

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: P776636

Luminaire Tested: HCDJBS4050CSD-HCD4TSQMB-5000lm-3000K

Issue Date: 2/7/2024

Test Information

Test Method: LM-79-2019
Report Number: P776636
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2312156B006-HCD4TSQMB)
Test Lab:
Issue Date: 2/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBS4050CSD-HCD4TSQMB-5000lm-3000K
Description: 4 INCH SQUARE MEDIUM MATTE BLACK TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 3000K CCT
Ballast/Driver: -

Summary

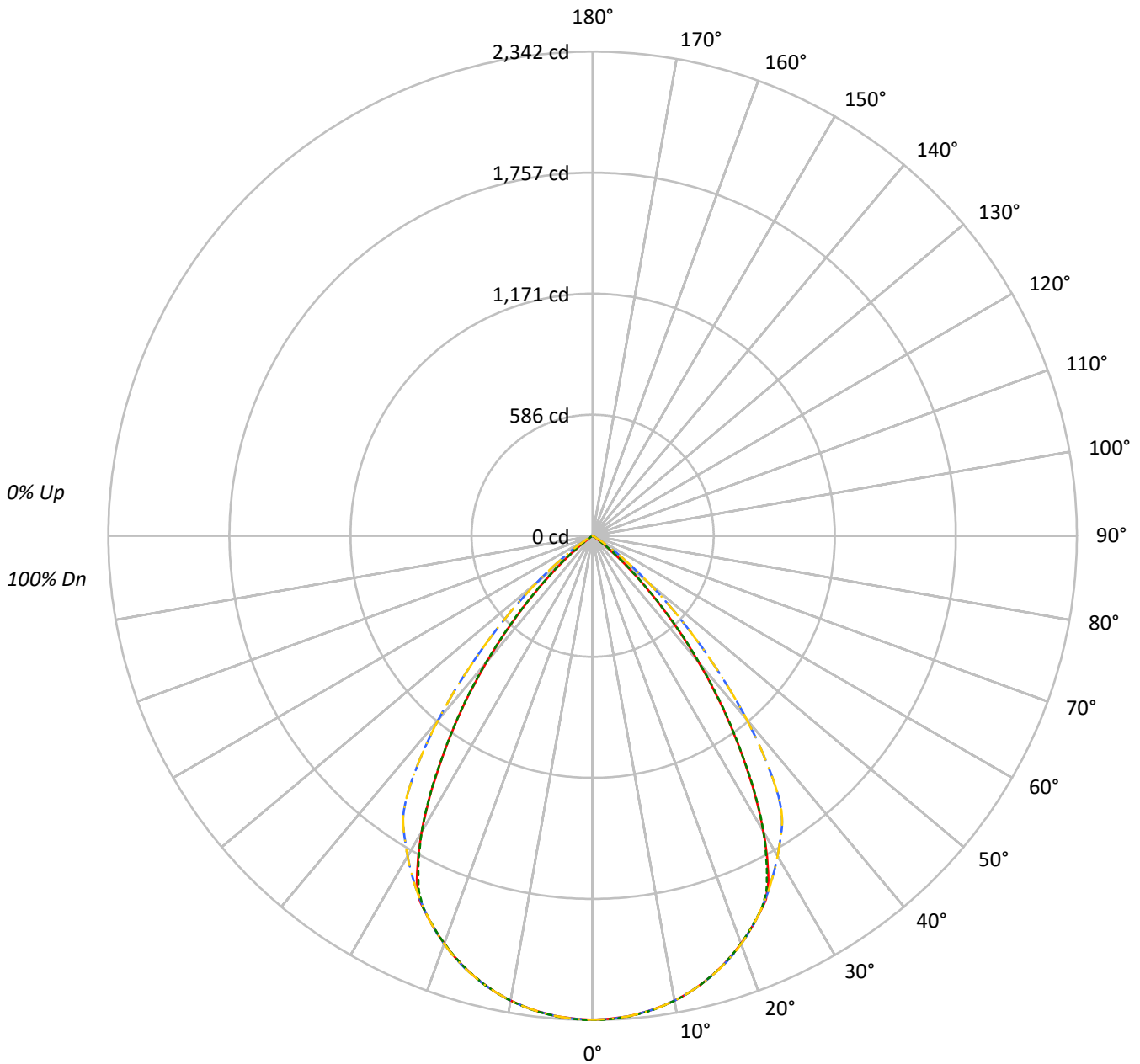
Lumens per Lamp: N/A
Luminaire Lumens: 3096.9 lumens
Efficiency: N/A
Efficacy: 64.5 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1.1 / 1.14
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')

