

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: P776360

Luminaire Tested: HCDJBL3040CSD-HCD62TRC-4000lm-2700K

Issue Date: 2/13/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P776360  
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: HCDJBL3040CSD-HCD62TRC-4000lm-2700K  
Description: 6 INCH ROUND NARROW SPECULAR CLEAR TRIM  
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 2700K CCT  
Ballast/Driver: -

**Summary**

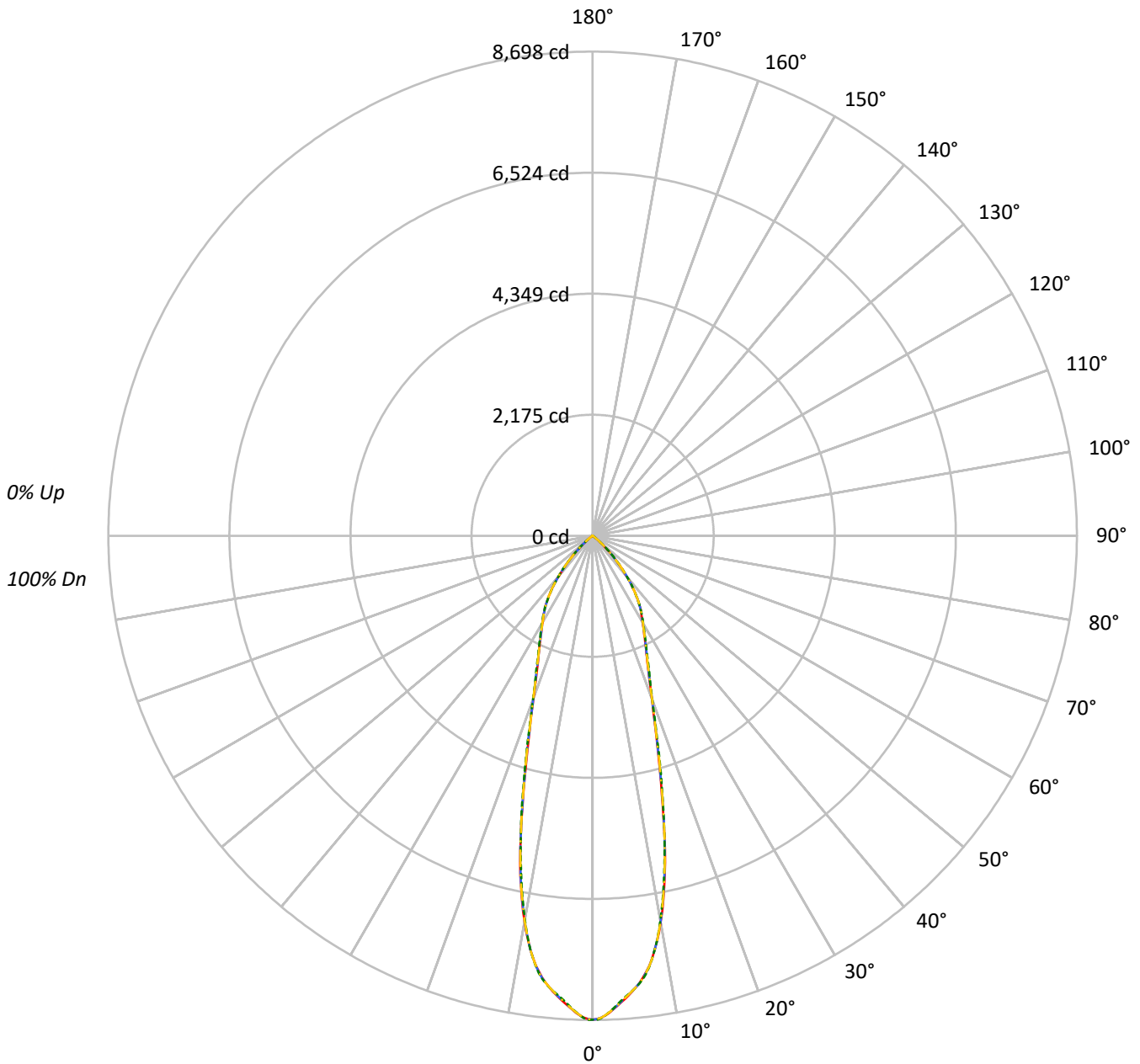
Lumens per Lamp: N/A  
Luminaire Lumens: 4450.1 lumens  
Efficiency: N/A  
Efficacy: 115.6 lumens/watt  
Spacing Criteria (0/90/45): 0.53 / 0.54 / 0.57  
Luminous Opening: Circular (Dia: 0.5' x H: 0')  
CIE Type: Direct

