

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: P776364

Luminaire Tested: HCDJBL3040CSD-HCD62TRC-4000lm-5000K

Issue Date: 2/13/2024

Test Information

Test Method: LM-79-2019
Report Number: P776364
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2312156B055-HCD62TRC)
Test Lab:
Issue Date: 2/13/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBS3040CSD-HCD62TRC-4000lm-5000K
Description: 6 INCH ROUND NARROW SPECULAR CLEAR TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 5000K CCT
Ballast/Driver: -

Summary

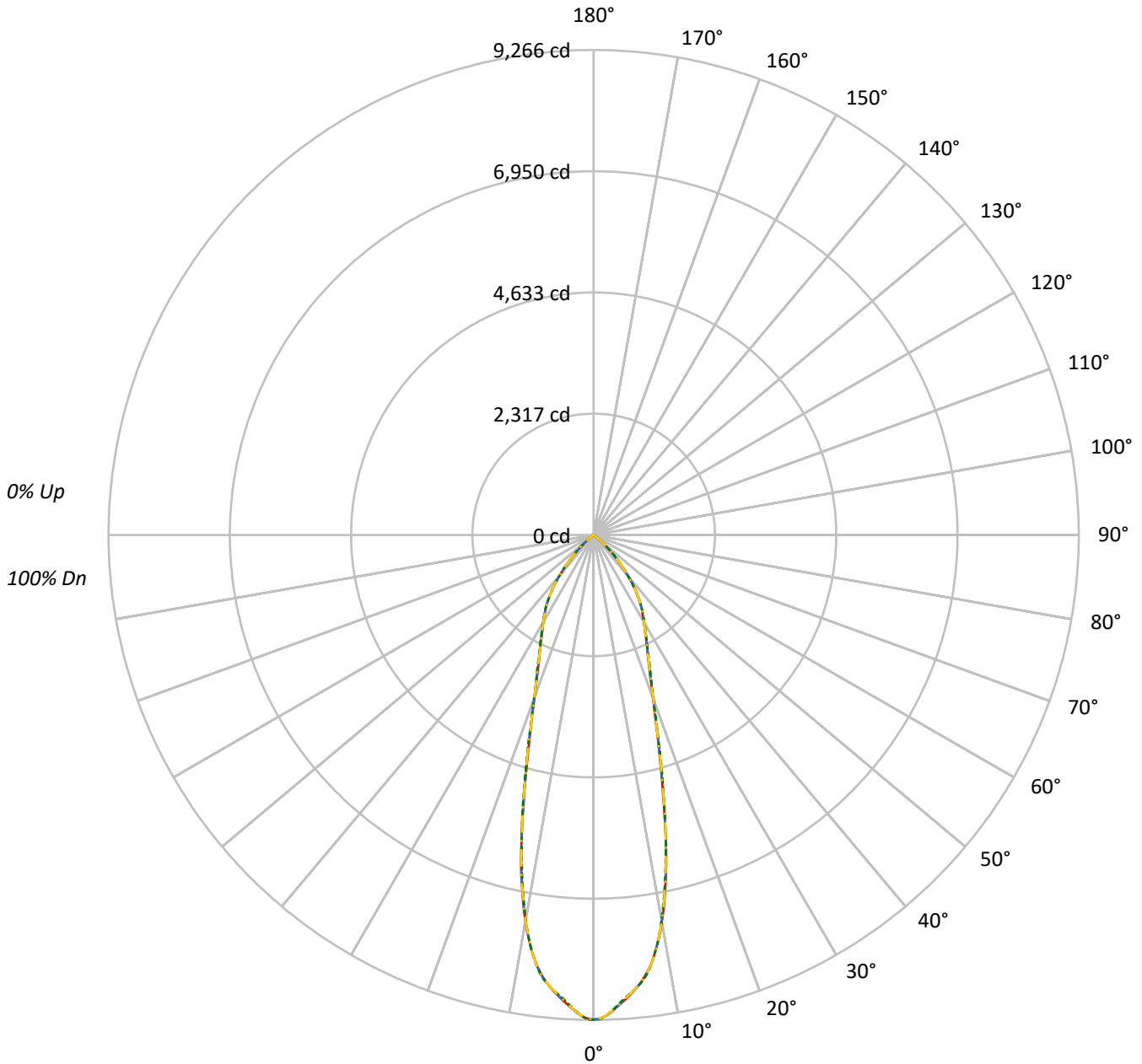
Lumens per Lamp: N/A
Luminaire Lumens: 4740.6 lumens
Efficiency: N/A
Efficacy: 123.1 lumens/watt
Spacing Criteria (0/90/45): 0.53 / 0.54 / 0.57
Luminous Opening: Circular (Dia: 0.5' x H: 0')
CIE Type: Direct