CIE Type: Direct
Input Watts (W): 48
Input Voltage (V): NR
Input Current (Ain): 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				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
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100		
1	113	110	107	105	110	108	105	103	104	102	100	100	98	97	97	95	94	92		
2	107	101	97	93	104	100	96	92	96	93	90	93	91	88	90	88	86	85		
3	100	93	88	84	98	92	87	83	89	85	81	87	83	80	84	82	79	77		
4	95	86	80	75	93	85	79	75	83	78	74	81	77	73	79	75	72	71		
5	89	80	73	68	87	79	73	68	77	72	67	75	71	67	74	70	66	65		
6	84	74	67	62	82	73	67	62	71	66	62	70	65	61	69	64	61	59		
7	79	69	62	57	77	68	62	57	67	61	57	65	60	56	64	60	56	55		
8	74	64	57	53	73	63	57	53	62	56	52	61	56	52	60	55	52	50		
9	70	60	53	49	69	59	53	49	58	52	48	57	52	48	56	52	48	47		
10	67	56	49	45	65	55	49	45	54	49	45	54	48	45	53	48	45	43		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	231360	231360	231360	231360
5°	230815	230954	230815	230954
10°	229098	229188	229098	229188
15°	225830	225881	225830	225881
20°	220753	220658	220753	220658
25°	214151	213289	214151	213289
30°	188605	188559	188605	188559
35°	147295	147801	147295	147801
40°	102811	103830	102811	103830
45°	58346	59911	58346	59911
50°	23204	24911	23204	24911
55°	3447	4394	3447	4394
60°	731	731	731	731
65°	538	538	538	538
70°	405	405	405	405
75°	344	344	344	344
80°	285	285	285	285
85°	0	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°

Vertical Angle: 45°

Luminance: 98660 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	220.7	7.1
10°-20°	621.4	20.1
20°-30°	895.0	28.9
30°-40°	844.7	27.3
40°-50°	435.4	14.1
50°-60°	76.0	2.5
60°-70°	2.8	0.1
70°-80°	0.8	0.0
80°-90°	0.1	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°	1737.1	56.1
0°-40°	2581.8	83.4
0°-60°	3093.3	99.9
0°-90°	3096.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3096.9	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2341	2341	2341	2341	2341	
5°	2326	2328	2326	2328	2326	221
15°	2207	2207	2207	2207	2207	621
25°	1964	1956	1964	1956	1964	887
35°	1221	1225	1221	1225	1221	758
45°	417	429	417	429	417	330
55°	20	26	20	26	20	36
65°	2	2	2	2	2	2
75°	1	1	1	1	1	1
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°	2340.7	2340.7	2340.7	2340.7	2340.7	2340.7	2340.7	2340.7	2340.7	2340.7	2340.7
0.5°	2340.2	2340.2	2340.2	2340.7	2342.0	2340.7	2340.2	2340.2	2340.2	2340.2	2340.2
1°	2339.7	2339.7	2339.7	2340.2	2341.6	2340.2	2339.7	2339.7	2339.7	2339.7	2339.7
1.5°	2338.8	2339.3	2339.3	2339.3	2340.7	2339.3	2339.3	2339.3	2338.8	2339.3	2339.3
2°	2337.9	2337.9	2338.3	2338.3	2339.7	2338.3	2338.3	2337.9	2337.9	2337.9	2338.3
2.5°	2336.5	2336.5	2336.9	2337.4	2338.3	2337.4	2336.9	2336.5	2336.5	2336.5	2336.9
3°	2335.1	2335.1	2335.5	2335.5	2336.9	2335.5	2335.5	2335.1	2335.1	2335.1	2335.5
3.5°	2333.2	2333.2	2333.7	2333.7	2335.1	2333.7	2333.7	2333.2	2333.2	2333.2	2333.7
4°	2331.4	2331.4	2331.4	2331.8	2332.8	2331.8	2331.4	2331.4	2331.4	2331.4	2331.4
4.5°	2329.0	2329.0	2329.0	2329.0	2330.4	2329.0	2329.0	2329.0	2329.0	2329.0	2329.0
5°	2326.3	2326.3	2326.3	2326.3	2327.7	2326.3	2326.3	2326.3	2326.3	2326.3	2326.3
5.5°	2323.0	2323.0	2323.5	2323.5	2324.4	2323.5	2323.5	2323.0	2323.0	2323.0	2323.5
6°	2319.8	2319.8	2319.8	2320.2	2321.2	2320.2	2319.8	2319.8	2319.8	2319.8	2319.8
6.5°	2316.0	2316.0	2316.5	2316.5	2317.4	2316.5	2316.5	2316.0	2316.0	2316.0	2316.5
7°	2312.3	2312.3	2312.3	2312.8	2313.7	2312.8	2312.3	2312.3	2312.3	2312.3	2312.3
7.5°	2308.2	2308.2	2308.2	2308.2	2309.5	2308.2	2308.2	2308.2	2308.2	2308.2	2308.2
8°	2303.5	2303.5	2304.0	2304.0	2304.9	2304.0	2304.0	2303.5	2303.5	2303.5	2304.0
8.5°	2298.9	2298.9	2298.9	2298.9	2299.8	2298.9	2298.9	2298.9	2298.9	2298.9	2298.9
9°	2293.8	2293.8	2293.8	2293.8	2294.7	2293.8	2293.8	2293.8	2293.8	2293.8	2293.8
9.5°	2288.2	2288.2	2288.2	2288.2	2289.1	2288.2	2288.2	2288.2	2288.2	2288.2	2288.2
10°	2282.6	2282.6	2282.6	2282.6	2283.5	2282.6	2282.6	2282.6	2282.6	2282.6	2282.6
10.5°	2276.6	2276.6	2276.6	2276.1	2277.5	2276.1	2276.6	2276.6	2276.6	2276.6	2276.6
11°	2270.1	2270.1	2270.5	2270.1	2271.0	2270.1	2270.5	2270.1	2270.1	2270.1	2270.5
11.5°	2263.6	2263.6	2263.6	2263.1	2264.0	2263.1	2263.6	2263.6	2263.6	2263.6	2263.6
12°	2256.6	2256.6	2256.6	2256.1	2257.1	2256.1	2256.6	2256.6	2256.6	2256.6	2256.6
12.5°	2248.7	2249.2	2249.2	2248.7	2249.2	2248.7	2249.2	2249.2	2248.7	2249.2	2249.2
13°	2241.3	2241.8	2241.8	2240.8	2241.8	2240.8	2241.8	2241.8	2241.3	2241.8	2241.8
13.5°	2233.4	2233.4	2233.9	2232.9	2233.9	2232.9	2233.9	2233.4	2233.4	2233.4	2233.9
14°	2225.0	2225.5	2225.5	2224.6	2225.0	2224.6	2225.5	2225.5	2225.0	2225.5	2225.5
14.5°	2216.2	2216.7	2217.1	2216.2	2216.2	2216.2	2217.1	2216.7	2216.2	2216.7	2217.1
15°	2206.9	2207.9	2207.9	2206.9	2207.4	2206.9	2207.9	2207.9	2206.9	2207.9	2207.9
15.5°	2197.6	2198.6	2198.6	2197.6	2197.6	2197.6	2198.6	2198.6	2197.6	2198.6	2198.6
16°	2187.9	2188.8	2189.3	2187.9	2187.9	2187.9	2189.3	2188.8	2187.9	2188.8	2189.3
16.5°	2178.1	2178.6	2179.5	2178.1	2177.7	2178.1	2179.5	2178.6	2178.1	2178.6	2179.5
17°	2167.9	2168.4	2169.3	2167.5	2167.5	2167.5	2169.3	2168.4	2167.9	2168.4	2169.3
17.5°	2156.8	2157.7	2158.6	2156.8	2156.8	2156.8	2158.6	2157.7	2156.8	2157.7	2158.6
18°	2146.1	2146.6	2147.5	2146.1	2145.6	2146.1	2147.5	2146.6	2146.1	2146.6	2147.5
18.5°	2135.0	2135.4	2136.4	2134.5	2134.0	2134.5	2136.4	2135.4	2135.0	2135.4	2136.4
19°	2122.9	2123.8	2124.7	2122.9	2122.0	2122.9	2124.7	2123.8	2122.9	2123.8	2124.7
19.5°	2111.3	2111.7	2112.7	2110.8	2110.3	2110.8	2112.7	2111.7	2111.3	2111.7	2112.7
20°	2098.7	2099.7	2100.6	2098.3	2097.8	2098.3	2100.6	2099.7	2098.7	2099.7	2100.6
20.5°	2086.7	2087.1	2088.1	2085.7	2085.3	2085.7	2088.1	2087.1	2086.7	2087.1	2088.1
21°	2073.7	2074.1	2075.1	2072.7	2072.3	2072.7	2075.1	2074.1	2073.7	2074.1	2075.1



