

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: P776770

Luminaire Tested: HCDJBS4050CSD-HCD82TRC-5000lm-2700K

Issue Date: 2/13/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P776770  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA ( A2312156B062-HCD82TRC)  
Test Lab:  
Issue Date: 2/13/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCDJBS4050CSD-HCD82TRC-5000lm-2700K  
Description: 8 INCH ROUND NARROW SPECULAR CLEAR TRIM  
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 2700K CCT  
Ballast/Driver: -

**Summary**

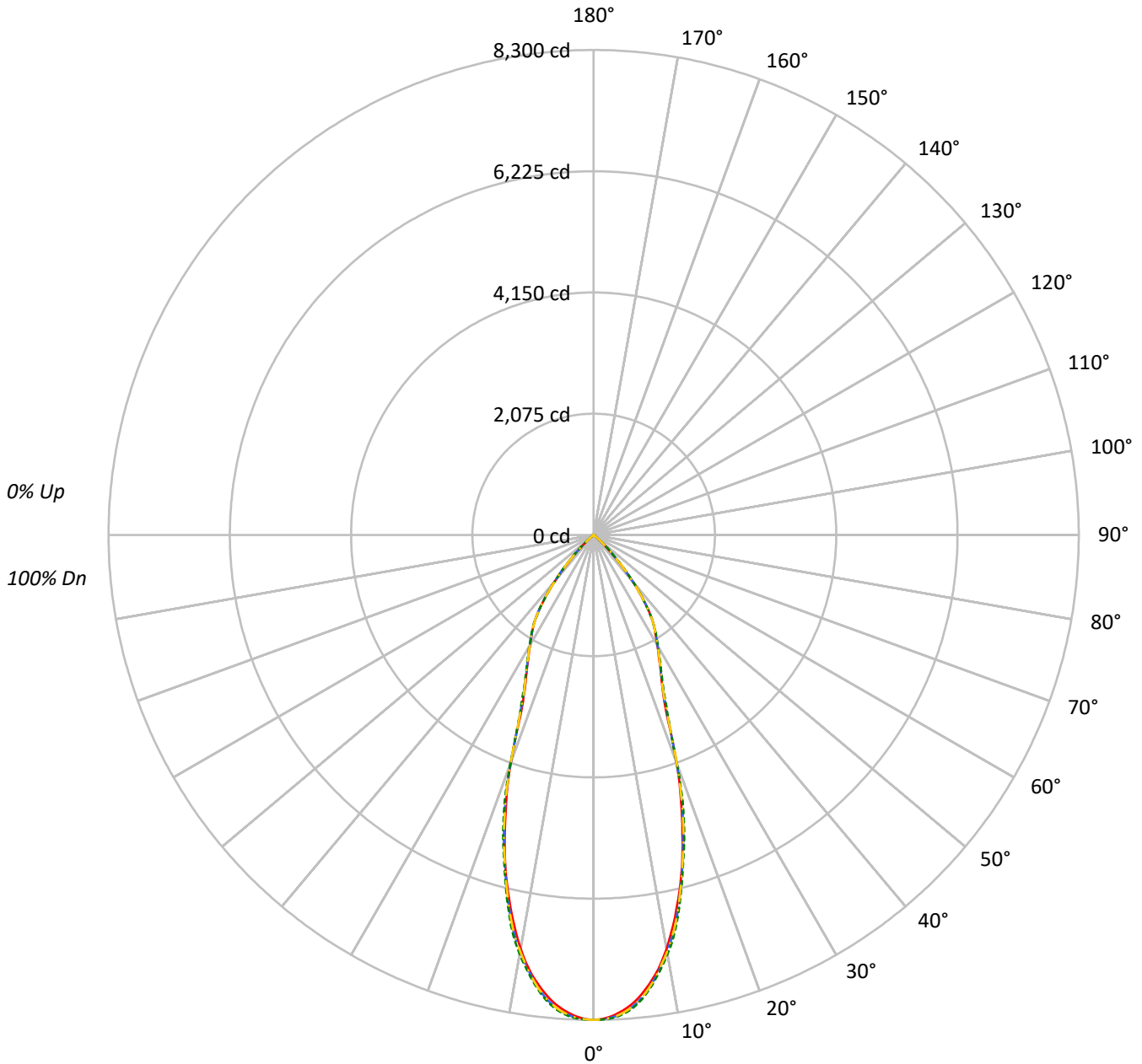
Lumens per Lamp: N/A  
Luminaire Lumens: 5067.9 lumens  
Efficiency: N/A  
Efficacy: 105.6 lumens/watt  
Spacing Criteria (0/90/45): 0.65 / 0.66 / 0.66  
Luminous Opening: Circular (Dia: 0.67' x H: 0')  
CIE Type: Direct

