

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: P776698

Luminaire Tested: HCDJBL54050CSD-HCD6TRC-5000lm-4000K

Issue Date: 2/7/2024

Test Information

Test Method: LM-79-2019
Report Number: P776698
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-HCD6TRC-5000lm-4000K
Description: 6 INCH ROUND MEDIUM SPECULAR CLEAR TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 4000K CCT
Ballast/Driver: -

Summary

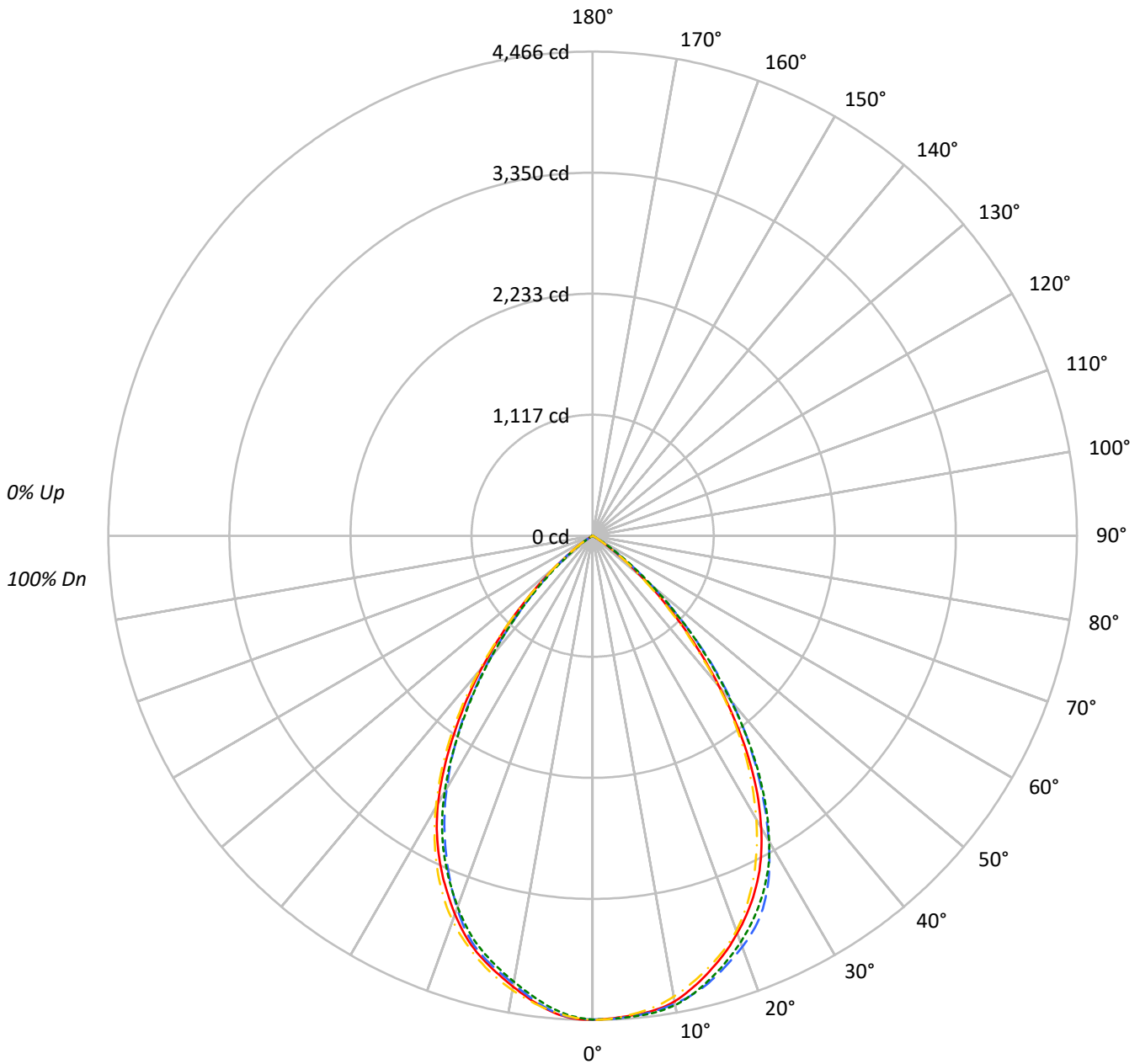
Lumens per Lamp: N/A
Luminaire Lumens: 5640.2 lumens
Efficiency: N/A
Efficacy: 117.5 lumens/watt
Spacing Criteria (0/90/45): 1.05 / 1.05 / 1.05
Luminous Opening: Circular (Dia: 0.5' x H: 0')
CIE Type: Direct