Input Watts (W): 38.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				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	0
RCR																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100			
1	114	111	109	107	111	109	107	105	105	103	102	101	100	99	98	97	96	94			
2	108	104	100	97	106	102	99	96	99	96	94	96	94	92	93	91	90	88			
3	103	97	92	89	101	96	91	88	93	90	87	91	88	85	89	86	84	82			
4	98	91	86	82	97	90	85	81	88	84	80	86	82	79	84	81	79	77			
5	94	86	80	76	92	85	80	76	83	79	75	81	77	74	80	77	74	72			
6	89	81	75	71	88	80	75	71	79	74	70	77	73	70	76	72	69	68			
7	85	76	71	67	84	76	70	67	75	70	66	73	69	66	72	68	65	64			
8	81	72	67	63	80	72	66	63	71	66	62	70	65	62	69	65	62	61			
9	78	69	63	59	77	68	63	59	67	63	59	67	62	59	66	62	59	57			
10	75	65	60	56	74	65	60	56	64	59	56	63	59	56	63	59	56	55			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	507695	507695	507695	507695
5°	481536	480997	481536	480997
10°	417650	415256	417650	415256
15°	290501	293912	290501	293912
20°	192791	194839	192791	194839
25°	146543	148617	146543	148617
30°	121171	122645	121171	122645
35°	101409	101489	101409	101489
40°	72221	73366	72221	73366
45°	40500	42501	40500	42501
50°	13782	16400	13782	16400
55°	975	2112	975	2112
60°	175	175	175	175
65°	104	104	104	104
70°	64	64	64	64
75°	85	85	85	85
80°	0	0	0	0
85°	0	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 45°