Input Watts (W): 48  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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: P776770  
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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	100	100	100	100		
	1	114	111	109	107	111	109	107	105	105	103	102	101	100	99	98	97	96	94	94	94	94	94	94		
	2	108	104	100	97	106	102	99	96	99	96	94	96	94	92	93	91	90	88	88	88	88	88	88		
	3	103	97	92	89	101	96	91	88	93	90	87	91	88	85	89	86	84	82	82	82	82	82	82		
	4	98	91	86	82	97	90	85	81	88	84	80	86	82	80	84	81	79	77	77	77	77	77	77		
	5	94	86	80	76	92	85	80	76	83	79	75	81	78	74	80	77	74	72	72	72	72	72	72		
	6	89	81	75	71	88	80	75	71	79	74	70	77	73	70	76	72	69	68	68	68	68	68	68		
	7	85	76	71	67	84	76	70	67	75	70	66	73	69	66	72	68	65	64	64	64	64	64	64		
	8	81	72	67	63	80	72	66	63	71	66	62	70	65	62	69	65	62	61	61	61	61	61	61		
	9	78	69	63	59	77	68	63	59	67	62	59	66	62	59	66	62	59	57	57	57	57	57	57		
	10	75	65	60	56	74	65	60	56	64	59	56	63	59	56	63	59	56	54	54	54	54	54	54		

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°	270°
0°	253328	253328	253328	253328
5°	245764	248249	245764	248249
10°	222834	225829	222834	225829
15°	184770	186366	184770	186366
20°	134549	135111	134549	135111
25°	92695	93985	92695	93985
30°	76796	77600	76796	77600
35°	64105	63800	64105	63800
40°	41030	41592	41030	41592
45°	16606	18242	16606	18242
50°	3116	3463	3116	3463
55°	947	921	947	921
60°	611	611	611	611
65°	426	426	426	426
70°	286	321	286	321
75°	212	212	212	212
80°	158	158	158	158
85°	0	175	0	175

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 18242 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	743.7	14.7
10°-20°	1603.9	31.6
20°-30°	1315.6	26.0
30°-40°	1035.6	20.4
40°-50°	340.6	6.7
50°-60°	19.9	0.4
60°-70°	6.1	0.1
70°-80°	2.1	0.0
80°-90°	0.4	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°	3663.2	72.3
0°-40°	4698.7	92.7
0°-60°	5059.3	99.8
0°-90°	5067.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5067.9	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	8298	8298	8298	8298	8298	
5°	8019	8100	8019	8100	8019	739
15°	5846	5896	5846	5896	5846	1591
25°	2752	2790	2752	2790	2752	1307
35°	1720	1712	1720	1712	1720	1035
45°	385	422	385	422	385	328
55°	18	17	18	17	18	19
65°	6	6	6	6	6	6
75°	2	2	2	2	2	2
85°	0	0	0	0	0	0
90°	0	0	0	0	0	0



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CATALOG NUMBER: HCDJBL54050CSD-HCD82TRC-5000lm-2700K

