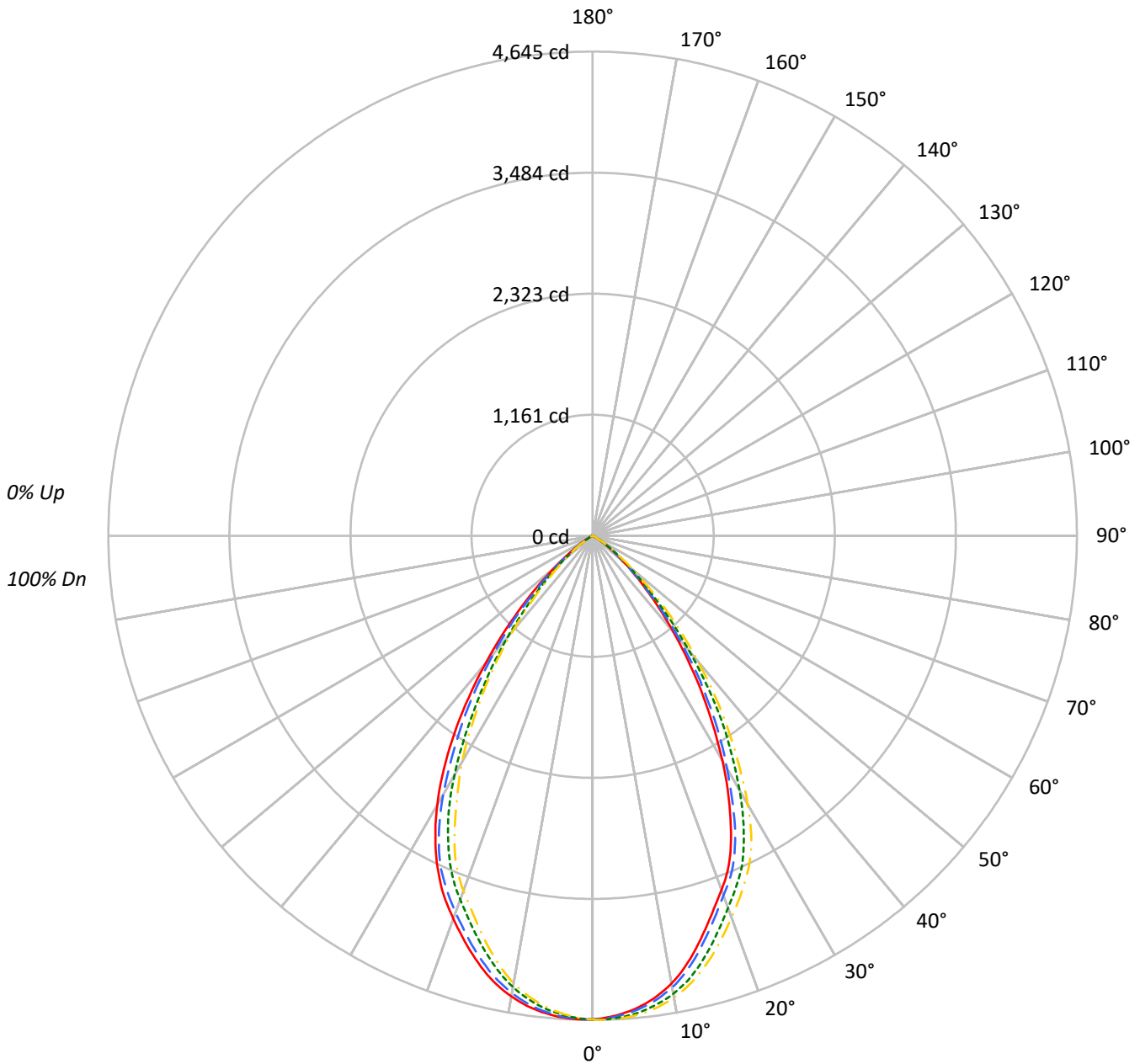
Lumens per Lamp: N/A
Luminaire Lumens: 5229.0 lumens
Efficiency: N/A
Efficacy: 108.9 lumens/watt
Spacing Criteria (0/90/45): 0.98 / 0.98 / 0.98
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 48
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



TEST NUMBER: P776604
CATALOG NUMBER: HCDJBL54050CSD-HCD4TRH-5000lm-5000K

Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20										
RC	80					70					50					30					10					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	113	110	107	105	111	108	105	103	104	102	100	100	99	97	97	95	94	92					92			
2	107	101	97	93	104	100	96	92	96	93	90	93	91	88	91	88	86	85					85			
3	101	94	88	84	99	92	87	83	90	85	82	87	84	81	85	82	79	78					78			
4	95	87	81	76	93	85	80	75	83	78	75	81	77	74	79	76	73	71					71			
5	89	80	74	69	88	79	73	69	77	72	68	76	71	68	74	70	67	65					65			
6	84	75	68	63	83	74	68	63	72	67	63	71	66	62	69	65	62	60					60			
7	80	70	63	58	78	69	63	58	68	62	58	66	61	58	65	61	57	56					56			
8	75	65	58	54	74	64	58	54	63	58	54	62	57	53	61	57	53	52					52			
9	71	61	54	50	70	60	54	50	59	54	50	58	53	50	58	53	49	48					48			
10	68	57	51	47	67	57	51	47	56	50	46	55	50	46	54	50	46	45					45			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	583993	583993	583993	583993
5°	576105	581689	582788	578126
10°	557323	570115	573527	561860
15°	521913	543736	552661	531854
20°	484131	508854	523345	497470
25°	436159	473651	488481	454780
30°	361829	409814	433166	385182
35°	278401	329791	354711	293918
40°	197586	236439	262676	208593
45°	128073	151495	171892	130227
50°	74047	88124	95916	71012
55°	36444	44431	44958	32714
60°	15278	17342	17846	12711
65°	7951	8249	8517	6641
70°	4636	4820	5188	3937
75°	2820	3063	3063	2383
80°	1377	2102	1739	1377
85°	722	1444	722	722