Luminance: 42501 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	798.6	16.8
10°-20°	1421.4	30.0
20°-30°	1135.0	23.9
30°-40°	929.1	19.6
40°-50°	419.6	8.9
50°-60°	35.9	0.8
60°-70°	0.8	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°	3354.9	70.8
0°-40°	4284.0	90.4
0°-60°	4739.5	100.0
0°-90°	4740.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4740.6	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	9261	9261	9261	9261	9261	
5°	8750	8741	8750	8741	8750	799
15°	5119	5179	5119	5179	5119	1419
25°	2423	2457	2423	2457	2423	1129
35°	1515	1516	1515	1516	1515	927
45°	522	548	522	548	522	412
55°	10	22	10	22	10	32
65°	1	1	1	1	1	1
75°	0	0	0	0	0	0
85°	0	0	0	0	0	0
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	9261.1	9261.1	9261.1	9261.1	9261.1	9261.1	9261.1	9261.1	9261.1	9261.1	9261.1
0.5°	9250.0	9250.0	9250.0	9251.7	9266.0	9251.7	9250.0	9250.0	9250.0	9250.0	9250.0
1°	9225.5	9225.5	9224.2	9224.7	9234.5	9224.7	9224.2	9225.5	9225.5	9225.5	9224.2
1.5°	9185.4	9185.0	9181.7	9179.7	9185.8	9179.7	9181.7	9185.0	9185.4	9185.0	9181.7
2°	9134.7	9132.2	9127.7	9122.8	9123.6	9122.8	9127.7	9132.2	9134.7	9132.2	9127.7
2.5°	9074.1	9072.5	9065.9	9057.7	9055.3	9057.7	9065.9	9072.5	9074.1	9072.5	9065.9
3°	9010.3	9008.2	9000.9	8989.8	8985.3	8989.8	9000.9	9008.2	9010.3	9008.2	9000.9
3.5°	8946.5	8943.6	8935.0	8924.0	8918.2	8924.0	8935.0	8943.6	8946.5	8943.6	8935.0
4°	8883.1	8878.6	8870.4	8861.8	8856.1	8861.8	8870.4	8878.6	8883.1	8878.6	8870.4
4.5°	8817.6	8813.5	8807.4	8801.7	8797.2	8801.7	8807.4	8813.5	8817.6	8813.5	8807.4
5°	8750.5	8747.7	8744.0	8741.5	8740.7	8741.5	8744.0	8747.7	8750.5	8747.7	8744.0
5.5°	8678.1	8676.5	8676.5	8678.1	8681.4	8678.1	8676.5	8676.5	8678.1	8676.5	8676.5
6°	8599.6	8599.6	8602.0	8608.6	8612.2	8608.6	8602.0	8599.6	8599.6	8599.6	8602.0
6.5°	8512.0	8514.1	8519.0	8525.9	8530.8	8525.9	8519.0	8514.1	8512.0	8514.1	8519.0
7°	8412.6	8416.7	8421.2	8428.6	8434.3	8428.6	8421.2	8416.7	8412.6	8416.7	8421.2
7.5°	8300.1	8301.7	8307.5	8312.8	8316.1	8312.8	8307.5	8301.7	8300.1	8301.7	8307.5
8°	8171.6	8172.5	8175.7	8179.0	8180.6	8179.0	8175.7	8172.5	8171.6	8172.5	8175.7
8.5°	8024.8	8024.8	8025.2	8024.4	8021.5	8024.4	8025.2	8024.8	8024.8	8024.8	8025.2
9°	7864.0	7863.6	7859.9	7854.2	7851.7	7854.2	7859.9	7863.6	7864.0	7863.6	7859.9
9.5°	7688.9	7687.7	7678.3	7670.1	7663.6	7670.1	7678.3	7687.7	7688.9	7687.7	7678.3
10°	7502.8	7498.7	7485.2	7470.1	7459.8	7470.1	7485.2	7498.7	7502.8	7498.7	7485.2
10.5°	7304.8	7296.2	7281.1	7262.6	7247.9	7262.6	7281.1	7296.2	7304.8	7296.2	7281.1
11°	7093.3	7085.9	7066.3	7051.1	7037.6	7051.1	7066.3	7085.9	7093.3	7085.9	7066.3
11.5°	6874.0	6867.5	6850.7	6828.6	6818.0	6828.6	6850.7	6867.5	6874.0	6867.5	6850.7
12°	6647.0	6641.6	6621.2	6600.7	6586.8	6600.7	6621.2	6641.6	6647.0	6641.6	6621.2
12.5°	6408.5	6399.5	6383.1	6363.5	6351.2	6363.5	6383.1	6399.5	6408.5	6399.5	6383.1
13°	6158.9	6154.4	6139.3	6127.8	6120.5	6127.8	6139.3	6154.4	6158.9	6154.4	6139.3
13.5°	5891.4	5894.6	5891.0	5886.9	5883.2	5886.9	5891.0	5894.6	5891.4	5894.6	5891.0
14°	5627.1	5632.8	5637.3	5643.0	5647.5	5643.0	5637.3	5632.8	5627.1	5632.8	5637.3
14.5°	5365.3	5374.3	5389.4	5404.1	5414.8	5404.1	5389.4	5374.3	5365.3	5374.3	5389.4
15°	5118.6	5125.9	5146.4	5165.6	5178.7	5165.6	5146.4	5125.9	5118.6	5125.9	5146.4
15.5°	4885.4	4895.2	4913.2	4934.5	4950.4	4934.5	4913.2	4895.2	4885.4	4895.2	4913.2
16°	4669.0	4675.1	4691.1	4716.4	4734.9	4716.4	4691.1	4675.1	4669.0	4675.1	4691.1
16.5°	4461.6	4466.5	4485.7	4508.6	4526.2	4508.6	4485.7	4466.5	4461.6	4466.5	4485.7
17°	4263.2	4268.5	4285.7	4308.6	4327.0	4308.6	4285.7	4268.5	4263.2	4268.5	4285.7
17.5°	4075.0	4080.3	4097.1	4115.9	4132.3	4115.9	4097.1	4080.3	4075.0	4080.3	4097.1
18°	3899.5	3904.0	3915.4	3933.4	3949.8	3933.4	3915.4	3904.0	3899.5	3904.0	3915.4
18.5°	3735.0	3736.3	3747.7	3769.8	3774.7	3769.8	3747.7	3736.3	3735.0	3736.3	3747.7
19°	3577.1	3580.4	3597.2	3618.0	3618.8	3618.0	3597.2	3580.4	3577.1	3580.4	3597.2
19.5°	3431.1	3440.1	3455.2	3473.2	3474.8	3473.2	3455.2	3440.1	3431.1	3440.1	3455.2
20°	3304.7	3306.7	3319.4	3337.8	3339.8	3337.8	3319.4	3306.7	3304.7	3306.7	3319.4
20.5°	3183.6	3186.8	3193.4	3209.8	3213.8	3209.8	3193.4	3186.8	3183.6	3186.8	3193.4
21°	3066.6	3071.9	3086.6	3096.4	3102.2	3096.4	3086.6	3071.9	3066.6	3071.9	3086.6