Input Watts (W): 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



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20										
RC	80					70					50					30					10					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	113	110	107	105	110	108	105	103	104	102	100	100	98	97	97	95	94	92					92			
2	107	101	97	93	104	99	95	92	96	93	90	93	90	88	90	88	86	84					84			
3	100	93	88	83	98	92	87	83	89	85	81	87	83	80	84	81	79	77					77			
4	94	86	80	75	93	85	79	75	83	78	74	81	76	73	79	75	72	70					70			
5	89	80	73	68	87	79	72	68	77	71	67	75	70	67	73	69	66	64					64			
6	84	74	67	62	82	73	67	62	71	66	62	70	65	61	68	64	61	59					59			
7	79	68	62	57	77	68	61	57	66	61	57	65	60	56	64	59	56	54					54			
8	74	64	57	53	73	63	57	52	62	56	52	61	56	52	60	55	52	50					50			
9	70	60	53	49	69	59	53	48	58	52	48	57	52	48	56	51	48	46					46			
10	66	56	49	45	65	55	49	45	54	49	45	54	48	45	53	48	45	43					43			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	244646	244646	244646	244646
5°	244161	244871	242290	240474
10°	242670	244690	235105	232544
15°	236085	239701	227697	224491
20°	227631	232770	216575	212334
25°	215898	223017	201483	196130
30°	196802	206101	180534	172868
35°	168131	178631	148944	139595
40°	129958	141565	113212	103587
45°	89816	101654	75054	66108
50°	50847	60851	38975	32280
55°	19115	25567	15502	12167
60°	1360	4408	625	735
65°	182	246	182	130
70°	80	80	80	80
75°	0	106	0	0
80°	0	0	0	0
85°	0	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°

Vertical Angle: 45°

Luminance: 105135 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	417.4	7.4
10°-20°	1150.0	20.4
20°-30°	1580.2	28.0
30°-40°	1469.1	26.0
40°-50°	829.5	14.7
50°-60°	191.4	3.4
60°-70°	2.4	0.0
70°-80°	0.2	0.0
80°-90°	0.0	0.0
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	3147.7	55.8
0°-40°	4616.7	81.9
0°-60°	5637.6	100.0
0°-90°	5640.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5640.2	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	4463	4463	4463	4463	4463	
5°	4437	4450	4403	4370	4437	421
15°	4160	4224	4012	3956	4160	1170
25°	3569	3687	3331	3242	3569	1631
35°	2512	2669	2226	2086	2512	1550
45°	1158	1311	968	853	1158	896
55°	200	268	162	127	200	207
65°	1	2	1	1	1	2
75°	0	0	0	0	0	0
85°	0	0	0	0	0	0
90°	0	0	0	0	0	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°	4462.7	4462.7	4462.7	4462.7	4462.7	4462.7	4462.7	4462.7	4462.7	4462.7	4462.7
0.5°	4464.2	4461.8	4461.8	4463.7	4461.3	4463.7	4465.6	4466.6	4465.1	4461.8	4459.9
1°	4462.3	4461.8	4461.8	4463.7	4461.8	4464.2	4465.1	4465.6	4464.6	4461.8	4458.9
1.5°	4459.4	4459.4	4460.8	4463.7	4460.8	4464.2	4462.7	4463.7	4462.3	4459.4	4456.0
2°	4457.0	4457.9	4459.9	4463.7	4460.3	4463.7	4459.9	4459.9	4459.4	4457.0	4452.2
2.5°	4454.1	4456.5	4458.9	4462.3	4459.4	4461.3	4456.0	4455.1	4454.1	4452.2	4447.4
3°	4450.3	4454.1	4456.5	4460.3	4457.9	4458.9	4451.3	4448.9	4446.9	4446.5	4441.2
3.5°	4446.9	4451.7	4454.1	4458.9	4456.5	4456.0	4446.0	4441.2	4437.9	4437.9	4432.6