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	8297.6	8297.6	8297.6	8297.6	8297.6	8297.6	8297.6	8297.6	8297.6	8297.6	8297.6
0.5°	8294.0	8294.9	8299.0	8290.8	8299.9	8290.8	8299.0	8294.9	8294.0	8294.9	8299.0
1°	8285.3	8287.1	8293.5	8285.8	8295.3	8285.8	8293.5	8287.1	8285.3	8287.1	8293.5
1.5°	8269.8	8273.9	8283.5	8277.6	8287.6	8277.6	8283.5	8273.9	8269.8	8273.9	8283.5
2°	8249.3	8254.8	8269.4	8265.3	8279.4	8265.3	8269.4	8254.8	8249.3	8254.8	8269.4
2.5°	8222.9	8231.5	8249.8	8248.9	8264.4	8248.9	8249.8	8231.5	8222.9	8231.5	8249.8
3°	8192.4	8203.7	8226.1	8226.5	8244.3	8226.5	8226.1	8203.7	8192.4	8203.7	8226.1
3.5°	8156.8	8171.8	8196.9	8198.3	8218.3	8198.3	8196.9	8171.8	8156.8	8171.8	8196.9
4°	8117.2	8137.2	8162.3	8164.1	8186.0	8164.1	8162.3	8137.2	8117.2	8137.2	8162.3
4.5°	8071.1	8096.2	8120.8	8124.9	8146.8	8124.9	8120.8	8096.2	8071.1	8096.2	8120.8
5°	8019.2	8050.6	8073.4	8079.3	8100.3	8079.3	8073.4	8050.6	8019.2	8050.6	8073.4
5.5°	7961.3	7998.7	8016.9	8028.3	8046.5	8028.3	8016.9	7998.7	7961.3	7998.7	8016.9
6°	7897.9	7939.9	7954.5	7971.8	7983.2	7971.8	7954.5	7939.9	7897.9	7939.9	7954.5
6.5°	7828.7	7873.8	7883.4	7908.4	7912.5	7908.4	7883.4	7873.8	7828.7	7873.8	7883.4
7°	7755.8	7800.0	7806.3	7840.5	7834.1	7840.5	7806.3	7800.0	7755.8	7800.0	7806.3
7.5°	7678.3	7718.8	7721.6	7766.2	7752.1	7766.2	7721.6	7718.8	7678.3	7718.8	7721.6
8°	7595.3	7631.3	7633.2	7685.6	7663.7	7685.6	7633.2	7631.3	7595.3	7631.3	7633.2
8.5°	7504.6	7534.3	7538.8	7597.2	7573.5	7597.2	7538.8	7534.3	7504.6	7534.3	7538.8
9°	7408.0	7430.8	7441.3	7500.5	7477.8	7500.5	7441.3	7430.8	7408.0	7430.8	7441.3
9.5°	7301.4	7317.8	7341.9	7395.7	7383.4	7395.7	7341.9	7317.8	7301.4	7317.8	7341.9
10°	7187.9	7200.2	7238.0	7280.9	7284.5	7280.9	7238.0	7200.2	7187.9	7200.2	7238.0
10.5°	7067.6	7075.3	7130.9	7159.2	7182.9	7159.2	7130.9	7075.3	7067.6	7075.3	7130.9
11°	6945.0	6948.2	7019.7	7032.0	7071.7	7032.0	7019.7	6948.2	6945.0	6948.2	7019.7
11.5°	6816.9	6819.2	6899.9	6900.8	6949.6	6900.8	6899.9	6819.2	6816.9	6819.2	6899.9
12°	6688.0	6689.8	6768.2	6770.4	6818.3	6770.4	6768.2	6689.8	6688.0	6689.8	6768.2
12.5°	6552.1	6563.1	6625.5	6637.8	6672.0	6637.8	6625.5	6563.1	6552.1	6563.1	6625.5
13°	6418.6	6434.6	6478.3	6502.9	6525.3	6502.9	6478.3	6434.6	6418.6	6434.6	6478.3
13.5°	6280.1	6301.9	6324.7	6359.8	6368.0	6359.8	6324.7	6301.9	6280.1	6301.9	6324.7
14°	6140.6	6162.5	6171.6	6210.3	6209.9	6210.3	6171.6	6162.5	6140.6	6162.5	6171.6
14.5°	5995.7	6013.0	6019.8	6059.0	6053.6	6059.0	6019.8	6013.0	5995.7	6013.0	6019.8
15°	5845.8	5856.7	5867.6	5903.2	5896.3	5903.2	5867.6	5856.7	5845.8	5856.7	5867.6
15.5°	5685.3	5691.7	5715.9	5747.8	5749.1	5747.8	5715.9	5691.7	5685.3	5691.7	5715.9
16°	5522.2	5526.3	5562.7	5591.0	5597.8	5591.0	5562.7	5526.3	5522.2	5526.3	5562.7
16.5°	5350.4	5362.7	5406.0	5435.6	5452.0	5435.6	5406.0	5362.7	5350.4	5362.7	5406.0
17°	5184.0	5198.6	5246.5	5281.6	5302.5	5281.6	5246.5	5198.6	5184.0	5198.6	5246.5
17.5°	5015.9	5035.9	5079.2	5122.0	5142.6	5122.0	5079.2	5035.9	5015.9	5035.9	5079.2
18°	4854.1	4868.7	4908.3	4954.8	4972.6	4954.8	4908.3	4868.7	4854.1	4868.7	4908.3
18.5°	4685.4	4699.1	4729.7	4776.1	4789.8	4776.1	4729.7	4699.1	4685.4	4699.1	4729.7
19°	4512.7	4521.8	4545.5	4580.2	4594.3	4580.2	4545.5	4521.8	4512.7	4521.8	4545.5
19.5°	4332.2	4333.2	4350.9	4377.4	4390.6	4377.4	4350.9	4333.2	4332.2	4333.2	4350.9
20°	4141.3	4141.3	4150.9	4165.4	4158.6	4165.4	4150.9	4141.3	4141.3	4141.3	4150.9
20.5°	3953.5	3946.7	3950.8	3950.3	3930.3	3950.3	3950.8	3946.7	3953.5	3946.7	3950.8
21°	3760.3	3755.7	3738.9	3755.7	3749.4	3755.7	3738.9	3755.7	3760.3	3755.7	3738.9