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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°	2777.7	2781.0	2799.0	2815.4	2830.9	2815.4	2799.0	2781.0	2777.7	2781.0	2799.0
23°	2698.0	2701.2	2712.7	2732.3	2749.9	2732.3	2712.7	2701.2	2698.0	2701.2	2712.7
23.5°	2622.7	2625.2	2636.2	2650.9	2670.6	2650.9	2636.2	2625.2	2622.7	2625.2	2636.2
24°	2551.5	2554.0	2563.8	2579.3	2592.4	2579.3	2563.8	2554.0	2551.5	2554.0	2563.8
24.5°	2485.7	2486.9	2494.7	2511.4	2522.1	2511.4	2494.7	2486.9	2485.7	2486.9	2494.7
25°	2422.7	2423.9	2430.0	2447.2	2457.0	2447.2	2430.0	2423.9	2422.7	2423.9	2430.0
25.5°	2362.1	2362.9	2369.5	2385.8	2394.8	2385.8	2369.5	2362.9	2362.1	2362.9	2369.5
26°	2304.0	2304.8	2311.0	2327.3	2336.3	2327.3	2311.0	2304.8	2304.0	2304.8	2311.0
26.5°	2247.2	2248.4	2254.1	2269.7	2278.7	2269.7	2254.1	2248.4	2247.2	2248.4	2254.1
27°	2194.0	2195.2	2200.1	2215.2	2225.5	2215.2	2200.1	2195.2	2194.0	2195.2	2200.1
27.5°	2143.7	2144.5	2149.0	2162.9	2172.7	2162.9	2149.0	2144.5	2143.7	2144.5	2149.0
28°	2095.0	2095.4	2100.3	2113.0	2122.0	2113.0	2100.3	2095.4	2095.0	2095.4	2100.3
28.5°	2047.9	2047.9	2052.8	2064.3	2073.7	2064.3	2052.8	2047.9	2047.9	2047.9	2052.8
29°	2002.5	2002.1	2006.2	2017.7	2026.2	2017.7	2006.2	2002.1	2002.5	2002.1	2006.2
29.5°	1957.1	1957.1	1962.0	1971.8	1980.4	1971.8	1962.0	1957.1	1957.1	1957.1	1962.0
30°	1914.2	1914.2	1919.1	1928.5	1937.5	1928.5	1919.1	1914.2	1914.2	1914.2	1919.1
30.5°	1872.8	1872.8	1877.3	1886.3	1894.9	1886.3	1877.3	1872.8	1872.8	1872.8	1877.3
31°	1833.6	1833.1	1838.5	1846.6	1855.2	1846.6	1838.5	1833.1	1833.6	1833.1	1838.5
31.5°	1795.9	1795.1	1799.6	1807.0	1815.6	1807.0	1799.6	1795.1	1795.9	1795.1	1799.6
32°	1759.9	1759.1	1763.2	1769.3	1775.5	1769.3	1763.2	1759.1	1759.9	1759.1	1763.2
32.5°	1723.9	1723.5	1725.1	1730.1	1734.1	1730.1	1725.1	1723.5	1723.9	1723.5	1725.1
33°	1686.7	1685.5	1685.5	1689.1	1692.8	1689.1	1685.5	1685.5	1686.7	1685.5	1685.5
33.5°	1647.0	1645.0	1645.4	1647.0	1652.3	1647.0	1645.4	1645.0	1647.0	1645.0	1645.4
34°	1604.9	1602.8	1602.8	1601.6	1607.3	1601.6	1602.8	1602.8	1604.9	1602.8	1602.8
34.5°	1561.1	1558.6	1559.5	1557.8	1562.7	1557.8	1559.5	1558.6	1561.1	1558.6	1559.5
35°	1515.3	1514.5	1514.1	1514.1	1516.5	1514.1	1514.1	1514.5	1515.3	1514.5	1514.1
35.5°	1468.6	1467.4	1467.0	1469.5	1469.5	1469.5	1467.0	1467.4	1468.6	1467.4	1467.0
36°	1420.8	1420.4	1420.4	1423.2	1421.2	1423.2	1420.4	1420.4	1420.8	1420.4	1420.4
36.5°	1370.9	1372.5	1372.5	1376.6	1373.3	1376.6	1372.5	1372.5	1370.9	1372.5	1372.5
37°	1320.6	1323.0	1324.6	1328.3	1324.2	1328.3	1324.6	1323.0	1320.6	1323.0	1324.6
37.5°	1271.1	1272.7	1278.0	1278.8	1275.6	1278.8	1278.0	1272.7	1271.1	1272.7	1278.0
38°	1221.1	1221.6	1228.1	1227.3	1226.9	1227.3	1228.1	1221.6	1221.1	1221.6	1228.1
38.5°	1170.4	1169.6	1177.4	1175.3	1177.0	1175.3	1177.4	1169.6	1170.4	1169.6	1177.4
39°	1117.2	1118.1	1126.6	1123.0	1127.5	1123.0	1126.6	1118.1	1117.2	1118.1	1126.6
39.5°	1063.2	1065.7	1075.5	1071.4	1076.3	1071.4	1075.5	1065.7	1063.2	1065.7	1075.5
40°	1009.2	1013.7	1024.0	1020.3	1025.2	1020.3	1024.0	1013.7	1009.2	1013.7	1024.0
40.5°	957.7	962.2	971.6	970.8	974.1	970.8	971.6	962.2	957.7	962.2	971.6
41°	907.0	911.1	919.2	920.9	922.9	920.9	919.2	911.1	907.0	911.1	919.2
41.5°	857.1	860.7	866.9	872.2	873.0	872.2	866.9	860.7	857.1	860.7	866.9
42°	807.6	810.4	815.3	823.1	823.9	823.1	815.3	810.4	807.6	810.4	815.3
42.5°	759.3	761.3	764.6	774.8	776.9	774.8	764.6	761.3	759.3	761.3	764.6
43°	710.6	712.2	714.7	726.1	729.8	726.1	714.7	712.2	710.6	712.2	714.7
43.5°	662.7	663.1	666.4	677.9	683.2	677.9	666.4	663.1	662.7	663.1	666.4