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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°	2033.7	2033.7	2034.2	2032.3	2032.3	2032.3	2034.2	2033.7	2033.7	2033.7	2034.2
23°	2019.8	2019.8	2019.8	2018.4	2017.9	2018.4	2019.8	2019.8	2019.8	2019.8	2019.8
23.5°	2005.9	2005.9	2004.9	2004.0	2004.0	2004.0	2004.9	2005.9	2005.9	2005.9	2004.9
24°	1991.5	1991.5	1990.1	1989.6	1990.6	1989.6	1990.1	1991.5	1991.5	1991.5	1990.1
24.5°	1977.1	1976.6	1974.8	1974.8	1976.2	1974.8	1974.8	1976.6	1977.1	1976.6	1974.8
25°	1963.6	1961.3	1959.0	1959.4	1955.7	1959.4	1959.0	1961.3	1963.6	1961.3	1959.0
25.5°	1947.8	1946.4	1943.2	1944.6	1936.2	1944.6	1943.2	1946.4	1947.8	1946.4	1943.2
26°	1921.4	1931.1	1926.9	1929.7	1916.7	1929.7	1926.9	1931.1	1921.4	1931.1	1926.9
26.5°	1899.1	1915.8	1910.7	1913.9	1888.4	1913.9	1910.7	1915.8	1899.1	1915.8	1910.7
27°	1872.2	1901.4	1894.0	1892.1	1855.4	1892.1	1894.0	1901.4	1872.2	1901.4	1894.0
27.5°	1838.7	1881.4	1876.8	1872.2	1825.7	1872.2	1876.8	1881.4	1838.7	1881.4	1876.8
28°	1803.4	1855.0	1859.6	1850.8	1792.8	1850.8	1859.6	1855.0	1803.4	1855.0	1859.6
28.5°	1767.7	1832.2	1842.4	1820.6	1758.4	1820.6	1842.4	1832.2	1767.7	1832.2	1842.4
29°	1730.1	1803.9	1824.8	1789.0	1725.0	1789.0	1824.8	1803.9	1730.1	1803.9	1824.8
29.5°	1692.0	1770.5	1807.1	1758.4	1688.7	1758.4	1807.1	1770.5	1692.0	1770.5	1807.1
30°	1652.5	1736.1	1789.0	1725.9	1652.1	1725.9	1789.0	1736.1	1652.5	1736.1	1789.0
30.5°	1612.1	1699.9	1771.4	1692.0	1614.0	1692.0	1771.4	1699.9	1612.1	1699.9	1771.4
31°	1570.3	1663.7	1753.3	1657.2	1575.0	1657.2	1753.3	1663.7	1570.3	1663.7	1753.3
31.5°	1528.1	1626.1	1735.2	1622.3	1532.7	1622.3	1735.2	1626.1	1528.1	1626.1	1735.2
32°	1484.9	1588.0	1717.1	1586.6	1489.5	1586.6	1717.1	1588.0	1484.9	1588.0	1717.1
32.5°	1440.8	1548.5	1699.4	1549.9	1445.9	1549.9	1699.4	1548.5	1440.8	1548.5	1699.4
33°	1396.7	1509.1	1681.3	1511.4	1402.7	1511.4	1681.3	1509.1	1396.7	1509.1	1681.3
33.5°	1352.1	1467.7	1660.4	1471.9	1355.8	1471.9	1660.4	1467.7	1352.1	1467.7	1660.4
34°	1308.5	1425.9	1638.1	1430.6	1311.2	1430.6	1638.1	1425.9	1308.5	1425.9	1638.1
34.5°	1264.4	1383.7	1612.1	1387.9	1267.1	1387.9	1612.1	1383.7	1264.4	1383.7	1612.1
35°	1220.7	1341.4	1580.6	1344.7	1224.9	1344.7	1580.6	1341.4	1220.7	1341.4	1580.6
35.5°	1178.0	1299.6	1546.7	1302.4	1181.2	1302.4	1546.7	1299.6	1178.0	1299.6	1546.7
36°	1135.7	1256.9	1509.1	1259.2	1140.4	1259.2	1509.1	1256.9	1135.7	1256.9	1509.1
36.5°	1093.0	1215.1	1468.7	1217.0	1098.6	1217.0	1468.7	1215.1	1093.0	1215.1	1468.7
37°	1050.8	1173.3	1425.9	1175.2	1057.3	1175.2	1425.9	1173.3	1050.8	1173.3	1425.9
37.5°	1008.0	1132.0	1382.8	1134.8	1015.5	1134.8	1382.8	1132.0	1008.0	1132.0	1382.8
38°	965.3	1090.7	1338.2	1093.9	973.7	1093.9	1338.2	1090.7	965.3	1090.7	1338.2
38.5°	922.1	1050.8	1294.1	1054.5	931.0	1054.5	1294.1	1050.8	922.1	1050.8	1294.1
39°	880.4	1010.4	1249.5	1015.0	889.2	1015.0	1249.5	1010.4	880.4	1010.4	1249.5
39.5°	839.0	970.0	1204.5	976.0	846.0	976.0	1204.5	970.0	839.0	970.0	1204.5
40°	796.8	929.1	1158.5	936.1	804.7	936.1	1158.5	929.1	796.8	929.1	1158.5
40.5°	755.5	888.7	1112.1	895.7	762.9	895.7	1112.1	888.7	755.5	888.7	1112.1
41°	715.5	848.8	1065.6	855.7	722.5	855.7	1065.6	848.8	715.5	848.8	1065.6
41.5°	675.6	808.9	1018.7	815.8	683.0	815.8	1018.7	808.9	675.6	808.9	1018.7
42°	637.1	769.8	971.8	775.9	644.9	775.9	971.8	769.8	637.1	769.8	971.8
42.5°	599.0	730.8	925.9	737.3	607.3	737.3	925.9	730.8	599.0	730.8	925.9
43°	561.4	692.8	879.9	698.3	570.2	698.3	879.9	692.8	561.4	692.8	879.9
43.5°	523.8	655.2	834.9	661.7	534.0	661.7	834.9	655.2	523.8	655.2	834.9