4°	4444.1	4449.3	4451.7	4456.5	4454.1	4453.2	4440.2	4432.1	4428.3	4427.3	4422.5
4.5°	4440.2	4446.0	4448.9	4454.1	4452.2	4450.3	4433.1	4422.1	4416.3	4415.4	4409.6
5°	4436.9	4443.1	4445.5	4450.8	4449.8	4446.9	4426.4	4411.1	4402.9	4402.0	4395.3
5.5°	4434.0	4439.3	4441.7	4447.4	4447.4	4443.6	4418.2	4398.6	4388.1	4386.2	4379.5
6°	4429.2	4435.0	4436.9	4444.1	4445.5	4439.8	4410.1	4386.2	4373.3	4370.4	4361.8
6.5°	4424.9	4429.7	4432.1	4439.8	4441.7	4436.4	4401.5	4372.3	4356.0	4352.2	4344.1
7°	4419.2	4424.5	4426.4	4435.5	4438.3	4431.6	4392.9	4358.4	4338.8	4334.5	4324.4
7.5°	4412.5	4417.8	4420.6	4430.2	4434.5	4427.3	4382.3	4344.1	4320.6	4315.3	4304.3
8°	4405.3	4410.1	4413.9	4424.9	4429.2	4422.1	4370.9	4327.8	4302.0	4295.7	4283.3
8.5°	4396.7	4401.5	4406.7	4417.8	4422.5	4414.9	4358.9	4312.0	4282.3	4275.2	4262.7
9°	4385.7	4391.9	4399.1	4411.5	4414.4	4407.2	4346.0	4295.7	4263.7	4256.0	4241.7
9.5°	4373.3	4380.4	4391.0	4403.4	4405.3	4397.7	4331.1	4279.9	4243.6	4235.9	4221.1
10°	4359.4	4368.9	4381.9	4394.8	4395.7	4386.2	4315.3	4262.7	4223.5	4214.9	4200.5
10.5°	4344.1	4355.5	4372.8	4384.7	4383.3	4373.3	4299.6	4244.5	4202.9	4194.3	4179.0
11°	4326.4	4340.7	4361.8	4374.2	4369.4	4358.4	4282.8	4226.3	4182.3	4173.2	4157.9
11.5°	4309.1	4324.4	4351.2	4363.2	4354.6	4341.7	4264.1	4209.1	4162.2	4152.2	4137.3
12°	4289.5	4308.2	4338.3	4351.2	4337.8	4323.5	4245.5	4190.5	4142.1	4130.6	4117.7
12.5°	4269.4	4290.5	4325.9	4337.8	4321.1	4303.9	4225.4	4170.8	4121.1	4107.7	4097.6
13°	4248.4	4272.3	4311.0	4324.4	4302.9	4284.2	4207.2	4150.7	4100.5	4085.2	4078.0
13.5°	4227.8	4252.7	4296.7	4310.6	4283.8	4263.7	4186.1	4130.2	4079.0	4060.8	4056.9
14°	4204.8	4233.0	4280.4	4295.7	4264.1	4241.7	4167.0	4108.6	4057.4	4035.9	4035.9
14.5°	4183.3	4213.9	4262.7	4279.9	4243.6	4219.2	4145.5	4085.2	4035.4	4009.6	4013.4
15°	4159.8	4192.8	4243.6	4264.1	4223.5	4196.2	4124.9	4061.7	4012.0	3983.7	3990.4
15.5°	4136.9	4171.8	4224.4	4246.0	4202.4	4173.7	4102.9	4037.8	3988.5	3956.0	3966.0
16°	4113.4	4150.7	4204.3	4227.8	4180.4	4151.2	4082.3	4011.0	3963.6	3927.7	3940.2
16.5°	4089.5	4129.2	4183.3	4208.2	4158.9	4128.2	4059.3	3984.2	3936.8	3899.5	3911.0
17°	4064.1	4107.2	4162.7	4189.0	4135.9	4104.8	4036.4	3957.9	3908.6	3868.9	3880.4
17.5°	4040.2	4085.2	4141.6	4168.0	4112.5	4081.3	4013.4	3929.2	3878.9	3836.3	3847.4
18°	4013.9	4063.2	4120.6	4147.9	4088.5	4056.9	3988.0	3900.9	3849.3	3805.7	3811.9
18.5°	3987.6	4041.2	4099.5	4126.8	4065.1	4033.0	3963.2	3870.3	3816.2	3772.7	3774.1
19°	3959.3	4018.2	4078.5	4105.3	4040.2	4009.1	3935.9	3840.7	3783.2	3739.7	3735.4
19.5°	3930.6	3994.3	4056.9	4082.8	4015.8	3983.3	3906.2	3810.0	3748.3	3704.3	3695.7
20°	3901.9	3969.9	4034.5	4058.4	3990.0	3957.4	3876.1	3777.5	3712.4	3670.3	3654.5
20.5°	3871.8	3944.0	4012.4	4034.0	3962.2	3928.7	3844.0	3743.5	3676.0	3634.4	3611.4
21°	3842.1	3917.2	3989.0	4008.6	3934.9	3899.5	3811.0	3710.5	3639.7	3597.6	3568.4