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 157.5°
 Vertical Angle: 45°
 Luminance: 175772 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	433.0	8.3
10°-20°	1155.9	22.1
20°-30°	1515.0	29.0
30°-40°	1268.8	24.3
40°-50°	643.3	12.3
50°-60°	175.8	3.4
60°-70°	29.6	0.6
70°-80°	6.9	0.1
80°-90°	0.8	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°	3103.8	59.4
0°-40°	4372.6	83.6
0°-60°	5191.7	99.3
0°-90°	5229.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5229.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	4640	4640	4640	4640	4640	
5°	4560	4604	4613	4576	4560	429
15°	4006	4173	4242	4082	4006	1122
25°	3141	3411	3518	3275	3141	1424
35°	1812	2147	2309	1913	1812	1129
45°	720	851	966	732	720	567
55°	166	202	205	149	166	161
65°	27	28	29	22	27	29
75°	6	6	6	5	6	7
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°	4640.4	4640.4	4640.4	4640.4	4640.4	4640.4	4640.4	4640.4	4640.4	4640.4	4640.4
0.5°	4635.1	4635.6	4637.5	4640.9	4642.4	4643.8	4644.3	4643.8	4640.0	4639.0	4639.5
1°	4631.2	4631.7	4635.1	4639.0	4642.4	4644.3	4645.3	4644.8	4641.4	4639.5	4639.5
1.5°	4625.9	4627.8	4631.7	4636.6	4641.4	4644.3	4645.3	4645.3	4640.9	4639.0	4637.0
2°	4620.0	4623.0	4626.8	4633.2	4639.0	4642.9	4645.3	4644.8	4640.0	4637.0	4635.6
2.5°	4612.8	4616.2	4622.0	4628.3	4636.1	4641.4	4643.8	4642.9	4638.0	4634.1	4632.2
3°	4604.5	4608.9	4614.7	4623.0	4631.2	4637.5	4640.9	4640.9	4634.6	4630.7	4627.8
3.5°	4594.8	4600.1	4607.4	4615.2	4626.4	4633.6	4637.0	4636.6	4631.2	4626.4	4622.5
4°	4584.6	4590.4	4597.7	4606.9	4620.5	4628.3	4633.2	4632.2	4626.4	4621.0	4616.6
4.5°	4573.4	4579.3	4588.0	4598.2	4613.2	4622.5	4628.3	4627.3	4619.6	4614.2	4608.9
5°	4560.3	4568.1	4576.3	4587.0	4604.5	4615.7	4621.5	4620.5	4613.2	4606.9	4601.1
5.5°	4546.7	4554.0	4564.2	4575.9	4595.3	4607.4	4614.2	4612.8	4605.0	4598.2	4591.4
6°	4530.7	4539.4	4551.6	4563.7	4584.1	4598.2	4606.0	4605.0	4596.3	4589.0	4581.7
6.5°	4515.2	4525.4	4537.0	4551.1	4572.9	4588.5	4597.2	4595.3	4586.5	4577.8	4569.5
7°	4497.2	4507.9	4521.5	4537.0	4560.3	4577.3	4586.5	4585.6	4575.4	4566.6	4556.9
7.5°	4478.3	4488.9	4504.5	4521.5	4546.7	4565.2	4574.4	4573.4	4563.7	4553.5	4542.8
8°	4457.9	4470.0	4486.5	4505.0	4532.2	4551.6	4561.3	4559.4	4551.1	4539.9	4527.8
8.5°	4436.0	4448.6	4466.6	4486.5	4516.1	4536.5	4547.7	4546.7	4536.5	4524.9	4511.3
9°	4412.2	4425.8	4444.8	4467.1	4499.6	4521.0	4532.2	4531.2	4521.5	4508.9	4493.8
9.5°	4388.0	4402.0	4422.4	4446.2	4480.7	4503.5	4516.1	4515.2	4505.9	4491.9	4474.9
10°	4361.2	4376.8	4398.6	4423.9	4461.3	4485.1	4497.2	4497.7	4488.0	4473.9	4455.0
10.5°	4332.1	4348.6	4373.9	4399.6	4439.4	4464.2	4478.3	4479.7	4469.5	4453.5	4434.6
11°	4303.0	4320.0	4345.2	4374.4	4416.6	4442.8	4458.4	4458.8	4449.1	4433.1	4411.7
11.5°	4270.0	4289.4	4315.6	4346.7	4392.8	4420.5	4436.5	4438.0	4428.3	4410.8	4387.5
12°	4235.5	4255.4	4283.6	4317.5	4367.1	4395.2	4412.7	4415.1	4405.9	4387.5	4363.2
12.5°	4200.0	4220.4	4250.1	4285.5	4337.9	4369.0	4389.4	4392.3	4382.1	4362.7	4337.0
13°	4163.6	4185.0	4215.1	4253.9	4308.3	4342.3	4362.2	4366.1	4356.4	4336.0	4309.3
13.5°	4125.3	4146.6	4179.6	4218.0	4277.2	4311.7	4335.5	4339.9	4329.7	4308.8	4281.1
14°	4085.5	4108.8	4141.3	4182.1	4244.2	4281.6	4305.9	4310.7	4301.0	4280.6	4250.1
14.5°	4046.1	4068.0	4102.0	4144.2	4209.3	4249.6	4275.3	4282.6	4272.9	4251.0	4220.0
15°	4005.8	4029.1	4062.6	4107.3	4173.3	4216.6	4244.2	4250.5	4241.8	4219.5	4188.4
15.5°	3965.0	3988.8	4022.8	4068.5	4137.9	4182.1	4212.7	4220.4	4210.7	4188.9	4156.3
16°	3925.2	3948.5	3984.0	4029.1	4101.0	4148.1	4180.1	4188.4	4179.6	4156.3	4123.3
16.5°	3883.9	3908.2	3943.7	3991.3	4064.6	4113.1	4145.2	4157.3	4147.6	4124.3	4089.3
17°	3844.6	3867.4	3903.9	3951.0	4025.7	4077.7	4110.7	4123.3	4114.1	4091.3	4054.4
17.5°	3803.8	3827.6	3863.1	3912.1	3987.4	4040.3	4076.2	4088.4	4080.6	4056.3	4020.4
18°	3764.0	3788.3	3824.2	3873.3	3950.0	4004.4	4040.3	4053.4	4046.1	4022.3	3984.0
18.5°	3723.7	3748.0	3783.9	3833.4	3911.6	3967.5	4004.8	4020.4	4010.7	3987.9	3948.0
19°	3686.8	3710.1	3745.6	3795.1	3873.8	3929.6	3968.9	3982.5	3976.2	3952.9	3913.1
19.5°	3649.4	3672.7	3708.7	3757.2	3837.3	3893.2	3933.0	3947.6	3941.7	3918.4	3879.1
20°	3614.9	3636.8	3671.8	3720.8	3799.5	3856.3	3896.1	3913.6	3907.7	3884.4	3844.1
20.5°	3578.0	3600.9	3635.8	3683.9	3763.5	3819.4	3861.1	3878.6	3873.3	3850.4	3809.2
21°	3542.1	3564.5	3600.4	3647.5	3727.6	3783.9	3825.2	3842.2	3838.8	3816.0	3774.7