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	417.4	546.5	705.8	553.5	428.6	553.5	705.8	546.5	417.4	546.5	705.8
45.5°	384.9	511.7	665.4	519.6	395.6	519.6	665.4	511.7	384.9	511.7	665.4
46°	353.8	477.8	626.8	486.1	364.0	486.1	626.8	477.8	353.8	477.8	626.8
46.5°	322.2	443.4	588.8	452.7	333.8	452.7	588.8	443.4	322.2	443.4	588.8
47°	292.5	410.9	551.6	419.7	305.5	419.7	551.6	410.9	292.5	410.9	551.6
47.5°	262.8	379.4	515.9	387.2	277.7	387.2	515.9	379.4	262.8	379.4	515.9
48°	236.8	349.2	481.5	357.1	250.7	357.1	481.5	349.2	236.8	349.2	481.5
48.5°	211.7	319.5	448.5	328.3	226.6	328.3	448.5	319.5	211.7	319.5	448.5
49°	190.8	290.2	415.6	300.0	204.3	300.0	415.6	290.2	190.8	290.2	415.6
49.5°	170.9	262.8	384.0	273.0	182.9	273.0	384.0	262.8	170.9	262.8	384.0
50°	150.9	236.8	352.9	247.0	162.0	247.0	352.9	236.8	150.9	236.8	352.9
50.5°	131.9	212.2	324.1	222.9	141.6	222.9	324.1	212.2	131.9	212.2	324.1
51°	113.8	190.8	296.2	201.1	124.4	201.1	296.2	190.8	113.8	190.8	296.2
51.5°	98.9	170.4	269.8	179.7	108.2	179.7	269.8	170.4	98.9	170.4	269.8
52°	84.5	150.4	244.2	159.3	92.9	159.3	244.2	150.4	84.5	150.4	244.2
52.5°	71.0	130.9	220.1	139.8	78.5	139.8	220.1	130.9	71.0	130.9	220.1
53°	58.5	113.3	198.7	122.6	65.0	122.6	198.7	113.3	58.5	113.3	198.7
53.5°	48.3	97.5	177.8	106.8	52.0	106.8	177.8	97.5	48.3	97.5	177.8
54°	37.6	83.1	158.3	91.5	41.3	91.5	158.3	83.1	37.6	83.1	158.3
54.5°	27.4	69.6	140.2	77.1	33.4	77.1	140.2	69.6	27.4	69.6	140.2
55°	20.0	58.0	122.6	63.6	25.5	63.6	122.6	58.0	20.0	58.0	122.6
55.5°	12.5	47.4	106.8	51.1	17.6	51.1	106.8	47.4	12.5	47.4	106.8
56°	8.4	37.1	91.5	39.9	9.8	39.9	91.5	37.1	8.4	37.1	91.5
56.5°	6.5	26.9	78.5	30.6	6.0	30.6	78.5	26.9	6.5	26.9	78.5
57°	4.6	17.6	66.9	22.3	5.1	22.3	66.9	17.6	4.6	17.6	66.9
57.5°	4.6	11.1	56.2	14.9	4.6	14.9	56.2	11.1	4.6	11.1	56.2
58°	4.2	7.0	46.9	9.8	4.6	9.8	46.9	7.0	4.2	7.0	46.9
58.5°	4.2	4.6	39.0	7.0	4.2	7.0	39.0	4.6	4.2	4.6	39.0
59°	3.7	3.7	31.6	5.1	4.2	5.1	31.6	3.7	3.7	3.7	31.6
59.5°	3.7	3.7	25.5	3.7	4.2	3.7	25.5	3.7	3.7	3.7	25.5
60°	3.7	3.7	20.4	3.7	3.7	3.7	20.4	3.7	3.7	3.7	20.4
60.5°	3.3	3.3	15.8	3.7	3.7	3.7	15.8	3.3	3.3	3.3	15.8
61°	3.3	3.3	12.5	3.3	3.7	3.3	12.5	3.3	3.3	3.3	12.5
61.5°	3.3	3.3	9.3	3.3	3.3	3.3	9.3	3.3	3.3	3.3	9.3
62°	2.8	2.8	7.0	3.3	3.3	3.3	7.0	2.8	2.8	2.8	7.0
62.5°	2.8	2.8	5.1	2.8	3.3	2.8	5.1	2.8	2.8	2.8	5.1
63°	2.8	2.8	3.7	2.8	2.8	2.8	3.7	2.8	2.8	2.8	3.7
63.5°	2.8	2.3	2.8	2.8	2.8	2.8	2.8	2.3	2.8	2.3	2.8
64°	2.3	2.3	2.3	2.3	2.8	2.3	2.3	2.3	2.3	2.3	2.3
64.5°	2.3	2.3	1.9	2.3	2.8	2.3	1.9	2.3	2.3	2.3	1.9
65°	2.3	2.3	1.9	2.3	2.3	2.3	1.9	2.3	2.3	2.3	1.9
65.5°	2.3	1.9	1.9	2.3	2.3	2.3	1.9	1.9	2.3	1.9	1.9
66°	2.3	1.9	1.4	1.9	2.3	1.9	1.4	1.9	2.3	1.9	1.4