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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°	3745.9	3829.2	3912.0	3924.4	3848.8	3805.7	3702.8	3605.7	3527.2	3486.5	3438.7
23°	3713.4	3796.6	3882.3	3892.3	3817.2	3771.3	3664.6	3568.8	3489.9	3449.2	3392.8
23.5°	3678.4	3763.1	3852.1	3860.3	3786.6	3737.3	3624.4	3532.5	3452.6	3407.6	3345.9
24°	3643.0	3728.2	3817.7	3825.3	3754.5	3700.9	3584.2	3496.1	3412.4	3366.0	3299.0
24.5°	3606.2	3692.8	3781.8	3788.0	3721.0	3664.1	3544.0	3459.7	3371.7	3323.8	3251.6
25°	3569.3	3655.5	3744.0	3750.7	3687.0	3626.7	3503.3	3420.0	3331.0	3280.3	3204.7
25.5°	3530.6	3615.3	3703.8	3711.0	3651.6	3587.0	3463.1	3379.4	3288.4	3236.3	3156.8
26°	3489.4	3574.6	3660.7	3669.3	3612.4	3547.3	3414.3	3336.8	3245.4	3192.7	3109.0
26.5°	3447.8	3533.4	3616.7	3626.3	3573.2	3507.6	3367.9	3292.7	3201.3	3146.3	3061.1
27°	3404.7	3489.4	3569.8	3581.3	3533.9	3468.4	3322.4	3248.7	3155.4	3099.9	3012.3
27.5°	3359.7	3442.0	3521.5	3535.4	3494.7	3426.7	3273.1	3202.3	3109.5	3051.6	2961.1
28°	3311.4	3394.2	3468.8	3486.5	3455.0	3379.8	3225.3	3154.0	3062.6	3000.8	2909.9
28.5°	3264.5	3343.9	3416.7	3436.8	3408.1	3335.3	3174.5	3103.7	3012.3	2947.7	2855.8
29°	3213.8	3291.8	3361.2	3384.1	3359.3	3285.6	3123.8	3053.0	2960.6	2894.1	2803.2
29.5°	3161.6	3241.1	3306.1	3331.0	3308.1	3237.2	3070.7	2999.9	2906.1	2839.6	2746.7
30°	3109.0	3184.6	3248.2	3276.5	3255.9	3186.5	3018.5	2946.3	2852.0	2783.6	2690.3
30.5°	3055.4	3131.0	3191.3	3222.4	3202.3	3135.3	2964.0	2890.3	2794.6	2726.2	2633.3
31°	2999.4	3075.0	3131.5	3163.5	3148.2	3081.2	2908.5	2832.9	2736.2	2667.8	2577.3
31.5°	2941.0	3017.6	3071.7	3106.1	3091.8	3028.1	2852.5	2775.5	2676.4	2608.4	2519.9
32°	2884.6	2958.2	3010.9	3045.3	3034.3	2972.6	2797.0	2717.1	2614.2	2548.6	2463.0
32.5°	2826.2	2898.9	2950.6	2985.0	2976.4	2917.6	2739.1	2656.8	2551.0	2485.5	2404.6
33°	2766.8	2839.1	2887.4	2923.8	2917.1	2857.8	2681.7	2595.5	2487.4	2421.8	2347.2
33.5°	2704.6	2778.3	2828.6	2863.0	2857.8	2799.4	2623.3	2533.8	2422.8	2358.7	2289.7
34°	2643.9	2715.2	2765.9	2800.3	2794.6	2739.1	2565.4	2470.6	2357.2	2293.1	2230.9
34.5°	2578.8	2652.5	2704.6	2739.1	2732.4	2677.8	2505.6	2408.4	2290.2	2229.5	2170.6
35°	2512.3	2586.4	2642.4	2676.4	2669.2	2613.7	2446.7	2344.3	2225.6	2164.9	2108.9
35.5°	2445.3	2521.4	2580.7	2614.2	2605.1	2551.0	2386.9	2280.7	2161.0	2099.3	2047.1
36°	2378.8	2455.8	2519.0	2552.0	2540.0	2485.5	2324.7	2216.1	2097.4	2035.7	1984.0
36.5°	2309.4	2388.8	2454.8	2488.8	2471.6	2419.9	2260.1	2151.9	2033.3	1970.6	1919.4
37°	2239.5	2323.7	2393.6	2424.7	2403.2	2354.3	2196.4	2088.3	1969.6	1906.4	1852.9
37.5°	2167.7	2254.8	2331.4	2359.6	2333.8	2286.9	2130.4	2024.2	1906.4	1842.3	1787.8
38°	2096.4	2186.9	2266.8	2294.5	2263.9	2217.5	2064.8	1958.6	1843.8	1776.3	1721.3
38.5°	2024.6	2118.4	2201.2	2227.1	2192.6	2148.1	1997.8	1894.0	1780.6	1712.2	1656.2
39°	1952.4	2050.0	2135.2	2162.0	2121.8	2078.7	1928.9	1828.9	1714.6	1647.1	1589.7
39.5°	1884.4	1981.6	2069.6	2094.5	2049.5	2007.9	1861.5	1763.8	1648.5	1582.5	1521.2
40°	1816.0	1910.3	2001.7	2028.5	1978.2	1935.6	1793.0	1697.8	1582.0	1516.4	1456.2
40.5°	1749.0	1840.4	1934.7	1960.0	1909.3	1865.3	1723.7	1632.7	1515.5	1452.3	1388.7
41°	1682.5	1771.0	1866.3	1891.6	1839.5	1794.5	1652.4	1567.7	1449.9	1388.7	1322.6
41.5°	1616.0	1693.5	1798.8	1822.2	1772.0	1724.1	1581.5	1502.1	1384.4	1324.6	1257.1
42°	1549.9	1631.3	1732.7	1753.8	1704.0	1655.2	1511.2	1436.1	1322.6	1262.4	1193.4
42.5°	1483.4	1569.1	1664.8	1685.4	1639.9	1586.3	1443.2	1371.5	1263.8	1200.6	1134.1
43°	1416.9	1506.9	1596.8	1617.9	1574.4	1519.8	1373.8	1302.5	1204.0	1139.4	1073.3
43.5°	1350.9	1444.7	1528.9	1575.3	1507.4	1452.8	1305.9	1237.5	1145.6	1080.0	1016.9