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CATALOG NUMBER: HCDJBL54050CSD-HCD4TRH-5000lm-5000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
22.5°	3413.0	3444.5	3486.8	3538.7	3617.4	3676.6	3719.8	3739.3	3732.9	3707.7	3664.5
23°	3365.9	3396.9	3442.6	3498.9	3580.5	3637.3	3684.4	3702.3	3694.6	3664.5	3625.6
23.5°	3313.4	3345.0	3395.5	3453.7	3543.1	3598.4	3646.5	3662.5	3650.4	3621.7	3586.8
24°	3257.6	3291.6	3344.0	3405.7	3505.7	3559.1	3608.2	3622.7	3606.2	3578.5	3547.5
24.5°	3198.8	3233.3	3290.1	3354.7	3459.6	3520.3	3570.3	3583.4	3562.0	3535.3	3508.6
25°	3141.0	3175.0	3234.3	3298.9	3411.0	3481.4	3532.4	3543.6	3517.8	3492.1	3460.5
25.5°	3078.4	3113.9	3175.0	3240.6	3360.0	3434.3	3494.0	3503.8	3473.7	3444.0	3411.5
26°	3017.7	3056.1	3113.9	3177.0	3305.7	3384.8	3448.9	3454.7	3423.2	3390.1	3360.0
26.5°	2954.1	2995.4	3048.8	3110.9	3250.8	3333.3	3400.8	3406.6	3372.2	3337.2	3305.7
27°	2892.0	2933.7	2982.3	3043.9	3194.0	3278.9	3350.3	3351.8	3318.8	3284.3	3249.3
27.5°	2826.9	2870.6	2911.4	2978.4	3136.7	3225.5	3297.4	3298.9	3264.9	3230.9	3190.1
28°	2762.8	2807.0	2843.4	2914.3	3076.5	3169.7	3239.1	3240.6	3210.5	3176.0	3129.4
28.5°	2695.3	2742.4	2774.9	2850.7	3012.4	3112.9	3178.0	3182.8	3157.1	3120.7	3066.8
29°	2628.3	2676.4	2706.5	2788.5	2948.8	3053.6	3115.3	3121.6	3099.8	3062.9	3002.2
29.5°	2559.8	2607.4	2641.4	2728.3	2883.2	2993.0	3047.8	3059.5	3041.5	3004.1	2935.2
30°	2489.9	2536.5	2577.3	2666.7	2820.1	2929.8	2977.4	2993.0	2980.8	2942.0	2863.8
30.5°	2418.1	2466.1	2513.2	2606.5	2748.2	2862.8	2903.6	2925.9	2919.6	2879.3	2792.4
31°	2348.1	2395.7	2449.6	2541.4	2680.7	2793.9	2832.7	2856.5	2855.1	2816.2	2721.0
31.5°	2278.7	2324.3	2386.0	2477.8	2613.7	2721.0	2757.5	2785.6	2790.0	2748.7	2647.7
32°	2209.8	2254.4	2321.4	2409.3	2551.1	2649.7	2684.6	2713.3	2723.0	2680.7	2576.8
32.5°	2144.2	2184.5	2255.9	2341.8	2482.2	2578.3	2612.8	2642.9	2657.9	2612.8	2505.9
33°	2078.7	2118.0	2190.8	2271.4	2415.6	2504.0	2542.8	2572.0	2589.0	2546.2	2435.5
33.5°	2011.7	2051.5	2123.8	2200.0	2350.1	2429.2	2472.9	2501.1	2521.5	2475.8	2367.1
34°	1946.1	1984.0	2054.9	2127.7	2286.0	2351.5	2404.0	2431.2	2450.6	2403.5	2299.1
34.5°	1879.6	1915.5	1985.9	2059.2	2215.1	2274.3	2335.5	2362.7	2381.2	2334.1	2232.1
35°	1812.1	1846.1	1918.4	1991.7	2146.6	2197.1	2265.6	2295.2	2308.8	2262.2	2164.1
35.5°	1749.9	1781.0	1851.9	1926.7	2075.7	2122.8	2196.6	2228.2	2238.9	2187.9	2097.1
36°	1686.8	1717.4	1786.4	1863.1	2008.7	2049.0	2127.2	2159.7	2164.6	2115.1	2030.1
36.5°	1622.7	1654.3	1741.2	1799.0	1932.0	1977.2	2057.8	2093.2	2091.8	2041.3	1961.6
37°	1559.1	1590.7	1674.2	1725.7	1860.6	1905.8	1986.4	2023.8	2018.0	1969.4	1892.2
37.5°	1495.5	1527.6	1607.7	1664.5	1786.8	1837.3	1914.5	1955.3	1948.0	1897.5	1822.8
38°	1431.9	1464.4	1541.1	1602.8	1716.9	1770.8	1843.6	1885.9	1876.2	1826.7	1752.4
38.5°	1372.2	1406.2	1474.1	1541.6	1643.1	1702.8	1774.2	1816.5	1805.8	1756.7	1683.9
39°	1314.9	1348.9	1412.5	1480.5	1574.7	1637.3	1705.3	1747.0	1737.3	1688.8	1616.9
39.5°	1258.1	1290.1	1350.8	1414.9	1504.2	1570.3	1637.8	1679.5	1668.8	1620.3	1551.3
40°	1202.7	1231.9	1289.6	1349.4	1439.2	1506.7	1570.3	1611.1	1598.9	1553.3	1484.8
40.5°	1147.4	1177.5	1230.4	1286.2	1370.7	1440.6	1505.2	1544.1	1531.4	1486.3	1423.6
41°	1094.4	1122.6	1170.7	1224.1	1308.1	1378.0	1442.1	1480.5	1463.9	1417.3	1359.1
41.5°	1043.0	1072.1	1112.9	1164.4	1245.0	1314.9	1378.5	1415.9	1397.4	1351.8	1297.4
42°	993.4	1021.1	1057.1	1106.1	1184.8	1254.7	1316.8	1352.8	1330.4	1287.7	1235.2
42.5°	943.4	971.6	1003.2	1049.3	1125.5	1193.5	1256.1	1288.7	1266.3	1224.6	1174.6
43°	895.8	923.0	949.3	993.0	1067.7	1134.7	1195.9	1227.5	1203.2	1164.4	1114.3
43.5°	849.7	876.9	898.8	936.6	1010.0	1077.0	1137.2	1167.8	1141.1	1102.2	1055.1