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	522.4	523.6	529.4	541.6	548.2	541.6	529.4	523.6	522.4	523.6	529.4
45.5°	479.0	480.7	486.4	499.1	504.8	499.1	486.4	480.7	479.0	480.7	486.4
46°	438.1	438.5	444.7	456.5	463.1	456.5	444.7	438.5	438.1	438.5	444.7
46.5°	397.6	398.5	403.8	414.8	423.0	414.8	403.8	398.5	397.6	398.5	403.8
47°	358.4	359.2	365.3	376.0	384.1	376.0	365.3	359.2	358.4	359.2	365.3
47.5°	319.5	322.0	329.3	338.3	348.1	338.3	329.3	322.0	319.5	322.0	329.3
48°	284.3	286.0	294.5	303.5	312.1	303.5	294.5	286.0	284.3	286.0	294.5
48.5°	250.4	252.0	261.4	270.8	279.8	270.8	261.4	252.0	250.4	252.0	261.4
49°	218.9	220.5	230.3	239.7	250.4	239.7	230.3	220.5	218.9	220.5	230.3
49.5°	189.0	192.3	201.3	210.7	221.3	210.7	201.3	192.3	189.0	192.3	201.3
50°	161.6	165.3	174.7	183.3	192.3	183.3	174.7	165.3	161.6	165.3	174.7
50.5°	136.2	142.0	150.1	157.5	163.2	157.5	150.1	142.0	136.2	142.0	150.1
51°	114.1	119.9	127.2	133.4	136.6	133.4	127.2	119.9	114.1	119.9	127.2
51.5°	96.1	100.2	105.5	112.1	114.5	112.1	105.5	100.2	96.1	100.2	105.5
52°	79.8	83.5	87.5	93.3	94.5	93.3	87.5	83.5	79.8	83.5	87.5
52.5°	65.5	67.1	72.0	76.9	76.1	76.9	72.0	67.1	65.5	67.1	72.0
53°	51.1	54.0	57.3	61.4	60.5	61.4	57.3	54.0	51.1	54.0	57.3
53.5°	36.8	40.9	44.2	47.0	46.6	47.0	44.2	40.9	36.8	40.9	44.2
54°	26.6	28.2	31.9	35.6	38.5	35.6	31.9	28.2	26.6	28.2	31.9
54.5°	16.8	18.8	22.9	25.4	30.3	25.4	22.9	18.8	16.8	18.8	22.9
55°	10.2	11.9	15.5	17.6	22.1	17.6	15.5	11.9	10.2	11.9	15.5
55.5°	7.4	7.4	9.0	11.0	14.3	11.0	9.0	7.4	7.4	9.0	11.0
56°	5.3	4.9	5.7	7.0	7.4	7.0	5.7	4.9	5.3	4.9	5.7
56.5°	3.7	3.3	4.1	5.3	4.1	5.3	4.1	3.3	3.7	3.3	4.1
57°	2.0	2.9	2.9	3.7	2.5	3.7	2.9	2.9	2.0	2.9	2.9
57.5°	2.0	2.0	2.0	2.9	2.0	2.9	2.0	2.0	2.0	2.0	2.0
58°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
58.5°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
59°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
59.5°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
60°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
60.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
61°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
61.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
62°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
62.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
63°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
63.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
64°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
64.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
65°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
65.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
66°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8