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CATALOG NUMBER: HCDJBL54050CSD-HCD82TRC-5000lm-2700K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
22.5°	3219.8	3241.2	3270.4	3305.5	3290.0	3305.5	3270.4	3241.2	3219.8	3241.2	3270.4
23°	3093.6	3108.1	3138.2	3186.1	3186.5	3186.1	3138.2	3108.1	3093.6	3108.1	3138.2
23.5°	3000.6	2998.3	3017.4	3063.5	3069.4	3063.5	3017.4	2998.3	3000.6	2998.3	3017.4
24°	2900.8	2910.8	2922.6	2960.0	2962.8	2960.0	2922.6	2910.8	2900.8	2910.8	2922.6
24.5°	2824.2	2829.2	2839.7	2863.4	2863.4	2863.4	2839.7	2829.2	2824.2	2829.2	2839.7
25°	2751.7	2758.1	2769.1	2790.9	2790.0	2790.9	2769.1	2758.1	2751.7	2758.1	2769.1
25.5°	2684.3	2687.5	2698.9	2719.4	2720.8	2719.4	2698.9	2687.5	2684.3	2687.5	2698.9
26°	2619.1	2621.9	2630.1	2645.6	2647.8	2645.6	2630.1	2621.9	2619.1	2621.9	2630.1
26.5°	2557.6	2558.5	2568.1	2582.2	2583.6	2582.2	2568.1	2558.5	2557.6	2558.5	2568.1
27°	2495.2	2497.9	2507.9	2525.7	2530.3	2525.7	2507.9	2497.9	2495.2	2497.9	2507.9
27.5°	2436.4	2440.0	2449.6	2466.9	2473.3	2466.9	2449.6	2440.0	2436.4	2440.0	2449.6
28°	2380.8	2384.4	2393.5	2406.3	2412.2	2406.3	2393.5	2384.4	2380.8	2384.4	2393.5
28.5°	2329.3	2331.1	2339.8	2349.8	2354.8	2349.8	2339.8	2331.1	2329.3	2331.1	2339.8
29°	2278.2	2279.6	2287.8	2296.5	2301.9	2296.5	2287.8	2279.6	2278.2	2279.6	2287.8
29.5°	2227.6	2230.4	2237.2	2246.8	2251.3	2246.8	2237.2	2230.4	2227.6	2230.4	2237.2
30°	2178.4	2181.2	2187.5	2196.7	2201.2	2196.7	2187.5	2181.2	2178.4	2181.2	2187.5
30.5°	2130.6	2132.9	2139.2	2147.9	2151.1	2147.9	2139.2	2132.9	2130.6	2132.9	2139.2
31°	2083.6	2085.9	2091.8	2101.0	2105.5	2101.0	2091.8	2085.9	2083.6	2085.9	2091.8
31.5°	2038.5	2040.8	2047.2	2055.4	2058.6	2055.4	2047.2	2040.8	2038.5	2040.8	2047.2
32°	1995.2	1997.0	2003.0	2011.2	2014.4	2011.2	2003.0	1997.0	1995.2	1997.0	2003.0
32.5°	1953.7	1955.6	1959.7	1967.4	1970.2	1967.4	1959.7	1955.6	1953.7	1955.6	1959.7
33°	1913.6	1914.6	1916.8	1920.5	1923.2	1920.5	1916.8	1914.6	1913.6	1914.6	1916.8
33.5°	1872.2	1872.2	1871.3	1869.4	1873.5	1869.4	1871.3	1872.2	1872.2	1872.2	1871.3
34°	1825.2	1823.4	1822.5	1816.6	1825.7	1816.6	1822.5	1823.4	1825.2	1823.4	1822.5
34.5°	1774.6	1770.5	1770.1	1762.3	1769.2	1762.3	1770.1	1770.5	1774.6	1770.5	1770.1
35°	1720.0	1714.5	1714.5	1707.2	1711.8	1707.2	1714.5	1714.5	1720.0	1714.5	1714.5
35.5°	1660.3	1658.0	1655.2	1648.9	1651.6	1648.9	1655.2	1658.0	1660.3	1658.0	1655.2
36°	1598.3	1597.4	1592.3	1588.7	1589.2	1588.7	1592.3	1597.4	1598.3	1597.4	1592.3
36.5°	1532.6	1534.5	1527.2	1524.9	1522.2	1524.9	1527.2	1534.5	1532.6	1534.5	1527.2
37°	1462.0	1467.5	1461.1	1459.7	1456.1	1459.7	1461.1	1467.5	1462.0	1467.5	1461.1
37.5°	1391.8	1395.9	1394.1	1391.8	1390.5	1391.8	1394.1	1395.9	1391.8	1395.9	1394.1
38°	1321.6	1324.8	1322.6	1324.4	1323.0	1324.4	1322.6	1324.8	1321.6	1324.8	1322.6
38.5°	1251.5	1249.6	1250.5	1251.0	1254.6	1251.0	1250.5	1249.6	1251.5	1249.6	1250.5
39°	1179.9	1175.8	1178.1	1178.1	1185.4	1178.1	1178.1	1175.8	1179.9	1175.8	1178.1
39.5°	1104.7	1102.4	1105.6	1108.4	1113.8	1108.4	1105.6	1102.4	1104.7	1102.4	1105.6
40°	1029.5	1031.3	1035.4	1039.5	1043.6	1039.5	1035.4	1031.3	1029.5	1031.3	1035.4
40.5°	954.8	959.3	963.4	973.5	973.0	973.5	963.4	959.3	954.8	959.3	963.4
41°	882.3	887.3	893.2	905.1	903.3	905.1	893.2	887.3	882.3	887.3	893.2
41.5°	809.4	815.8	823.5	837.6	834.5	837.6	823.5	815.8	809.4	815.8	823.5
42°	740.1	746.5	757.0	771.1	768.8	771.1	757.0	746.5	740.1	746.5	757.0
42.5°	673.1	679.1	692.7	707.3	705.9	707.3	692.7	679.1	673.1	679.1	692.7
43°	608.4	616.2	630.3	646.7	645.3	646.7	630.3	616.2	608.4	616.2	630.3
43.5°	550.5	554.6	568.8	584.7	586.1	584.7	568.8	554.6	550.5	554.6	568.8