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	719.6	744.8	756.5	777.4	851.2	914.8	969.7	987.6	965.8	931.3	883.2
45.5°	679.8	704.1	712.3	728.8	803.1	862.3	916.7	929.8	910.9	877.9	829.3
46°	640.4	664.7	669.6	680.3	755.5	813.3	866.7	875.5	858.0	824.5	777.9
46.5°	603.1	626.9	627.8	635.1	710.4	765.7	815.2	819.6	806.0	772.5	727.8
47°	565.7	589.0	589.0	593.3	667.2	719.1	765.7	768.1	755.0	724.9	678.8
47.5°	532.2	553.5	551.6	553.5	625.4	674.4	717.2	717.6	706.0	678.3	633.2
48°	498.7	520.0	516.1	516.6	585.6	632.2	671.5	670.1	658.9	629.8	589.5
48.5°	466.6	487.5	483.1	483.6	548.2	591.9	625.9	623.5	613.7	586.1	547.7
49°	435.5	455.9	450.6	452.5	512.7	552.6	582.2	579.8	570.5	544.8	507.4
49.5°	406.4	425.8	421.0	422.9	478.8	515.7	540.9	539.0	528.3	504.5	473.4
50°	378.2	396.7	393.3	396.2	450.1	480.7	501.1	500.1	489.9	471.0	439.9
50.5°	351.5	369.0	367.1	370.5	421.0	450.1	467.6	466.6	456.9	437.5	406.4
51°	325.8	342.3	342.3	346.7	392.3	419.5	434.1	433.1	423.4	403.5	372.9
51.5°	301.0	317.1	318.0	323.4	363.2	389.4	400.6	400.1	389.9	370.0	339.4
52°	278.2	293.3	295.2	301.5	334.5	358.8	367.1	366.6	356.4	336.5	310.8
52.5°	255.9	270.5	273.4	279.7	309.8	328.2	333.6	333.6	323.4	306.4	284.0
53°	235.0	248.1	252.0	258.8	285.5	302.5	306.4	305.9	296.2	280.2	259.8
53.5°	215.1	227.2	232.1	238.9	263.7	277.7	281.1	279.2	270.9	255.9	236.5
54°	196.6	207.8	213.2	219.5	242.3	253.5	257.3	254.9	247.1	233.6	215.6
54.5°	180.6	190.3	195.2	201.5	221.4	231.1	234.5	232.1	224.3	211.7	195.7
55°	166.1	173.8	178.7	184.5	202.5	210.7	213.2	211.7	204.9	192.8	179.2
55.5°	152.0	159.7	164.1	169.9	184.5	191.3	193.7	192.8	186.5	176.3	163.1
56°	137.4	145.7	149.6	154.9	168.0	173.8	176.3	175.3	169.9	160.7	146.6
56.5°	122.8	131.6	135.0	139.8	152.5	157.8	160.2	158.8	153.9	143.7	131.1
57°	108.3	117.0	120.4	124.8	136.4	141.8	144.2	142.3	138.4	129.2	117.0
57.5°	97.6	102.9	105.9	109.7	121.4	126.2	128.2	127.7	123.3	115.1	104.4
58°	88.4	92.7	95.2	98.1	108.3	112.2	114.1	113.6	110.2	102.9	93.2
58.5°	80.1	84.0	85.5	87.4	96.6	100.0	101.5	101.5	98.6	92.3	83.5
59°	72.8	76.2	77.2	78.7	85.9	88.4	90.3	90.3	87.9	83.0	75.3
59.5°	66.5	69.4	69.4	70.9	76.7	79.1	80.6	80.6	78.7	74.3	67.5
60°	60.7	63.1	63.6	64.1	68.9	70.9	71.9	72.3	70.9	67.0	61.2
60.5°	55.4	57.8	57.8	57.8	62.2	63.6	64.6	65.5	64.1	61.2	55.8
61°	50.5	52.9	52.9	52.4	56.3	57.8	58.3	59.2	57.8	55.4	50.5
61.5°	46.6	48.6	48.6	48.1	51.0	52.4	52.9	53.9	52.4	50.5	46.6
62°	42.7	44.7	44.2	44.2	46.6	47.6	48.1	49.0	48.1	46.1	43.2
62.5°	39.8	41.3	40.8	40.3	43.2	44.2	44.2	44.7	43.7	42.7	40.3
63°	36.4	38.4	37.9	36.9	39.8	40.8	41.3	41.8	40.8	39.8	36.9
63.5°	33.5	35.4	34.5	34.0	36.4	37.4	37.9	38.4	37.9	36.4	34.0
64°	31.1	32.5	32.0	31.6	33.5	34.0	35.0	35.4	35.0	33.5	30.6
64.5°	28.6	30.1	29.6	29.1	30.1	30.6	32.0	32.5	32.0	30.1	28.2
65°	26.7	28.2	27.7	26.7	27.7	28.2	28.6	29.1	28.6	28.2	26.2
65.5°	24.8	25.7	25.7	24.8	25.7	26.2	26.7	27.2	26.7	26.2	24.3
66°	22.8	24.3	23.8	23.3	23.8	24.3	24.8	25.2	24.8	24.3	22.8