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	1158.5	1251.8	1326.5	1356.1	1311.2	1253.7	1115.0	1047.0	968.1	910.2	852.3
45.5°	1096.3	1187.7	1258.5	1283.4	1245.1	1189.6	1053.2	983.8	911.1	853.7	802.0
46°	1037.4	1124.5	1190.6	1218.8	1182.0	1126.0	991.5	923.6	854.6	800.6	751.8
46.5°	977.2	1062.3	1125.0	1155.2	1122.1	1064.2	932.6	864.7	799.1	749.4	704.4
47°	917.3	1002.5	1060.4	1091.0	1059.9	1003.9	873.3	805.8	744.6	699.1	658.0
47.5°	858.5	941.7	997.7	1027.9	1000.1	946.5	816.8	751.8	694.8	650.3	615.4
48°	803.4	882.4	935.5	965.7	942.2	889.6	762.3	695.8	642.7	603.4	572.3
48.5°	747.9	823.5	874.3	904.9	883.8	834.5	709.7	644.6	592.4	558.9	532.6
49°	696.3	768.0	815.9	846.0	825.0	781.4	658.0	594.3	543.1	516.3	493.4
49.5°	644.6	712.0	758.0	786.7	767.6	729.8	610.6	548.4	497.7	475.7	459.4
50°	596.2	657.0	703.9	731.2	713.5	679.0	562.7	503.4	457.0	439.8	425.4
50.5°	547.0	603.9	650.8	676.2	659.4	629.3	519.2	466.1	416.8	403.9	391.4
51°	502.0	552.2	598.6	623.0	608.7	581.9	477.6	429.2	376.6	368.5	357.5
51.5°	457.5	502.0	548.9	571.4	558.9	535.5	440.7	391.9	336.4	332.6	323.5
52°	413.9	455.6	501.0	521.6	511.1	491.0	403.9	354.6	303.9	300.5	293.3
52.5°	371.8	411.5	455.1	476.1	469.0	450.3	367.0	317.3	274.7	271.3	265.1
53°	333.1	370.4	411.5	430.7	427.3	409.6	330.2	286.6	248.8	244.0	237.8
53.5°	295.7	330.7	368.5	386.6	385.2	369.4	298.6	259.4	225.9	218.7	212.0
54°	260.3	294.8	329.7	346.0	343.6	328.7	268.0	233.0	202.9	194.3	186.1
54.5°	228.7	259.8	291.4	308.6	302.0	294.3	240.2	208.6	182.3	172.3	162.7
55°	200.0	228.3	257.0	273.2	267.5	261.8	212.5	185.7	162.2	150.7	139.7
55.5°	173.2	199.1	224.4	239.7	235.0	230.2	186.6	163.7	142.6	129.7	118.7
56°	151.7	170.8	193.3	208.2	205.3	201.9	162.7	142.6	123.9	110.5	98.6
56.5°	130.6	149.3	164.6	180.4	177.5	175.1	139.3	123.0	105.8	92.4	80.9
57°	109.1	127.8	143.1	158.4	151.7	150.3	117.7	103.8	88.5	76.1	66.5
57.5°	88.0	106.2	121.5	136.4	128.2	126.8	97.6	86.1	73.2	60.3	51.7
58°	66.5	84.7	100.0	114.8	106.2	105.3	80.4	70.8	57.4	44.5	36.8
58.5°	47.4	63.2	78.5	92.8	87.6	86.6	65.6	55.5	42.1	28.2	22.5
59°	29.2	44.5	59.3	71.3	71.8	70.8	50.7	40.2	26.8	12.4	7.7
59.5°	15.8	27.3	40.2	51.7	56.0	55.5	36.4	24.9	11.5	6.7	5.3
60°	12.4	14.4	23.9	33.0	40.2	39.7	21.5	9.6	5.7	4.8	4.3
60.5°	9.6	11.5	12.4	18.7	24.4	24.4	6.7	5.3	4.3	3.8	3.8
61°	6.2	9.1	10.0	14.8	9.1	8.6	4.3	3.8	3.8	3.3	3.3
61.5°	3.3	6.2	7.7	11.0	5.3	4.8	3.3	3.3	3.3	2.9	2.9
62°	2.9	3.8	5.7	7.7	3.8	3.8	2.9	2.9	2.9	2.9	2.4
62.5°	2.4	3.3	3.8	3.8	3.3	3.3	2.4	2.4	2.4	2.4	2.4
63°	2.4	2.9	3.3	3.3	2.9	2.9	2.4	2.4	1.9	1.9	1.9
63.5°	1.9	2.4	2.9	2.9	2.4	2.4	1.9	1.9	1.9	1.9	1.9
64°	1.4	1.9	2.4	2.4	2.4	1.9	1.9	1.9	1.9	1.9	1.4
64.5°	1.4	1.9	1.9	2.4	1.9	1.9	1.4	1.4	1.4	1.4	1.4
65°	1.4	1.4	1.9	1.9	1.9	1.9	1.4	1.4	1.4	1.4	1.4
65.5°	1.0	1.4	1.4	1.9	1.4	1.4	1.4	1.4	1.4	1.4	1.0
66°	1.0	1.4	1.4	1.4	1.4	1.4	1.0	1.0	1.0	1.0	1.0