TEST NUMBER: P776364

CATALOG NUMBER: HCDJBL3040CSD-HCD62TRC-4000lm-5000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	0.8	0.8	0.8	0.8	0.4	0.8	0.8	0.8	0.8	0.8	0.8
68°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
68.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
69°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
69.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
70°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
70.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
71°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
71.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
72°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
72.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
73°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
73.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
74°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
74.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
75°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
75.5°	0.0	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.0	0.4	0.4
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: P776364
CATALOG NUMBER: HCDJBL3040CSD-HCD62TRC-4000lm-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: P776364

CATALOG NUMBER: HCDJBL3040CSD-HCD62TRC-4000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	9261.1	9261.1	9261.1	9261.1	9261.1	9261.1
0.5°	9251.7	9266.0	9251.7	9250.0	9250.0	9250.0
1°	9224.7	9234.5	9224.7	9224.2	9225.5	9225.5
1.5°	9179.7	9185.8	9179.7	9181.7	9185.0	9185.4
2°	9122.8	9123.6	9122.8	9127.7	9132.2	9134.7
2.5°	9057.7	9055.3	9057.7	9065.9	9072.5	9074.1
3°	8989.8	8985.3	8989.8	9000.9	9008.2	9010.3
3.5°	8924.0	8918.2	8924.0	8935.0	8943.6	8946.5
4°	8861.8	8856.1	8861.8	8870.4	8878.6	8883.1
4.5°	8801.7	8797.2	8801.7	8807.4	8813.5	8817.6
5°	8741.5	8740.7	8741.5	8744.0	8747.7	8750.5
5.5°	8678.1	8681.4	8678.1	8676.5	8676.5	8678.1
6°	8608.6	8612.2	8608.6	8602.0	8599.6	8599.6
6.5°	8525.9	8530.8	8525.9	8519.0	8514.1	8512.0
7°	8428.6	8434.3	8428.6	8421.2	8416.7	8412.6
7.5°	8312.8	8316.1	8312.8	8307.5	8301.7	8300.1
8°	8179.0	8180.6	8179.0	8175.7	8172.5	8171.6
8.5°	8024.4	8021.5	8024.4	8025.2	8024.8	8024.8
9°	7854.2	7851.7	7854.2	7859.9	7863.6	7864.0
9.5°	7670.1	7663.6	7670.1	7678.3	7687.7	7688.9
10°	7470.1	7459.8	7470.1	7485.2	7498.7	7502.8
10.5°	7262.6	7247.9	7262.6	7281.1	7296.2	7304.8
11°	7051.1	7037.6	7051.1	7066.3	7085.9	7093.3
11.5°	6828.6	6818.0	6828.6	6850.7	6867.5	6874.0
12°	6600.7	6586.8	6600.7	6621.2	6641.6	6647.0
12.5°	6363.5	6351.2	6363.5	6383.1	6399.5	6408.5
13°	6127.8	6120.5	6127.8	6139.3	6154.4	6158.9
13.5°	5886.9	5883.2	5886.9	5891.0	5894.6	5891.4
14°	5643.0	5647.5	5643.0	5637.3	5632.8	5627.1
14.5°	5404.1	5414.8	5404.1	5389.4	5374.3	5365.3
15°	5165.6	5178.7	5165.6	5146.4	5125.9	5118.6
15.5°	4934.5	4950.4	4934.5	4913.2	4895.2	4885.4
16°	4716.4	4734.9	4716.4	4691.1	4675.1	4669.0
16.5°	4508.6	4526.2	4508.6	4485.7	4466.5	4461.6
17°	4308.6	4327.0	4308.6	4285.7	4268.5	4263.2
17.5°	4115.9	4132.3	4115.9	4097.1	4080.3	4075.0
18°	3933.4	3949.8	3933.4	3915.4	3904.0	3899.5
18.5°	3769.8	3774.7	3769.8	3747.7	3736.3	3735.0
19°	3618.0	3618.8	3618.0	3597.2	3580.4	3577.1
19.5°	3473.2	3474.8	3473.2	3455.2	3440.1	3431.1
20°	3337.8	3339.8	3337.8	3319.4	3306.7	3304.7
20.5°	3209.8	3213.8	3209.8	3193.4	3186.8	3183.6
21°	3096.4	3102.2	3096.4	3086.6	3071.9	3066.6