TEST NUMBER: P776604

CATALOG NUMBER: HCDJBL54050CSD-HCD4TRH-5000lm-5000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	18.5	19.4	18.9	18.5	18.9	19.4	19.9	19.9	19.9	19.4	18.0
68°	17.0	18.0	18.0	17.5	17.5	18.0	18.5	18.5	18.5	18.0	17.0
68.5°	16.0	17.0	17.0	16.5	16.5	16.5	17.0	17.5	17.0	17.0	15.5
69°	15.1	15.5	15.5	15.1	15.5	15.5	16.0	16.0	16.0	15.5	14.6
69.5°	13.6	14.6	14.6	14.1	14.6	14.6	15.1	15.1	15.1	14.6	13.6
70°	12.6	13.6	13.6	13.1	13.1	13.6	14.1	14.1	14.1	13.6	12.6
70.5°	11.7	12.6	12.6	12.1	12.6	12.6	13.1	13.1	13.1	12.6	11.7
71°	11.2	11.7	11.7	11.2	11.7	11.7	12.1	12.1	12.1	11.7	11.2
71.5°	10.2	10.7	10.7	10.7	10.7	10.7	11.2	11.2	11.2	10.7	10.2
72°	9.2	10.2	10.2	9.7	10.2	10.2	10.2	10.7	10.2	10.2	9.7
72.5°	8.7	9.2	9.2	9.2	9.2	9.7	9.7	9.7	9.7	9.2	8.7
73°	7.8	8.7	8.7	8.3	8.7	8.7	9.2	9.2	8.7	8.7	8.3
73.5°	7.3	7.8	7.8	7.8	8.3	8.3	8.3	8.3	8.3	7.8	7.8
74°	6.8	7.3	7.3	7.3	7.8	7.8	7.8	7.8	7.8	7.3	7.3
74.5°	6.3	6.8	6.8	6.8	6.8	7.3	7.3	7.3	7.3	6.8	6.3
75°	5.8	6.3	6.3	6.3	6.3	6.8	6.8	6.8	6.3	6.3	5.8
75.5°	5.3	5.8	5.8	5.8	5.8	6.3	6.3	6.3	5.8	5.8	5.3
76°	4.9	5.3	5.3	5.3	5.3	5.8	5.8	5.3	5.3	5.3	4.9
76.5°	4.4	4.9	4.9	4.9	5.3	5.3	5.3	5.3	4.9	4.9	4.9
77°	3.9	4.4	4.4	4.4	4.9	4.9	4.9	4.9	4.9	4.4	4.4
77.5°	3.4	3.9	4.4	4.4	4.4	4.4	4.4	4.4	4.4	3.9	3.9
78°	3.4	3.4	3.9	3.9	3.9	4.4	3.9	3.9	3.9	3.9	3.4
78.5°	2.9	3.4	3.4	3.4	3.9	3.9	3.9	3.4	3.4	3.4	3.4
79°	2.4	2.9	2.9	3.4	3.4	3.4	3.4	3.4	3.4	2.9	2.9
79.5°	2.4	2.4	2.9	2.9	2.9	3.4	2.9	2.9	2.9	2.4	2.9
80°	1.9	2.4	2.4	2.4	2.9	2.9	2.9	2.4	2.4	2.4	2.4
80.5°	1.9	1.9	2.4	2.4	2.4	2.4	2.4	2.4	2.4	1.9	1.9
81°	1.5	1.9	1.9	2.4	2.4	2.4	2.4	1.9	1.9	1.9	1.9
81.5°	1.5	1.5	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.5	1.9
82°	1.0	1.5	1.5	1.9	1.9	1.9	1.9	1.5	1.5	1.5	1.5
82.5°	1.0	1.0	1.5	1.5	1.5	1.9	1.5	1.5	1.5	1.0	1.5
83°	0.5	1.0	1.5	1.5	1.5	1.5	1.5	1.5	1.0	1.0	1.0
83.5°	0.5	1.0	1.0	1.5	1.5	1.5	1.5	1.0	1.0	1.0	1.0
84°	0.5	0.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.5	1.0
84.5°	0.5	0.5	1.0	1.0	1.0	1.0	1.0	1.0	0.5	0.5	1.0
85°	0.5	0.5	0.5	1.0	1.0	1.0	1.0	0.5	0.5	0.5	0.5
85.5°	0.0	0.5	0.5	0.5	0.5	1.0	0.5	0.5	0.5	0.5	0.5
86°	0.0	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
86.5°	0.0	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.0	0.0	0.5
87°	0.0	0.0	0.0	0.5	0.5	0.5	0.5	0.5	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.5	0.5	0.5	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: P776604
CATALOG NUMBER: HCDJBL4050CSD-HCD4TRH-5000lm-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: P776604