TEST NUMBER: P776698
 CATALOG NUMBER: HCDJBL54050CSD-HCD6TRC-5000lm-4000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
68°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
68.5°	0.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.5
69°	0.5	0.5	1.0	1.0	1.0	1.0	0.5	0.5	0.5	0.5	0.5
69.5°	0.5	0.5	1.0	1.0	1.0	0.5	0.5	0.5	0.5	0.5	0.5
70°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
70.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
71°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
71.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
72°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
72.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
73°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
73.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
74°	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
74.5°	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
75°	0.0	0.0	0.5	0.5	0.5	0.5	0.0	0.0	0.0	0.0	0.5
75.5°	0.0	0.0	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
76°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
76.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
78°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
78.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
79°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
79.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
81°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
81.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
83°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
83.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
84°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
84.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
86°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
86.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
88°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
88.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P776698
CATALOG NUMBER: HCDJBL54050CSD-HCD6TRC-5000lm-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: P776698

CATALOG NUMBER: HCDJBL54050CSD-HCD6TRC-5000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	4462.7	4462.7	4462.7	4462.7	4462.7	4462.7
0.5°	4459.9	4457.5	4458.9	4462.7	4464.2	4464.2
1°	4457.0	4454.1	4454.1	4459.9	4461.8	4462.3
1.5°	4453.2	4448.9	4448.4	4456.0	4457.9	4459.4
2°	4447.4	4442.2	4440.7	4450.3	4454.1	4457.0
2.5°	4440.7	4434.0	4432.1	4443.6	4449.3	4454.1
3°	4431.6	4424.5	4422.1	4435.9	4444.1	4450.3
3.5°	4421.6	4413.0	4411.1	4426.8	4438.3	4446.9
4°	4409.6	4400.0	4398.6	4418.2	4432.6	4444.1
4.5°	4395.7	4385.7	4385.2	4408.2	4426.4	4440.2
5°	4380.4	4369.9	4369.9	4397.7	4419.7	4436.9
5.5°	4362.7	4353.6	4354.6	4386.2	4413.0	4434.0
6°	4346.0	4335.9	4338.3	4374.2	4405.3	4429.2
6.5°	4326.8	4317.3	4321.6	4361.8	4396.2	4424.9
7°	4308.2	4298.1	4303.9	4348.8	4388.1	4419.2
7.5°	4288.6	4279.5	4286.2	4334.0	4377.6	4412.5
8°	4267.5	4258.9	4268.0	4320.1	4368.0	4405.3
8.5°	4246.9	4239.3	4249.3	4304.8	4355.1	4396.7
9°	4226.8	4218.7	4229.7	4289.0	4342.1	4385.7
9.5°	4206.2	4198.1	4209.6	4272.3	4327.8	4373.3
10°	4185.2	4177.5	4190.9	4256.0	4312.5	4359.4
10.5°	4163.7	4157.0	4171.8	4237.8	4296.2	4344.1
11°	4143.6	4136.4	4152.2	4220.6	4278.5	4326.4
11.5°	4121.1	4115.3	4131.6	4202.4	4260.3	4309.1
12°	4100.0	4093.3	4111.0	4182.8	4241.7	4289.5
12.5°	4077.5	4072.3	4090.4	4162.7	4222.0	4269.4
13°	4055.0	4049.8	4069.4	4142.1	4203.4	4248.4
13.5°	4030.1	4027.3	4046.9	4120.6	4183.3	4227.8
14°	4006.2	4003.3	4024.4	4098.6	4163.2	4204.8
14.5°	3980.9	3980.4	4001.0	4074.7	4143.6	4183.3
15°	3955.5	3955.5	3976.6	4051.2	4123.0	4159.8
15.5°	3928.2	3929.7	3952.1	4025.8	4101.0	4136.9
16°	3900.5	3902.9	3925.8	4001.9	4079.4	4113.4
16.5°	3871.3	3875.1	3898.1	3976.6	4056.9	4089.5
17°	3841.6	3845.4	3869.4	3950.2	4034.0	4064.1
17.5°	3808.6	3813.9	3838.7	3923.4	4009.6	4040.2
18°	3777.0	3781.3	3807.2	3896.2	3983.3	4013.9
18.5°	3742.1	3747.3	3774.1	3868.4	3955.0	3987.6
19°	3706.7	3712.9	3740.2	3838.7	3925.4	3959.3
19.5°	3670.3	3676.5	3705.7	3808.6	3894.7	3930.6
20°	3633.0	3639.7	3670.3	3777.5	3862.2	3901.9
20.5°	3593.7	3602.3	3633.4	3744.0	3829.2	3871.8
21°	3553.5	3564.5	3596.1	3711.0	3793.8	3842.1