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	384.6	386.5	402.0	416.5	422.5	416.5	402.0	386.5	384.6	386.5	402.0
45.5°	331.8	335.9	353.2	366.0	373.7	366.0	353.2	335.9	331.8	335.9	353.2
46°	285.3	288.5	307.2	321.8	330.0	321.8	307.2	288.5	285.3	288.5	307.2
46.5°	243.4	248.8	263.4	281.6	291.2	281.6	263.4	248.8	243.4	248.8	263.4
47°	205.1	211.5	222.9	243.4	252.5	243.4	222.9	211.5	205.1	211.5	222.9
47.5°	172.3	178.6	189.1	206.9	213.7	206.9	189.1	178.6	172.3	178.6	189.1
48°	142.6	150.4	157.7	173.6	175.0	173.6	157.7	150.4	142.6	150.4	157.7
48.5°	117.6	124.4	130.3	144.0	141.7	144.0	130.3	124.4	117.6	124.4	130.3
49°	97.5	101.6	105.7	118.5	114.8	118.5	105.7	101.6	97.5	101.6	105.7
49.5°	81.6	82.9	87.5	95.2	91.1	95.2	87.5	82.9	81.6	82.9	87.5
50°	65.6	65.2	70.2	77.5	72.9	77.5	70.2	65.2	65.6	65.2	70.2
50.5°	49.7	51.5	54.2	61.5	57.4	61.5	54.2	51.5	49.7	51.5	54.2
51°	38.3	39.2	44.2	49.2	45.6	49.2	44.2	39.2	38.3	39.2	44.2
51.5°	28.7	32.4	35.1	41.0	40.6	41.0	35.1	32.4	28.7	32.4	35.1
52°	25.1	26.9	29.6	32.4	35.5	32.4	29.6	26.9	25.1	26.9	29.6
52.5°	22.8	23.2	25.5	27.3	30.1	27.3	25.5	23.2	22.8	23.2	25.5
53°	21.4	21.9	21.9	23.7	25.1	23.7	21.9	21.9	21.4	21.9	21.9
53.5°	20.5	20.5	21.0	20.5	20.1	20.5	21.0	20.5	20.5	20.5	21.0
54°	19.6	19.6	19.6	19.6	19.1	19.6	19.6	19.6	19.6	19.6	19.6
54.5°	18.7	18.7	18.7	18.7	18.2	18.7	18.7	18.7	18.7	18.7	18.7
55°	17.8	17.8	17.8	17.8	17.3	17.8	17.8	17.8	17.8	17.8	17.8
55.5°	16.9	16.9	16.9	16.9	16.4	16.9	16.9	16.9	16.9	16.9	16.9
56°	16.0	16.0	16.0	16.0	15.5	16.0	16.0	16.0	16.0	16.0	16.0
56.5°	15.0	15.0	15.5	15.0	14.6	15.0	15.5	15.0	15.0	15.0	15.5
57°	14.1	14.1	14.6	14.1	14.1	14.1	14.6	14.1	14.1	14.1	14.6
57.5°	13.2	13.7	13.7	13.2	13.2	13.2	13.7	13.7	13.2	13.7	13.7
58°	12.8	12.8	12.8	12.8	12.3	12.8	12.8	12.8	12.8	12.8	12.8
58.5°	11.8	12.3	12.3	11.8	11.8	11.8	12.3	12.3	11.8	12.3	12.3
59°	11.4	11.4	11.4	11.4	10.9	11.4	11.4	11.4	11.4	11.4	11.4
59.5°	10.5	10.9	10.9	10.9	10.5	10.9	10.9	10.9	10.5	10.9	10.9
60°	10.0	10.0	10.5	10.0	10.0	10.0	10.5	10.0	10.0	10.0	10.5
60.5°	9.6	9.6	10.0	9.6	9.6	9.6	10.0	9.6	9.6	9.6	10.0
61°	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1
61.5°	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7
62°	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2
62.5°	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7
63°	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
63.5°	6.8	6.8	7.3	6.8	6.8	6.8	7.3	6.8	6.8	6.8	7.3
64°	6.4	6.4	6.8	6.8	6.4	6.8	6.8	6.4	6.4	6.4	6.8
64.5°	5.9	6.4	6.4	6.4	5.9	6.4	6.4	6.4	5.9	6.4	6.4
65°	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
65.5°	5.5	5.5	5.9	5.5	5.5	5.5	5.9	5.5	5.5	5.5	5.9
66°	5.0	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.0	5.5	5.5





TEST NUMBER: P776770

CATALOG NUMBER: HCDJBL54050CSD-HCD82TRC-5000lm-2700K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
68°	4.1	4.1	4.6	4.6	4.1	4.6	4.6	4.1	4.1	4.1	4.6
68.5°	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
69°	3.6	3.6	4.1	4.1	3.6	4.1	4.1	3.6	3.6	3.6	4.1
69.5°	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
70°	3.2	3.2	3.6	3.6	3.6	3.6	3.6	3.2	3.2	3.2	3.6
70.5°	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	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	3.2
71.5°	2.7	2.7	3.2	3.2	2.7	3.2	3.2	2.7	2.7	2.7	3.2
72°	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
72.5°	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
73°	2.3	2.3	2.3	2.7	2.3	2.7	2.3	2.3	2.3	2.3	2.3
73.5°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
74°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
74.5°	1.8	1.8	2.3	2.3	2.3	2.3	2.3	1.8	1.8	1.8	2.3
75°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
75.5°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
76°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
76.5°	1.4	1.4	1.4	1.8	1.4	1.8	1.4	1.4	1.4	1.4	1.4
77°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
77.5°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
78°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
78.5°	0.9	0.9	1.4	1.4	0.9	1.4	1.4	0.9	0.9	0.9	1.4
79°	0.9	0.9	0.9	1.4	0.9	1.4	0.9	0.9	0.9	0.9	0.9
79.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
80°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
80.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
81°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
81.5°	0.5	0.5	0.9	0.9	0.5	0.9	0.9	0.5	0.5	0.5	0.9
82°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
82.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
83°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
83.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
84°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
84.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
85°	0.0	0.0	0.5	0.5	0.5	0.5	0.5	0.0	0.0	0.0	0.5
85.5°	0.0	0.0	0.0	0.5	0.5	0.5	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: P776770