TEST NUMBER: P776636

CATALOG NUMBER: HCDJBL54050CSD-HCD4TSQMB-5000lm-3000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	1.9	1.9	1.4	1.9	1.9	1.9	1.4	1.9	1.9	1.9	1.4
68°	1.9	1.4	1.4	1.9	1.9	1.9	1.4	1.4	1.9	1.4	1.4
68.5°	1.9	1.4	0.9	1.4	1.9	1.4	0.9	1.4	1.9	1.4	0.9
69°	1.4	1.4	0.9	1.4	1.9	1.4	0.9	1.4	1.4	1.4	0.9
69.5°	1.4	1.4	0.9	1.4	1.9	1.4	0.9	1.4	1.4	1.4	0.9
70°	1.4	1.4	0.9	1.4	1.4	1.4	0.9	1.4	1.4	1.4	0.9
70.5°	1.4	1.4	0.9	1.4	1.4	1.4	0.9	1.4	1.4	1.4	0.9
71°	1.4	0.9	0.9	1.4	1.4	1.4	0.9	0.9	1.4	0.9	0.9
71.5°	1.4	0.9	0.9	0.9	1.4	0.9	0.9	0.9	1.4	0.9	0.9
72°	1.4	0.9	0.9	0.9	1.4	0.9	0.9	0.9	1.4	0.9	0.9
72.5°	0.9	0.9	0.5	0.9	1.4	0.9	0.5	0.9	0.9	0.9	0.5
73°	0.9	0.9	0.5	0.9	1.4	0.9	0.5	0.9	0.9	0.9	0.5
73.5°	0.9	0.9	0.5	0.9	0.9	0.9	0.5	0.9	0.9	0.9	0.5
74°	0.9	0.9	0.5	0.9	0.9	0.9	0.5	0.9	0.9	0.9	0.5
74.5°	0.9	0.9	0.5	0.9	0.9	0.9	0.5	0.9	0.9	0.9	0.5
75°	0.9	0.9	0.5	0.9	0.9	0.9	0.5	0.9	0.9	0.9	0.5
75.5°	0.9	0.5	0.5	0.9	0.9	0.9	0.5	0.5	0.9	0.5	0.5
76°	0.9	0.5	0.5	0.5	0.9	0.5	0.5	0.5	0.9	0.5	0.5
76.5°	0.5	0.5	0.5	0.5	0.9	0.5	0.5	0.5	0.5	0.5	0.5
77°	0.5	0.5	0.5	0.5	0.9	0.5	0.5	0.5	0.5	0.5	0.5
77.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
78°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
78.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
79°	0.5	0.5	0.0	0.5	0.5	0.5	0.0	0.5	0.5	0.5	0.0
79.5°	0.5	0.5	0.0	0.5	0.5	0.5	0.0	0.5	0.5	0.5	0.0
80°	0.5	0.5	0.0	0.5	0.5	0.5	0.0	0.5	0.5	0.5	0.0
80.5°	0.5	0.5	0.0	0.5	0.5	0.5	0.0	0.5	0.5	0.5	0.0
81°	0.5	0.5	0.0	0.5	0.5	0.5	0.0	0.5	0.5	0.5	0.0
81.5°	0.5	0.0	0.0	0.5	0.5	0.5	0.0	0.0	0.5	0.0	0.0
82°	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0
83°	0.0	0.0	0.0	0.0	0.5	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: P776636