TEST NUMBER: P776698

CATALOG NUMBER: HCDJBL54050CSD-HCD6TRC-5000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	3434.4	3447.3	3482.7	3598.5	3679.4	3745.9
23°	3392.3	3408.5	3444.9	3559.3	3637.8	3713.4
23.5°	3347.3	3368.3	3404.7	3519.1	3595.6	3678.4
24°	3302.8	3327.7	3365.0	3476.5	3554.5	3643.0
24.5°	3257.3	3284.6	3322.4	3435.3	3511.4	3606.2
25°	3212.3	3242.5	3281.3	3390.8	3466.9	3569.3
25.5°	3165.0	3198.9	3236.8	3346.3	3421.5	3530.6
26°	3116.6	3153.5	3193.7	3300.4	3376.0	3489.4
26.5°	3067.4	3106.6	3147.7	3254.9	3329.6	3447.8
27°	3017.1	3058.3	3099.4	3206.6	3282.7	3404.7
27.5°	2964.9	3008.0	3049.2	3156.8	3235.3	3359.7
28°	2912.3	2956.3	2997.5	3104.7	3184.1	3311.4
28.5°	2857.8	2901.8	2944.8	3053.0	3134.3	3264.5
29°	2802.7	2847.2	2889.8	2998.9	3082.2	3213.8
29.5°	2745.8	2789.3	2831.9	2946.8	3030.0	3161.6
30°	2688.4	2730.9	2774.5	2889.8	2975.0	3109.0
30.5°	2630.9	2669.7	2715.2	2834.8	2921.4	3055.4
31°	2572.1	2608.9	2653.9	2776.9	2865.9	2999.4
31.5°	2512.3	2545.3	2588.8	2719.5	2809.9	2941.0
32°	2452.4	2480.7	2525.2	2663.5	2751.5	2884.6
32.5°	2392.6	2414.6	2461.5	2603.7	2694.6	2826.2
33°	2329.9	2350.5	2396.5	2545.3	2634.8	2766.8
33.5°	2268.7	2284.5	2330.4	2484.0	2577.3	2704.6
34°	2204.6	2219.4	2266.3	2423.3	2518.0	2643.9
34.5°	2142.8	2151.0	2200.3	2361.5	2457.2	2578.8
35°	2080.6	2085.9	2135.7	2297.4	2393.6	2512.3
35.5°	2017.0	2020.8	2072.0	2234.7	2331.4	2445.3
36°	1953.8	1957.2	2006.9	2170.6	2266.3	2378.8
36.5°	1887.8	1895.0	1944.3	2106.5	2201.2	2309.4
37°	1822.2	1830.4	1880.6	2039.0	2133.3	2239.5
37.5°	1756.7	1767.2	1816.5	1972.0	2065.3	2167.7
38°	1690.6	1697.8	1751.9	1905.0	1996.9	2096.4
38.5°	1625.1	1635.1	1686.8	1835.6	1927.5	2024.6
39°	1558.1	1572.4	1621.2	1769.6	1857.2	1952.4
39.5°	1493.0	1509.8	1555.7	1695.4	1786.8	1884.4
40°	1428.9	1447.5	1490.1	1630.3	1712.2	1816.0
40.5°	1365.2	1383.4	1424.6	1564.8	1642.3	1749.0
41°	1302.5	1319.8	1359.0	1499.7	1572.4	1682.5
41.5°	1239.9	1259.0	1293.9	1434.1	1503.1	1616.0
42°	1177.2	1198.7	1231.7	1367.1	1433.2	1549.9
42.5°	1116.9	1139.4	1171.0	1301.1	1363.8	1483.4
43°	1056.1	1080.0	1109.2	1234.6	1297.8	1416.9
43.5°	997.2	1023.6	1048.9	1168.1	1231.7	1350.9



TEST NUMBER: P776698

CATALOG NUMBER: HCDJBL54050CSD-HCD6TRC-5000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	830.7	852.7	870.9	972.8	1043.7	1158.5
45.5°	779.5	798.2	812.5	912.1	984.8	1096.3
46°	728.3	743.6	756.5	853.2	927.9	1037.4
46.5°	681.4	692.9	702.0	795.8	872.8	977.2
47°	635.0	642.2	649.8	742.2	818.3	917.3
47.5°	591.5	592.4	598.6	690.0	763.2	858.5
48°	548.4	544.6	549.3	638.4	712.0	803.4
48.5°	507.2	501.0	503.4	591.0	661.3	747.9
49°	469.0	457.5	459.4	545.0	613.0	696.3
49.5°	434.5	418.2	419.2	503.4	565.1	644.6
50°	400.5	378.5	379.5	462.3	520.6	596.2
50.5°	366.1	344.1	344.1	422.1	475.7	547.0
51°	331.6	310.6	311.0	384.3	434.5	502.0
51.5°	301.0	281.9	281.4	351.2	394.8	457.5
52°	271.8	254.6	255.1	318.2	358.4	413.9
52.5°	244.5	230.2	230.2	287.1	323.0	371.8
53°	218.2	206.2	206.7	257.4	290.0	333.1
53.5°	193.3	185.2	185.2	230.6	258.4	295.7
54°	169.9	165.1	164.1	204.8	229.7	260.3
54.5°	148.3	146.4	145.5	180.4	201.0	228.7
55°	126.8	127.3	126.3	159.3	175.6	200.0
55.5°	107.2	108.6	107.7	138.8	154.1	173.2
56°	88.5	90.0	88.5	118.2	133.0	151.7
56.5°	72.7	73.2	71.8	97.6	111.5	130.6
57°	57.4	55.0	53.6	77.0	90.4	109.1
57.5°	41.6	37.3	35.4	58.9	69.4	88.0
58°	26.3	22.0	20.1	39.2	49.8	66.5
58.5°	10.5	17.7	15.8	23.4	32.1	47.4
59°	5.7	13.9	11.5	12.0	18.2	29.2
59.5°	4.3	10.5	7.7	9.6	14.4	15.8
60°	3.8	6.7	3.3	7.2	10.5	12.4
60.5°	3.3	2.9	2.9	5.3	6.7	9.6
61°	2.9	2.4	2.4	2.9	3.3	6.2
61.5°	2.4	2.4	1.9	2.4	2.9	3.3
62°	1.9	1.9	1.9	2.4	2.4	2.9
62.5°	1.9	1.9	1.4	1.9	1.9	2.4
63°	1.9	1.4	1.4	1.9	1.9	2.4
63.5°	1.4	1.4	1.4	1.4	1.4	1.9
64°	1.4	1.4	1.4	1.4	1.4	1.4
64.5°	1.4	1.0	1.0	1.4	1.4	1.4
65°	1.0	1.0	1.0	1.0	1.0	1.4
65.5°	1.0	1.0	1.0	1.0	1.0	1.0
66°	1.0	1.0	1.0	1.0	1.0	1.0