CATALOG NUMBER: HCDJBL54050CSD-HCD82TRC-5000lm-2700K

**CANDELA DISTRIBUTION (continued):**

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



TEST NUMBER: P776770

CATALOG NUMBER: HCDJBL54050CSD-HCD82TRC-5000lm-2700K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	8297.6	8297.6	8297.6	8297.6	8297.6	8297.6
0.5°	8290.8	8299.9	8290.8	8299.0	8294.9	8294.0
1°	8285.8	8295.3	8285.8	8293.5	8287.1	8285.3
1.5°	8277.6	8287.6	8277.6	8283.5	8273.9	8269.8
2°	8265.3	8279.4	8265.3	8269.4	8254.8	8249.3
2.5°	8248.9	8264.4	8248.9	8249.8	8231.5	8222.9
3°	8226.5	8244.3	8226.5	8226.1	8203.7	8192.4
3.5°	8198.3	8218.3	8198.3	8196.9	8171.8	8156.8
4°	8164.1	8186.0	8164.1	8162.3	8137.2	8117.2
4.5°	8124.9	8146.8	8124.9	8120.8	8096.2	8071.1
5°	8079.3	8100.3	8079.3	8073.4	8050.6	8019.2
5.5°	8028.3	8046.5	8028.3	8016.9	7998.7	7961.3
6°	7971.8	7983.2	7971.8	7954.5	7939.9	7897.9
6.5°	7908.4	7912.5	7908.4	7883.4	7873.8	7828.7
7°	7840.5	7834.1	7840.5	7806.3	7800.0	7755.8
7.5°	7766.2	7752.1	7766.2	7721.6	7718.8	7678.3
8°	7685.6	7663.7	7685.6	7633.2	7631.3	7595.3
8.5°	7597.2	7573.5	7597.2	7538.8	7534.3	7504.6
9°	7500.5	7477.8	7500.5	7441.3	7430.8	7408.0
9.5°	7395.7	7383.4	7395.7	7341.9	7317.8	7301.4
10°	7280.9	7284.5	7280.9	7238.0	7200.2	7187.9
10.5°	7159.2	7182.9	7159.2	7130.9	7075.3	7067.6
11°	7032.0	7071.7	7032.0	7019.7	6948.2	6945.0
11.5°	6900.8	6949.6	6900.8	6899.9	6819.2	6816.9
12°	6770.4	6818.3	6770.4	6768.2	6689.8	6688.0
12.5°	6637.8	6672.0	6637.8	6625.5	6563.1	6552.1
13°	6502.9	6525.3	6502.9	6478.3	6434.6	6418.6
13.5°	6359.8	6368.0	6359.8	6324.7	6301.9	6280.1
14°	6210.3	6209.9	6210.3	6171.6	6162.5	6140.6
14.5°	6059.0	6053.6	6059.0	6019.8	6013.0	5995.7
15°	5903.2	5896.3	5903.2	5867.6	5856.7	5845.8
15.5°	5747.8	5749.1	5747.8	5715.9	5691.7	5685.3
16°	5591.0	5597.8	5591.0	5562.7	5526.3	5522.2
16.5°	5435.6	5452.0	5435.6	5406.0	5362.7	5350.4
17°	5281.6	5302.5	5281.6	5246.5	5198.6	5184.0
17.5°	5122.0	5142.6	5122.0	5079.2	5035.9	5015.9
18°	4954.8	4972.6	4954.8	4908.3	4868.7	4854.1
18.5°	4776.1	4789.8	4776.1	4729.7	4699.1	4685.4
19°	4580.2	4594.3	4580.2	4545.5	4521.8	4512.7
19.5°	4377.4	4390.6	4377.4	4350.9	4333.2	4332.2
20°	4165.4	4158.6	4165.4	4150.9	4141.3	4141.3
20.5°	3950.3	3930.3	3950.3	3950.8	3946.7	3953.5
21°	3755.7	3749.4	3755.7	3738.9	3755.7	3760.3