CATALOG NUMBER: HCDJBL54050CSD-HCD4TSQMB-5000lm-3000K

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: P776636

CATALOG NUMBER: HCDJBL54050CSD-HCD4TSQMB-5000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2340.7	2340.7	2340.7	2340.7	2340.7	2340.7
0.5°	2340.7	2342.0	2340.7	2340.2	2340.2	2340.2
1°	2340.2	2341.6	2340.2	2339.7	2339.7	2339.7
1.5°	2339.3	2340.7	2339.3	2339.3	2339.3	2338.8
2°	2338.3	2339.7	2338.3	2338.3	2337.9	2337.9
2.5°	2337.4	2338.3	2337.4	2336.9	2336.5	2336.5
3°	2335.5	2336.9	2335.5	2335.5	2335.1	2335.1
3.5°	2333.7	2335.1	2333.7	2333.7	2333.2	2333.2
4°	2331.8	2332.8	2331.8	2331.4	2331.4	2331.4
4.5°	2329.0	2330.4	2329.0	2329.0	2329.0	2329.0
5°	2326.3	2327.7	2326.3	2326.3	2326.3	2326.3
5.5°	2323.5	2324.4	2323.5	2323.5	2323.0	2323.0
6°	2320.2	2321.2	2320.2	2319.8	2319.8	2319.8
6.5°	2316.5	2317.4	2316.5	2316.5	2316.0	2316.0
7°	2312.8	2313.7	2312.8	2312.3	2312.3	2312.3
7.5°	2308.2	2309.5	2308.2	2308.2	2308.2	2308.2
8°	2304.0	2304.9	2304.0	2304.0	2303.5	2303.5
8.5°	2298.9	2299.8	2298.9	2298.9	2298.9	2298.9
9°	2293.8	2294.7	2293.8	2293.8	2293.8	2293.8
9.5°	2288.2	2289.1	2288.2	2288.2	2288.2	2288.2
10°	2282.6	2283.5	2282.6	2282.6	2282.6	2282.6
10.5°	2276.1	2277.5	2276.1	2276.6	2276.6	2276.6
11°	2270.1	2271.0	2270.1	2270.5	2270.1	2270.1
11.5°	2263.1	2264.0	2263.1	2263.6	2263.6	2263.6
12°	2256.1	2257.1	2256.1	2256.6	2256.6	2256.6
12.5°	2248.7	2249.2	2248.7	2249.2	2249.2	2248.7
13°	2240.8	2241.8	2240.8	2241.8	2241.8	2241.3
13.5°	2232.9	2233.9	2232.9	2233.9	2233.4	2233.4
14°	2224.6	2225.0	2224.6	2225.5	2225.5	2225.0
14.5°	2216.2	2216.2	2216.2	2217.1	2216.7	2216.2
15°	2206.9	2207.4	2206.9	2207.9	2207.9	2206.9
15.5°	2197.6	2197.6	2197.6	2198.6	2198.6	2197.6
16°	2187.9	2187.9	2187.9	2189.3	2188.8	2187.9
16.5°	2178.1	2177.7	2178.1	2179.5	2178.6	2178.1
17°	2167.5	2167.5	2167.5	2169.3	2168.4	2167.9
17.5°	2156.8	2156.8	2156.8	2158.6	2157.7	2156.8
18°	2146.1	2145.6	2146.1	2147.5	2146.6	2146.1
18.5°	2134.5	2134.0	2134.5	2136.4	2135.4	2135.0
19°	2122.9	2122.0	2122.9	2124.7	2123.8	2122.9
19.5°	2110.8	2110.3	2110.8	2112.7	2111.7	2111.3
20°	2098.3	2097.8	2098.3	2100.6	2099.7	2098.7
20.5°	2085.7	2085.3	2085.7	2088.1	2087.1	2086.7
21°	2072.7	2072.3	2072.7	2075.1	2074.1	2073.7