TEST NUMBER: P776698

CATALOG NUMBER: HCDJBL54050CSD-HCD6TRC-5000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	1.0	0.5	0.5	0.5	0.5	1.0
68°	0.5	0.5	0.5	0.5	0.5	1.0
68.5°	0.5	0.5	0.5	0.5	0.5	0.5
69°	0.5	0.5	0.5	0.5	0.5	0.5
69.5°	0.5	0.5	0.5	0.5	0.5	0.5
70°	0.5	0.5	0.5	0.5	0.5	0.5
70.5°	0.5	0.5	0.5	0.5	0.5	0.5
71°	0.5	0.5	0.5	0.5	0.5	0.5
71.5°	0.5	0.5	0.5	0.5	0.5	0.5
72°	0.5	0.5	0.5	0.5	0.5	0.5
72.5°	0.5	0.5	0.5	0.5	0.5	0.5
73°	0.5	0.5	0.0	0.5	0.5	0.5
73.5°	0.5	0.0	0.0	0.0	0.0	0.5
74°	0.5	0.0	0.0	0.0	0.0	0.0
74.5°	0.0	0.0	0.0	0.0	0.0	0.0
75°	0.0	0.0	0.0	0.0	0.0	0.0
75.5°	0.0	0.0	0.0	0.0	0.0	0.0
76°	0.0	0.0	0.0	0.0	0.0	0.0
76.5°	0.0	0.0	0.0	0.0	0.0	0.0
77°	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	0.0	0.0	0.0	0.0	0.0	0.0
78°	0.0	0.0	0.0	0.0	0.0	0.0
78.5°	0.0	0.0	0.0	0.0	0.0	0.0
79°	0.0	0.0	0.0	0.0	0.0	0.0
79.5°	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0	0.0
80.5°	0.0	0.0	0.0	0.0	0.0	0.0
81°	0.0	0.0	0.0	0.0	0.0	0.0
81.5°	0.0	0.0	0.0	0.0	0.0	0.0
82°	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0
83°	0.0	0.0	0.0	0.0	0.0	0.0
83.5°	0.0	0.0	0.0	0.0	0.0	0.0
84°	0.0	0.0	0.0	0.0	0.0	0.0
84.5°	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0
85.5°	0.0	0.0	0.0	0.0	0.0	0.0
86°	0.0	0.0	0.0	0.0	0.0	0.0
86.5°	0.0	0.0	0.0	0.0	0.0	0.0
87°	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0
88°	0.0	0.0	0.0	0.0	0.0	0.0
88.5°	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P776698

CATALOG NUMBER: HCDJBL54050CSD-HCD6TRC-5000lm-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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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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Scaled Data Report





21.5°	3810.5	3889.0	3964.6	3982.3	3906.7	3869.4	3777.0	3676.0	3602.3	3560.2	3524.8
22°	3778.4	3859.8	3938.7	3953.6	3878.0	3838.3	3741.1	3642.1	3564.5	3523.4	3481.8



44°	1284.4	1380.5	1460.9	1502.1	1440.4	1385.8	1242.3	1173.8	1085.8	1023.1	960.9
44.5°	1220.2	1315.0	1393.0	1428.9	1377.7	1320.3	1180.0	1110.2	1028.4	965.7	906.8



66.5°	1.0	1.0	1.4	1.4	1.4	1.4	1.0	1.0	1.0	1.0	1.0
67°	1.0	1.0	1.4	1.4	1.0	1.0	1.0	1.0	1.0	1.0	1.0



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°	3513.8	3525.8	3559.3	3675.1	3756.9	3810.5
22°	3474.1	3486.5	3521.5	3636.3	3719.1	3778.4



44°	938.9	964.7	988.2	1101.6	1167.6	1284.4
44.5°	884.3	908.7	929.8	1035.5	1104.9	1220.2

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66.5°	1.0	1.0	1.0	1.0	1.0	1.0
67°	1.0	1.0	0.5	1.0	1.0	1.0

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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)