TEST NUMBER: P776770

CATALOG NUMBER: HCDJBL54050CSD-HCD82TRC-5000lm-2700K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	3305.5	3290.0	3305.5	3270.4	3241.2	3219.8
23°	3186.1	3186.5	3186.1	3138.2	3108.1	3093.6
23.5°	3063.5	3069.4	3063.5	3017.4	2998.3	3000.6
24°	2960.0	2962.8	2960.0	2922.6	2910.8	2900.8
24.5°	2863.4	2863.4	2863.4	2839.7	2829.2	2824.2
25°	2790.9	2790.0	2790.9	2769.1	2758.1	2751.7
25.5°	2719.4	2720.8	2719.4	2698.9	2687.5	2684.3
26°	2645.6	2647.8	2645.6	2630.1	2621.9	2619.1
26.5°	2582.2	2583.6	2582.2	2568.1	2558.5	2557.6
27°	2525.7	2530.3	2525.7	2507.9	2497.9	2495.2
27.5°	2466.9	2473.3	2466.9	2449.6	2440.0	2436.4
28°	2406.3	2412.2	2406.3	2393.5	2384.4	2380.8
28.5°	2349.8	2354.8	2349.8	2339.8	2331.1	2329.3
29°	2296.5	2301.9	2296.5	2287.8	2279.6	2278.2
29.5°	2246.8	2251.3	2246.8	2237.2	2230.4	2227.6
30°	2196.7	2201.2	2196.7	2187.5	2181.2	2178.4
30.5°	2147.9	2151.1	2147.9	2139.2	2132.9	2130.6
31°	2101.0	2105.5	2101.0	2091.8	2085.9	2083.6
31.5°	2055.4	2058.6	2055.4	2047.2	2040.8	2038.5
32°	2011.2	2014.4	2011.2	2003.0	1997.0	1995.2
32.5°	1967.4	1970.2	1967.4	1959.7	1955.6	1953.7
33°	1920.5	1923.2	1920.5	1916.8	1914.6	1913.6
33.5°	1869.4	1873.5	1869.4	1871.3	1872.2	1872.2
34°	1816.6	1825.7	1816.6	1822.5	1823.4	1825.2
34.5°	1762.3	1769.2	1762.3	1770.1	1770.5	1774.6
35°	1707.2	1711.8	1707.2	1714.5	1714.5	1720.0
35.5°	1648.9	1651.6	1648.9	1655.2	1658.0	1660.3
36°	1588.7	1589.2	1588.7	1592.3	1597.4	1598.3
36.5°	1524.9	1522.2	1524.9	1527.2	1534.5	1532.6
37°	1459.7	1456.1	1459.7	1461.1	1467.5	1462.0
37.5°	1391.8	1390.5	1391.8	1394.1	1395.9	1391.8
38°	1324.4	1323.0	1324.4	1322.6	1324.8	1321.6
38.5°	1251.0	1254.6	1251.0	1250.5	1249.6	1251.5
39°	1178.1	1185.4	1178.1	1178.1	1175.8	1179.9
39.5°	1108.4	1113.8	1108.4	1105.6	1102.4	1104.7
40°	1039.5	1043.6	1039.5	1035.4	1031.3	1029.5
40.5°	973.5	973.0	973.5	963.4	959.3	954.8
41°	905.1	903.3	905.1	893.2	887.3	882.3
41.5°	837.6	834.5	837.6	823.5	815.8	809.4
42°	771.1	768.8	771.1	757.0	746.5	740.1
42.5°	707.3	705.9	707.3	692.7	679.1	673.1
43°	646.7	645.3	646.7	630.3	616.2	608.4
43.5°	584.7	586.1	584.7	568.8	554.6	550.5



TEST NUMBER: P776770

CATALOG NUMBER: HCDJBL54050CSD-HCD82TRC-5000lm-2700K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
45°	416.5	422.5	416.5	402.0	386.5	384.6
45.5°	366.0	373.7	366.0	353.2	335.9	331.8
46°	321.8	330.0	321.8	307.2	288.5	285.3
46.5°	281.6	291.2	281.6	263.4	248.8	243.4
47°	243.4	252.5	243.4	222.9	211.5	205.1
47.5°	206.9	213.7	206.9	189.1	178.6	172.3
48°	173.6	175.0	173.6	157.7	150.4	142.6
48.5°	144.0	141.7	144.0	130.3	124.4	117.6
49°	118.5	114.8	118.5	105.7	101.6	97.5
49.5°	95.2	91.1	95.2	87.5	82.9	81.6
50°	77.5	72.9	77.5	70.2	65.2	65.6
50.5°	61.5	57.4	61.5	54.2	51.5	49.7
51°	49.2	45.6	49.2	44.2	39.2	38.3
51.5°	41.0	40.6	41.0	35.1	32.4	28.7
52°	32.4	35.5	32.4	29.6	26.9	25.1
52.5°	27.3	30.1	27.3	25.5	23.2	22.8
53°	23.7	25.1	23.7	21.9	21.9	21.4
53.5°	20.5	20.1	20.5	21.0	20.5	20.5
54°	19.6	19.1	19.6	19.6	19.6	19.6
54.5°	18.7	18.2	18.7	18.7	18.7	18.7
55°	17.8	17.3	17.8	17.8	17.8	17.8
55.5°	16.9	16.4	16.9	16.9	16.9	16.9
56°	16.0	15.5	16.0	16.0	16.0	16.0
56.5°	15.0	14.6	15.0	15.5	15.0	15.0
57°	14.1	14.1	14.1	14.6	14.1	14.1
57.5°	13.2	13.2	13.2	13.7	13.7	13.2
58°	12.8	12.3	12.8	12.8	12.8	12.8
58.5°	11.8	11.8	11.8	12.3	12.3	11.8
59°	11.4	10.9	11.4	11.4	11.4	11.4
59.5°	10.9	10.5	10.9	10.9	10.9	10.5
60°	10.0	10.0	10.0	10.5	10.0	10.0
60.5°	9.6	9.6	9.6	10.0	9.6	9.6
61°	9.1	9.1	9.1	9.1	9.1	9.1
61.5°	8.7	8.7	8.7	8.7	8.7	8.7
62°	8.2	8.2	8.2	8.2	8.2	8.2
62.5°	7.7	7.7	7.7	7.7	7.7	7.7
63°	7.3	7.3	7.3	7.3	7.3	7.3
63.5°	6.8	6.8	6.8	7.3	6.8	6.8
64°	6.8	6.4	6.8	6.8	6.4	6.4
64.5°	6.4	5.9	6.4	6.4	6.4	5.9
65°	5.9	5.9	5.9	5.9	5.9	5.9
65.5°	5.5	5.5	5.5	5.9	5.5	5.5
66°	5.5	5.5	5.5	5.5	5.5	5.0