TEST NUMBER: P776636

CATALOG NUMBER: HCDJBL54050CSD-HCD4TSQMB-5000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	2032.3	2032.3	2032.3	2034.2	2033.7	2033.7
23°	2018.4	2017.9	2018.4	2019.8	2019.8	2019.8
23.5°	2004.0	2004.0	2004.0	2004.9	2005.9	2005.9
24°	1989.6	1990.6	1989.6	1990.1	1991.5	1991.5
24.5°	1974.8	1976.2	1974.8	1974.8	1976.6	1977.1
25°	1959.4	1955.7	1959.4	1959.0	1961.3	1963.6
25.5°	1944.6	1936.2	1944.6	1943.2	1946.4	1947.8
26°	1929.7	1916.7	1929.7	1926.9	1931.1	1921.4
26.5°	1913.9	1888.4	1913.9	1910.7	1915.8	1899.1
27°	1892.1	1855.4	1892.1	1894.0	1901.4	1872.2
27.5°	1872.2	1825.7	1872.2	1876.8	1881.4	1838.7
28°	1850.8	1792.8	1850.8	1859.6	1855.0	1803.4
28.5°	1820.6	1758.4	1820.6	1842.4	1832.2	1767.7
29°	1789.0	1725.0	1789.0	1824.8	1803.9	1730.1
29.5°	1758.4	1688.7	1758.4	1807.1	1770.5	1692.0
30°	1725.9	1652.1	1725.9	1789.0	1736.1	1652.5
30.5°	1692.0	1614.0	1692.0	1771.4	1699.9	1612.1
31°	1657.2	1575.0	1657.2	1753.3	1663.7	1570.3
31.5°	1622.3	1532.7	1622.3	1735.2	1626.1	1528.1
32°	1586.6	1489.5	1586.6	1717.1	1588.0	1484.9
32.5°	1549.9	1445.9	1549.9	1699.4	1548.5	1440.8
33°	1511.4	1402.7	1511.4	1681.3	1509.1	1396.7
33.5°	1471.9	1355.8	1471.9	1660.4	1467.7	1352.1
34°	1430.6	1311.2	1430.6	1638.1	1425.9	1308.5
34.5°	1387.9	1267.1	1387.9	1612.1	1383.7	1264.4
35°	1344.7	1224.9	1344.7	1580.6	1341.4	1220.7
35.5°	1302.4	1181.2	1302.4	1546.7	1299.6	1178.0
36°	1259.2	1140.4	1259.2	1509.1	1256.9	1135.7
36.5°	1217.0	1098.6	1217.0	1468.7	1215.1	1093.0
37°	1175.2	1057.3	1175.2	1425.9	1173.3	1050.8
37.5°	1134.8	1015.5	1134.8	1382.8	1132.0	1008.0
38°	1093.9	973.7	1093.9	1338.2	1090.7	965.3
38.5°	1054.5	931.0	1054.5	1294.1	1050.8	922.1
39°	1015.0	889.2	1015.0	1249.5	1010.4	880.4
39.5°	976.0	846.0	976.0	1204.5	970.0	839.0
40°	936.1	804.7	936.1	1158.5	929.1	796.8
40.5°	895.7	762.9	895.7	1112.1	888.7	755.5
41°	855.7	722.5	855.7	1065.6	848.8	715.5
41.5°	815.8	683.0	815.8	1018.7	808.9	675.6
42°	775.9	644.9	775.9	971.8	769.8	637.1
42.5°	737.3	607.3	737.3	925.9	730.8	599.0
43°	698.3	570.2	698.3	879.9	692.8	561.4
43.5°	661.7	534.0	661.7	834.9	655.2	523.8



TEST NUMBER: P776636

CATALOG NUMBER: HCDJBL54050CSD-HCD4TSQMB-5000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	553.5	428.6	553.5	705.8	546.5	417.4
45.5°	519.6	395.6	519.6	665.4	511.7	384.9
46°	486.1	364.0	486.1	626.8	477.8	353.8
46.5°	452.7	333.8	452.7	588.8	443.4	322.2
47°	419.7	305.5	419.7	551.6	410.9	292.5
47.5°	387.2	277.7	387.2	515.9	379.4	262.8
48°	357.1	250.7	357.1	481.5	349.2	236.8
48.5°	328.3	226.6	328.3	448.5	319.5	211.7
49°	300.0	204.3	300.0	415.6	290.2	190.8
49.5°	273.0	182.9	273.0	384.0	262.8	170.9
50°	247.0	162.0	247.0	352.9	236.8	150.9
50.5°	222.9	141.6	222.9	324.1	212.2	131.9
51°	201.1	124.4	201.1	296.2	190.8	113.8
51.5°	179.7	108.2	179.7	269.8	170.4	98.9
52°	159.3	92.9	159.3	244.2	150.4	84.5
52.5°	139.8	78.5	139.8	220.1	130.9	71.0
53°	122.6	65.0	122.6	198.7	113.3	58.5
53.5°	106.8	52.0	106.8	177.8	97.5	48.3
54°	91.5	41.3	91.5	158.3	83.1	37.6
54.5°	77.1	33.4	77.1	140.2	69.6	27.4
55°	63.6	25.5	63.6	122.6	58.0	20.0
55.5°	51.1	17.6	51.1	106.8	47.4	12.5
56°	39.9	9.8	39.9	91.5	37.1	8.4
56.5°	30.6	6.0	30.6	78.5	26.9	6.5
57°	22.3	5.1	22.3	66.9	17.6	4.6
57.5°	14.9	4.6	14.9	56.2	11.1	4.6
58°	9.8	4.6	9.8	46.9	7.0	4.2
58.5°	7.0	4.2	7.0	39.0	4.6	4.2
59°	5.1	4.2	5.1	31.6	3.7	3.7
59.5°	3.7	4.2	3.7	25.5	3.7	3.7
60°	3.7	3.7	3.7	20.4	3.7	3.7
60.5°	3.7	3.7	3.7	15.8	3.3	3.3
61°	3.3	3.7	3.3	12.5	3.3	3.3
61.5°	3.3	3.3	3.3	9.3	3.3	3.3
62°	3.3	3.3	3.3	7.0	2.8	2.8
62.5°	2.8	3.3	2.8	5.1	2.8	2.8
63°	2.8	2.8	2.8	3.7	2.8	2.8
63.5°	2.8	2.8	2.8	2.8	2.3	2.8
64°	2.3	2.8	2.3	2.3	2.3	2.3
64.5°	2.3	2.8	2.3	1.9	2.3	2.3
65°	2.3	2.3	2.3	1.9	2.3	2.3
65.5°	2.3	2.3	2.3	1.9	1.9	2.3
66°	1.9	2.3	1.9	1.4	1.9	2.3