CATALOG NUMBER: HCDJBL54050CSD-HCD4TRH-5000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	4640.4	4640.4	4640.4	4640.4	4640.4	4640.4
0.5°	4639.5	4639.0	4639.5	4638.5	4637.5	4635.1
1°	4638.5	4636.1	4635.1	4633.6	4632.7	4631.2
1.5°	4636.1	4632.2	4629.8	4628.3	4627.8	4625.9
2°	4632.7	4627.3	4624.4	4622.5	4621.5	4620.0
2.5°	4627.8	4621.5	4616.6	4613.7	4613.2	4612.8
3°	4623.0	4614.2	4608.9	4605.0	4604.0	4604.5
3.5°	4617.1	4606.5	4599.2	4595.3	4594.3	4594.8
4°	4609.8	4597.2	4589.0	4583.6	4583.1	4584.6
4.5°	4601.6	4587.5	4577.8	4572.5	4571.0	4573.4
5°	4592.4	4576.3	4565.7	4559.4	4557.4	4560.3
5.5°	4581.7	4564.2	4551.1	4545.3	4543.8	4546.7
6°	4570.5	4551.1	4537.0	4529.2	4528.3	4530.7
6.5°	4557.9	4536.0	4521.5	4513.7	4511.8	4515.2
7°	4543.8	4520.5	4504.0	4495.7	4492.8	4497.2
7.5°	4528.3	4503.5	4486.0	4476.8	4473.9	4478.3
8°	4512.3	4485.1	4467.1	4456.4	4453.5	4457.9
8.5°	4494.3	4464.7	4445.7	4435.1	4431.7	4436.0
9°	4475.4	4443.3	4423.4	4411.3	4407.4	4412.2
9.5°	4454.5	4421.0	4400.1	4385.5	4382.6	4388.0
10°	4433.1	4396.7	4373.9	4359.8	4354.9	4361.2
10.5°	4409.8	4370.5	4346.7	4331.6	4327.3	4332.1
11°	4385.0	4343.8	4318.0	4300.6	4294.7	4303.0
11.5°	4359.3	4315.6	4286.5	4267.5	4263.2	4270.0
12°	4333.1	4285.0	4253.9	4233.5	4228.2	4235.5
12.5°	4304.0	4253.5	4220.0	4198.1	4191.3	4200.0
13°	4274.8	4220.9	4185.0	4161.2	4153.9	4163.6
13.5°	4243.7	4187.9	4150.0	4123.3	4116.5	4125.3
14°	4212.2	4153.4	4112.2	4085.5	4077.2	4085.5
14.5°	4178.2	4118.0	4075.7	4047.6	4037.9	4046.1
15°	4146.1	4082.1	4035.9	4007.3	3996.6	4005.8
15.5°	4111.2	4045.2	3999.0	3967.9	3956.3	3965.0
16°	4076.7	4008.7	3959.7	3927.2	3916.0	3925.2
16.5°	4040.8	3972.3	3923.8	3887.8	3876.7	3883.9
17°	4005.8	3933.5	3884.4	3846.6	3836.4	3844.6
17.5°	3969.4	3897.5	3846.1	3808.2	3795.6	3803.8
18°	3932.5	3859.7	3806.7	3768.4	3756.2	3764.0
18.5°	3896.1	3822.3	3770.3	3730.0	3717.9	3723.7
19°	3860.6	3785.4	3733.4	3694.6	3681.0	3686.8
19.5°	3825.2	3750.9	3697.5	3658.6	3644.1	3649.4
20°	3790.7	3714.5	3661.1	3622.2	3607.7	3614.9
20.5°	3754.3	3678.1	3624.7	3586.3	3570.8	3578.0
21°	3720.8	3641.2	3585.3	3546.5	3533.9	3542.1