TEST NUMBER: P776364

CATALOG NUMBER: HCDJBL3040CSD-HCD62TRC-4000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	2815.4	2830.9	2815.4	2799.0	2781.0	2777.7
23°	2732.3	2749.9	2732.3	2712.7	2701.2	2698.0
23.5°	2650.9	2670.6	2650.9	2636.2	2625.2	2622.7
24°	2579.3	2592.4	2579.3	2563.8	2554.0	2551.5
24.5°	2511.4	2522.1	2511.4	2494.7	2486.9	2485.7
25°	2447.2	2457.0	2447.2	2430.0	2423.9	2422.7
25.5°	2385.8	2394.8	2385.8	2369.5	2362.9	2362.1
26°	2327.3	2336.3	2327.3	2311.0	2304.8	2304.0
26.5°	2269.7	2278.7	2269.7	2254.1	2248.4	2247.2
27°	2215.2	2225.5	2215.2	2200.1	2195.2	2194.0
27.5°	2162.9	2172.7	2162.9	2149.0	2144.5	2143.7
28°	2113.0	2122.0	2113.0	2100.3	2095.4	2095.0
28.5°	2064.3	2073.7	2064.3	2052.8	2047.9	2047.9
29°	2017.7	2026.2	2017.7	2006.2	2002.1	2002.5
29.5°	1971.8	1980.4	1971.8	1962.0	1957.1	1957.1
30°	1928.5	1937.5	1928.5	1919.1	1914.2	1914.2
30.5°	1886.3	1894.9	1886.3	1877.3	1872.8	1872.8
31°	1846.6	1855.2	1846.6	1838.5	1833.1	1833.6
31.5°	1807.0	1815.6	1807.0	1799.6	1795.1	1795.9
32°	1769.3	1775.5	1769.3	1763.2	1759.1	1759.9
32.5°	1730.1	1734.1	1730.1	1725.1	1723.5	1723.9
33°	1689.1	1692.8	1689.1	1685.5	1685.5	1686.7
33.5°	1647.0	1652.3	1647.0	1645.4	1645.0	1647.0
34°	1601.6	1607.3	1601.6	1602.8	1602.8	1604.9
34.5°	1557.8	1562.7	1557.8	1559.5	1558.6	1561.1
35°	1514.1	1516.5	1514.1	1514.1	1514.5	1515.3
35.5°	1469.5	1469.5	1469.5	1467.0	1467.4	1468.6
36°	1423.2	1421.2	1423.2	1420.4	1420.4	1420.8
36.5°	1376.6	1373.3	1376.6	1372.5	1372.5	1370.9
37°	1328.3	1324.2	1328.3	1324.6	1323.0	1320.6
37.5°	1278.8	1275.6	1278.8	1278.0	1272.7	1271.1
38°	1227.3	1226.9	1227.3	1228.1	1221.6	1221.1
38.5°	1175.3	1177.0	1175.3	1177.4	1169.6	1170.4
39°	1123.0	1127.5	1123.0	1126.6	1118.1	1117.2
39.5°	1071.4	1076.3	1071.4	1075.5	1065.7	1063.2
40°	1020.3	1025.2	1020.3	1024.0	1013.7	1009.2
40.5°	970.8	974.1	970.8	971.6	962.2	957.7
41°	920.9	922.9	920.9	919.2	911.1	907.0
41.5°	872.2	873.0	872.2	866.9	860.7	857.1
42°	823.1	823.9	823.1	815.3	810.4	807.6
42.5°	774.8	776.9	774.8	764.6	761.3	759.3
43°	726.1	729.8	726.1	714.7	712.2	710.6
43.5°	677.9	683.2	677.9	666.4	663.1	662.7