TEST NUMBER: P776636

CATALOG NUMBER: HCDJBL54050CSD-HCD4TSQMB-5000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	1.9	1.9	1.9	1.4	1.9	1.9
68°	1.9	1.9	1.9	1.4	1.4	1.9
68.5°	1.4	1.9	1.4	0.9	1.4	1.9
69°	1.4	1.9	1.4	0.9	1.4	1.4
69.5°	1.4	1.9	1.4	0.9	1.4	1.4
70°	1.4	1.4	1.4	0.9	1.4	1.4
70.5°	1.4	1.4	1.4	0.9	1.4	1.4
71°	1.4	1.4	1.4	0.9	0.9	1.4
71.5°	0.9	1.4	0.9	0.9	0.9	1.4
72°	0.9	1.4	0.9	0.9	0.9	1.4
72.5°	0.9	1.4	0.9	0.5	0.9	0.9
73°	0.9	1.4	0.9	0.5	0.9	0.9
73.5°	0.9	0.9	0.9	0.5	0.9	0.9
74°	0.9	0.9	0.9	0.5	0.9	0.9
74.5°	0.9	0.9	0.9	0.5	0.9	0.9
75°	0.9	0.9	0.9	0.5	0.9	0.9
75.5°	0.9	0.9	0.9	0.5	0.5	0.9
76°	0.5	0.9	0.5	0.5	0.5	0.9
76.5°	0.5	0.9	0.5	0.5	0.5	0.5
77°	0.5	0.9	0.5	0.5	0.5	0.5
77.5°	0.5	0.5	0.5	0.5	0.5	0.5
78°	0.5	0.5	0.5	0.5	0.5	0.5
78.5°	0.5	0.5	0.5	0.5	0.5	0.5
79°	0.5	0.5	0.5	0.0	0.5	0.5
79.5°	0.5	0.5	0.5	0.0	0.5	0.5
80°	0.5	0.5	0.5	0.0	0.5	0.5
80.5°	0.5	0.5	0.5	0.0	0.5	0.5
81°	0.5	0.5	0.5	0.0	0.5	0.5
81.5°	0.5	0.5	0.5	0.0	0.0	0.5
82°	0.0	0.5	0.0	0.0	0.0	0.0
82.5°	0.0	0.5	0.0	0.0	0.0	0.0
83°	0.0	0.5	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: P776636
CATALOG NUMBER: HCDJBL54050CSD-HCD4TSQMB-5000lm-3000K

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

Signify Classified - Internal
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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Peachtree City, GA 30269

Scaled Data Report



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Scaled Data Report





21.5°	2060.7	2061.1	2061.6	2059.7	2059.3	2059.7	2061.6	2061.1	2060.7	2061.1	2061.6
22°	2047.2	2047.7	2048.1	2045.8	2045.8	2045.8	2048.1	2047.7	2047.2	2047.7	2048.1



44°	487.5	618.0	790.3	624.5	497.8	624.5	790.3	618.0	487.5	618.0	790.3
44.5°	452.3	582.3	747.6	588.8	462.5	588.8	747.6	582.3	452.3	582.3	747.6



66.5°	1.9	1.9	1.4	1.9	2.3	1.9	1.4	1.9	1.9	1.9	1.4
67°	1.9	1.9	1.4	1.9	1.9	1.9	1.4	1.9	1.9	1.9	1.4



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°	2059.7	2059.3	2059.7	2061.6	2061.1	2060.7
22°	2045.8	2045.8	2045.8	2048.1	2047.7	2047.2



44°	624.5	497.8	624.5	790.3	618.0	487.5
44.5°	588.8	462.5	588.8	747.6	582.3	452.3

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66.5°	1.9	2.3	1.9	1.4	1.9	1.9
67°	1.9	1.9	1.9	1.4	1.9	1.9

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Scaled Data Report



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

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Scaled Data Report



(END OF REPORT)