TEST NUMBER: P776604

CATALOG NUMBER: HCDJBL54050CSD-HCD4TRH-5000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	3610.1	3520.8	3455.2	3416.8	3404.2	3413.0
23°	3572.7	3474.6	3407.6	3365.9	3355.2	3365.9
23.5°	3534.8	3429.0	3357.1	3312.9	3303.2	3313.4
24°	3497.4	3379.5	3304.2	3257.1	3246.4	3257.6
24.5°	3452.3	3328.5	3250.3	3195.9	3186.7	3198.8
25°	3405.7	3275.1	3195.4	3132.8	3126.5	3141.0
25.5°	3354.7	3220.7	3138.6	3067.2	3060.4	3078.4
26°	3302.7	3165.8	3080.4	3001.2	2995.9	3017.7
26.5°	3244.5	3109.0	3019.2	2937.1	2927.4	2954.1
27°	3184.7	3051.2	2957.0	2874.0	2858.5	2892.0
27.5°	3119.7	2989.6	2892.9	2810.9	2790.0	2826.9
28°	3053.2	2926.4	2826.9	2749.7	2723.5	2762.8
28.5°	2982.3	2861.4	2759.4	2689.5	2656.0	2695.3
29°	2909.0	2792.9	2691.9	2628.8	2593.3	2628.3
29.5°	2834.7	2723.0	2623.4	2566.6	2526.8	2559.8
30°	2761.8	2650.6	2556.0	2504.0	2463.7	2489.9
30.5°	2686.6	2578.3	2487.5	2437.5	2401.1	2418.1
31°	2615.7	2504.5	2423.4	2370.5	2337.0	2348.1
31.5°	2546.2	2429.2	2356.4	2300.6	2271.9	2278.7
32°	2477.8	2354.9	2290.4	2228.7	2206.8	2209.8
32.5°	2410.8	2279.7	2223.8	2157.8	2140.3	2144.2
33°	2340.9	2203.9	2155.4	2088.9	2073.3	2078.7
33.5°	2272.9	2127.7	2084.5	2020.4	2006.3	2011.7
34°	2204.4	2055.8	2015.5	1952.4	1938.8	1946.1
34.5°	2135.5	1984.0	1944.2	1884.4	1869.4	1879.6
35°	2065.1	1913.1	1873.3	1820.8	1803.8	1812.1
35.5°	1994.7	1846.6	1800.9	1758.7	1738.8	1749.9
36°	1923.8	1780.0	1721.8	1694.6	1677.6	1686.8
36.5°	1853.4	1715.0	1654.8	1631.0	1616.4	1622.7
37°	1783.0	1649.9	1587.3	1566.9	1555.2	1559.1
37.5°	1714.0	1585.3	1520.3	1503.3	1494.5	1495.5
38°	1647.0	1520.3	1452.8	1439.2	1433.4	1431.9
38.5°	1581.4	1455.7	1386.3	1375.1	1373.6	1372.2
39°	1516.4	1392.6	1324.6	1312.5	1314.4	1314.9
39.5°	1453.3	1329.9	1262.0	1249.8	1252.7	1258.1
40°	1390.1	1269.7	1200.3	1188.2	1193.0	1202.7
40.5°	1328.5	1209.5	1141.1	1127.9	1135.2	1147.4
41°	1267.8	1149.8	1083.3	1068.7	1078.9	1094.4
41.5°	1208.1	1091.5	1026.0	1011.9	1023.5	1043.0
42°	1148.8	1036.7	971.6	956.5	968.7	993.4
42.5°	1092.0	980.8	919.2	902.2	917.2	943.4
43°	1036.2	927.9	868.2	849.2	866.2	895.8
43.5°	981.3	875.9	818.6	796.8	817.2	849.7



TEST NUMBER: P776604

CATALOG NUMBER: HCDJBL54050CSD-HCD4TRH-5000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	825.9	731.7	681.7	655.5	679.3	719.6
45.5°	777.4	686.6	640.4	612.8	636.6	679.8
46°	729.3	643.8	600.6	572.0	595.8	640.4
46.5°	682.2	603.1	561.8	533.6	557.4	603.1
47°	637.0	563.7	525.9	499.1	521.5	565.7
47.5°	592.4	524.9	491.4	467.1	487.0	532.2
48°	550.1	489.4	458.8	436.0	455.4	498.7
48.5°	511.3	455.9	427.8	407.4	425.3	466.6
49°	472.9	423.4	397.7	380.2	396.7	435.5
49.5°	439.9	392.8	369.5	355.9	371.4	406.4
50°	406.9	362.7	342.8	332.1	345.7	378.2
50.5°	373.9	334.5	317.1	308.8	322.4	351.5
51°	340.9	308.3	292.8	287.0	299.6	325.8
51.5°	313.2	283.1	270.0	266.6	277.7	301.0
52°	287.4	259.8	248.1	246.7	256.9	278.2
52.5°	262.2	236.5	227.7	227.2	237.4	255.9
53°	239.9	215.1	208.3	208.3	218.5	235.0
53.5°	218.5	195.7	190.3	191.3	200.5	215.1
54°	198.6	178.2	173.3	175.3	183.5	196.6
54.5°	181.1	163.6	159.3	161.2	169.9	180.6
55°	165.1	149.1	145.2	147.1	155.4	166.1
55.5°	149.1	134.0	130.6	133.0	140.8	152.0
56°	133.0	119.4	116.5	119.0	126.2	137.4
56.5°	119.0	104.9	102.5	104.9	111.7	122.8
57°	105.9	93.2	91.3	93.7	100.0	108.3
57.5°	94.2	83.5	82.1	84.5	90.3	97.6
58°	84.0	75.3	73.8	76.2	82.1	88.4
58.5°	75.7	67.5	67.0	68.9	74.3	80.1
59°	68.0	61.2	60.7	63.1	68.0	72.8
59.5°	61.7	55.4	54.9	57.3	61.7	66.5
60°	55.8	50.5	50.0	52.4	56.8	60.7
60.5°	51.0	46.1	45.6	48.1	52.0	55.4
61°	46.6	42.2	41.8	44.2	47.6	50.5
61.5°	43.2	38.8	38.4	40.8	44.2	46.6
62°	39.8	35.4	35.4	37.4	40.8	42.7
62.5°	36.9	32.5	32.5	34.5	37.4	39.8
63°	33.5	30.1	30.1	32.0	34.5	36.4
63.5°	30.6	27.7	28.2	29.6	32.0	33.5
64°	28.2	25.7	25.7	27.2	29.6	31.1
64.5°	26.2	23.8	23.8	25.2	27.2	28.6
65°	24.3	22.3	22.3	23.3	25.2	26.7
65.5°	22.3	20.4	20.9	21.8	23.8	24.8
66°	20.9	18.9	19.4	20.4	21.8	22.8