TEST NUMBER: P776770

CATALOG NUMBER: HCDJBL54050CSD-HCD82TRC-5000lm-2700K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	4.6	4.6	4.6	4.6	4.6	4.6
68°	4.6	4.1	4.6	4.6	4.1	4.1
68.5°	4.1	4.1	4.1	4.1	4.1	4.1
69°	4.1	3.6	4.1	4.1	3.6	3.6
69.5°	3.6	3.6	3.6	3.6	3.6	3.6
70°	3.6	3.6	3.6	3.6	3.2	3.2
70.5°	3.2	3.2	3.2	3.2	3.2	3.2
71°	3.2	3.2	3.2	3.2	3.2	3.2
71.5°	3.2	2.7	3.2	3.2	2.7	2.7
72°	2.7	2.7	2.7	2.7	2.7	2.7
72.5°	2.7	2.7	2.7	2.7	2.7	2.7
73°	2.7	2.3	2.7	2.3	2.3	2.3
73.5°	2.3	2.3	2.3	2.3	2.3	2.3
74°	2.3	2.3	2.3	2.3	2.3	2.3
74.5°	2.3	2.3	2.3	2.3	1.8	1.8
75°	1.8	1.8	1.8	1.8	1.8	1.8
75.5°	1.8	1.8	1.8	1.8	1.8	1.8
76°	1.8	1.8	1.8	1.8	1.8	1.8
76.5°	1.8	1.8	1.8	1.4	1.4	1.4
77°	1.4	1.4	1.4	1.4	1.4	1.4
77.5°	1.4	1.4	1.4	1.4	1.4	1.4
78°	1.4	1.4	1.4	1.4	1.4	1.4
78.5°	1.4	1.4	1.4	1.4	0.9	0.9
79°	1.4	0.9	1.4	0.9	0.9	0.9
79.5°	0.9	0.9	0.9	0.9	0.9	0.9
80°	0.9	0.9	0.9	0.9	0.9	0.9
80.5°	0.9	0.9	0.9	0.9	0.9	0.9
81°	0.9	0.9	0.9	0.9	0.9	0.9
81.5°	0.9	0.9	0.9	0.9	0.5	0.5
82°	0.5	0.5	0.5	0.5	0.5	0.5
82.5°	0.5	0.5	0.5	0.5	0.5	0.5
83°	0.5	0.5	0.5	0.5	0.5	0.5
83.5°	0.5	0.5	0.5	0.5	0.5	0.5
84°	0.5	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	0.0	0.0
85.5°	0.5	0.5	0.5	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: P776770

CATALOG NUMBER: HCDJBL54050CSD-HCD82TRC-5000lm-2700K

**CANDELA DISTRIBUTION (continued):**

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



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

Scaled Data Report





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

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Peachtree City, GA 30269

Scaled Data Report



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Scaled Data Report





21.5°	3563.4	3561.1	3567.5	3587.6	3584.8	3587.6	3567.5	3561.1	3563.4	3561.1	3567.5
22°	3363.3	3395.3	3410.3	3436.7	3433.5	3436.7	3410.3	3395.3	3363.3	3395.3	3410.3



44°	493.6	497.2	510.0	525.9	527.7	525.9	510.0	497.2	493.6	497.2	510.0
44.5°	438.4	440.7	453.0	469.4	474.0	469.4	453.0	440.7	438.4	440.7	453.0



66.5°	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
67°	4.6	4.6	5.0	5.0	4.6	5.0	5.0	4.6	4.6	4.6	5.0



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°	3587.6	3584.8	3587.6	3567.5	3561.1	3563.4
22°	3436.7	3433.5	3436.7	3410.3	3395.3	3363.3



44°	525.9	527.7	525.9	510.0	497.2	493.6
44.5°	469.4	474.0	469.4	453.0	440.7	438.4

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66.5°	5.0	5.0	5.0	5.0	5.0	5.0
67°	5.0	4.6	5.0	5.0	4.6	4.6

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Peachtree City, GA 30269

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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)