TEST NUMBER: P776364

CATALOG NUMBER: HCDJBL3040CSD-HCD62TRC-4000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	541.6	548.2	541.6	529.4	523.6	522.4
45.5°	499.1	504.8	499.1	486.4	480.7	479.0
46°	456.5	463.1	456.5	444.7	438.5	438.1
46.5°	414.8	423.0	414.8	403.8	398.5	397.6
47°	376.0	384.1	376.0	365.3	359.2	358.4
47.5°	338.3	348.1	338.3	329.3	322.0	319.5
48°	303.5	312.1	303.5	294.5	286.0	284.3
48.5°	270.8	279.8	270.8	261.4	252.0	250.4
49°	239.7	250.4	239.7	230.3	220.5	218.9
49.5°	210.7	221.3	210.7	201.3	192.3	189.0
50°	183.3	192.3	183.3	174.7	165.3	161.6
50.5°	157.5	163.2	157.5	150.1	142.0	136.2
51°	133.4	136.6	133.4	127.2	119.9	114.1
51.5°	112.1	114.5	112.1	105.5	100.2	96.1
52°	93.3	94.5	93.3	87.5	83.5	79.8
52.5°	76.9	76.1	76.9	72.0	67.1	65.5
53°	61.4	60.5	61.4	57.3	54.0	51.1
53.5°	47.0	46.6	47.0	44.2	40.9	36.8
54°	35.6	38.5	35.6	31.9	28.2	26.6
54.5°	25.4	30.3	25.4	22.9	18.8	16.8
55°	17.6	22.1	17.6	15.5	11.9	10.2
55.5°	11.0	14.3	11.0	9.0	7.4	7.4
56°	7.0	7.4	7.0	5.7	4.9	5.3
56.5°	5.3	4.1	5.3	4.1	3.3	3.7
57°	3.7	2.5	3.7	2.9	2.9	2.0
57.5°	2.9	2.0	2.9	2.0	2.0	2.0
58°	2.0	2.0	2.0	2.0	2.0	2.0
58.5°	1.6	1.6	1.6	1.6	1.6	1.6
59°	1.6	1.6	1.6	1.6	1.6	1.6
59.5°	1.6	1.6	1.6	1.6	1.6	1.6
60°	1.6	1.6	1.6	1.6	1.6	1.6
60.5°	1.2	1.2	1.2	1.2	1.2	1.2
61°	1.2	1.2	1.2	1.2	1.2	1.2
61.5°	1.2	1.2	1.2	1.2	1.2	1.2
62°	1.2	1.2	1.2	1.2	1.2	1.2
62.5°	1.2	1.2	1.2	1.2	1.2	1.2
63°	1.2	1.2	1.2	1.2	1.2	1.2
63.5°	0.8	0.8	0.8	0.8	0.8	0.8
64°	0.8	0.8	0.8	0.8	0.8	0.8
64.5°	0.8	0.8	0.8	0.8	0.8	0.8
65°	0.8	0.8	0.8	0.8	0.8	0.8
65.5°	0.8	0.8	0.8	0.8	0.8	0.8
66°	0.8	0.8	0.8	0.8	0.8	0.8



TEST NUMBER: P776364

CATALOG NUMBER: HCDJBL3040CSD-HCD62TRC-4000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	0.8	0.4	0.8	0.8	0.8	0.8
68°	0.4	0.4	0.4	0.4	0.4	0.4
68.5°	0.4	0.4	0.4	0.4	0.4	0.4
69°	0.4	0.4	0.4	0.4	0.4	0.4
69.5°	0.4	0.4	0.4	0.4	0.4	0.4
70°	0.4	0.4	0.4	0.4	0.4	0.4
70.5°	0.4	0.4	0.4	0.4	0.4	0.4
71°	0.4	0.4	0.4	0.4	0.4	0.4
71.5°	0.4	0.4	0.4	0.4	0.4	0.4
72°	0.4	0.4	0.4	0.4	0.4	0.4
72.5°	0.4	0.4	0.4	0.4	0.4	0.4
73°	0.4	0.4	0.4	0.4	0.4	0.4
73.5°	0.4	0.4	0.4	0.4	0.4	0.4
74°	0.4	0.4	0.4	0.4	0.4	0.4
74.5°	0.4	0.4	0.4	0.4	0.4	0.4
75°	0.4	0.4	0.4	0.4	0.4	0.4
75.5°	0.4	0.4	0.4	0.4	0.4	0.0
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: P776364

CATALOG NUMBER: HCDJBL3040CSD-HCD62TRC-4000lm-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
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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





21.5°	2956.1	2968.0	2985.6	2996.2	2999.5	2996.2	2985.6	2968.0	2956.1	2968.0	2985.6
22°	2865.3	2871.8	2889.4	2903.7	2913.6	2903.7	2889.4	2871.8	2865.3	2871.8	2889.4



44°	614.0	615.3	619.0	630.4	637.4	630.4	619.0	615.3	614.0	615.3	619.0
44.5°	567.8	569.0	572.7	585.8	592.4	585.8	572.7	569.0	567.8	569.0	572.7



66.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
67°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8



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°	2996.2	2999.5	2996.2	2985.6	2968.0	2956.1
22°	2903.7	2913.6	2903.7	2889.4	2871.8	2865.3



44°	630.4	637.4	630.4	619.0	615.3	614.0
44.5°	585.8	592.4	585.8	572.7	569.0	567.8

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Scaled Data Report



66.5°	0.8	0.8	0.8	0.8	0.8	0.8
67°	0.8	0.8	0.8	0.8	0.8	0.8

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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)