TEST NUMBER: P776604

CATALOG NUMBER: HCDJBL4050CSD-HCD4TRH-5000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	16.5	15.5	15.5	16.5	17.5	18.5
68°	15.5	14.6	14.6	15.5	16.5	17.0
68.5°	14.6	13.6	13.6	14.1	15.1	16.0
69°	13.6	12.6	12.6	13.1	14.1	15.1
69.5°	12.6	11.7	11.7	12.1	13.1	13.6
70°	11.7	10.7	10.7	11.7	12.1	12.6
70.5°	11.2	10.2	10.2	10.7	11.2	11.7
71°	10.2	9.2	9.2	9.7	10.2	11.2
71.5°	9.7	8.7	8.7	9.2	9.7	10.2
72°	8.7	8.3	8.3	8.7	8.7	9.2
72.5°	8.3	7.3	7.3	7.8	8.3	8.7
73°	7.8	6.8	6.8	7.3	7.8	7.8
73.5°	7.3	6.3	6.3	6.8	6.8	7.3
74°	6.8	5.8	5.8	6.3	6.3	6.8
74.5°	6.3	5.3	5.3	5.8	5.8	6.3
75°	5.8	4.9	4.9	5.3	5.3	5.8
75.5°	5.3	4.9	4.9	4.9	4.9	5.3
76°	4.9	4.4	4.4	4.4	4.4	4.9
76.5°	4.4	3.9	3.9	3.9	3.9	4.4
77°	3.9	3.4	3.4	3.4	3.9	3.9
77.5°	3.9	3.4	3.4	3.4	3.4	3.4
78°	3.4	2.9	2.9	2.9	2.9	3.4
78.5°	2.9	2.9	2.9	2.9	2.9	2.9
79°	2.9	2.4	2.4	2.4	2.4	2.4
79.5°	2.4	2.4	2.4	2.4	1.9	2.4
80°	2.4	1.9	1.9	1.9	1.9	1.9
80.5°	1.9	1.9	1.9	1.9	1.5	1.9
81°	1.9	1.5	1.5	1.5	1.5	1.5
81.5°	1.5	1.5	1.5	1.5	1.5	1.5
82°	1.5	1.5	1.5	1.0	1.0	1.0
82.5°	1.5	1.0	1.0	1.0	1.0	1.0
83°	1.0	1.0	1.0	1.0	1.0	0.5
83.5°	1.0	1.0	1.0	1.0	0.5	0.5
84°	1.0	0.5	0.5	0.5	0.5	0.5
84.5°	0.5	0.5	0.5	0.5	0.5	0.5
85°	0.5	0.5	0.5	0.5	0.5	0.5
85.5°	0.5	0.5	0.5	0.5	0.0	0.0
86°	0.5	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: P776604
CATALOG NUMBER: HCDJBL54050CSD-HCD4TRH-5000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
90°	0.0	0.0	0.0	0.0	0.0	0.0

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Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report



Report Generated By 670245859 / DESKTOP-T8S5UU9

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Scaled Data Report





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

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21.5°	3501.8	3527.1	3564.0	3611.6	3692.2	3748.0	3789.7	3807.7	3804.3	3781.0	3739.7
22°	3460.1	3489.2	3526.6	3576.1	3654.8	3713.0	3753.8	3773.2	3769.4	3745.1	3703.8



44°	804.6	830.8	849.7	882.7	955.6	1021.1	1079.9	1106.1	1081.3	1042.5	996.4
44.5°	761.8	787.1	802.1	829.3	903.1	965.8	1024.0	1045.4	1022.6	987.1	939.5



66.5°	21.4	22.3	22.3	21.4	21.8	22.3	22.8	23.3	22.8	22.3	20.9
67°	19.9	20.9	20.4	19.9	20.4	20.9	21.4	21.4	21.4	20.9	19.4



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°	3685.4	3602.8	3544.5	3504.2	3494.0	3501.8
22°	3647.5	3562.0	3500.8	3462.0	3450.3	3460.1



44°	928.4	826.4	771.5	748.7	770.1	804.6
44.5°	877.4	778.3	725.4	701.1	724.4	761.8

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66.5°	19.4	18.0	18.0	18.9	20.4	21.4
67°	18.0	16.5	17.0	18.0	18.9	19.9

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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)