Input Watts (W): 38.5  
Input Voltage (V): NR  
Input Current (A<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: P776360  
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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									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°	476579	476579	476579	476579
5°	452029	451518	452029	451518
10°	392055	389811	392055	389811
15°	272697	275898	272697	275898
20°	180972	182903	180972	182903
25°	137560	139508	137560	139508
30°	113739	115125	113739	115125
35°	95191	95272	95191	95272
40°	67798	68872	67798	68872
45°	38019	39896	38019	39896
50°	12938	15394	12938	15394
55°	918	1978	918	1978
60°	164	164	164	164
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: 39896 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	749.7	16.8
10°-20°	1334.3	30.0
20°-30°	1065.4	23.9
30°-40°	872.1	19.6
40°-50°	393.9	8.9
50°-60°	33.7	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°	3149.3	70.8
0°-40°	4021.5	90.4
0°-60°	4449.0	100.0
0°-90°	4450.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4450.1	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	8694	8694	8694	8694	8694	
5°	8214	8205	8214	8205	8214	750
15°	4805	4861	4805	4861	4805	1332
25°	2274	2306	2274	2306	2274	1059
35°	1422	1424	1422	1424	1422	870
45°	490	515	490	515	490	387
55°	10	21	10	21	10	30
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°	8693.5	8693.5	8693.5	8693.5	8693.5	8693.5	8693.5	8693.5	8693.5	8693.5	8693.5
0.5°	8683.1	8683.1	8683.1	8684.7	8698.1	8684.7	8683.1	8683.1	8683.1	8683.1	8683.1
1°	8660.1	8660.1	8658.9	8659.3	8668.5	8659.3	8658.9	8660.1	8660.1	8660.1	8658.9
1.5°	8622.5	8622.1	8619.0	8617.1	8622.9	8617.1	8619.0	8622.1	8622.5	8622.1	8619.0
2°	8574.8	8572.5	8568.3	8563.7	8564.5	8563.7	8568.3	8572.5	8574.8	8572.5	8568.3
2.5°	8518.0	8516.5	8510.3	8502.7	8500.3	8502.7	8510.3	8516.5	8518.0	8516.5	8510.3
3°	8458.1	8456.2	8449.3	8438.9	8434.7	8438.9	8449.3	8456.2	8458.1	8456.2	8449.3
3.5°	8398.2	8395.5	8387.4	8377.1	8371.7	8377.1	8387.4	8395.5	8398.2	8395.5	8387.4
4°	8338.7	8334.4	8326.8	8318.7	8313.3	8318.7	8326.8	8334.4	8338.7	8334.4	8326.8
4.5°	8277.2	8273.4	8267.6	8262.3	8258.0	8262.3	8267.6	8273.4	8277.2	8273.4	8267.6
5°	8214.3	8211.6	8208.1	8205.8	8205.0	8205.8	8208.1	8211.6	8214.3	8211.6	8208.1
5.5°	8146.3	8144.7	8144.7	8146.3	8149.4	8146.3	8144.7	8144.7	8146.3	8144.7	8144.7
6°	8072.5	8072.5	8074.9	8081.0	8084.5	8081.0	8074.9	8072.5	8072.5	8072.5	8074.9
6.5°	7990.4	7992.3	7996.9	8003.4	8008.0	8003.4	7996.9	7992.3	7990.4	7992.3	7996.9
7°	7897.0	7900.9	7905.1	7912.0	7917.4	7912.0	7905.1	7900.9	7897.0	7900.9	7905.1
7.5°	7791.4	7793.0	7798.4	7803.3	7806.4	7803.3	7798.4	7793.0	7791.4	7793.0	7798.4
8°	7670.9	7671.6	7674.7	7677.8	7679.3	7677.8	7674.7	7671.6	7670.9	7671.6	7674.7
8.5°	7533.0	7533.0	7533.4	7532.6	7529.9	7532.6	7533.4	7533.0	7533.0	7533.0	7533.4
9°	7382.1	7381.7	7378.2	7372.9	7370.6	7372.9	7378.2	7381.7	7382.1	7381.7	7378.2
9.5°	7217.7	7216.6	7207.7	7200.0	7193.9	7200.0	7207.7	7216.6	7217.7	7216.6	7207.7
10°	7043.0	7039.1	7026.5	7012.3	7002.7	7012.3	7026.5	7039.1	7043.0	7039.1	7026.5
10.5°	6857.1	6849.0	6834.8	6817.6	6803.7	6817.6	6834.8	6849.0	6857.1	6849.0	6834.8
11°	6658.6	6651.7	6633.2	6619.0	6606.3	6619.0	6633.2	6651.7	6658.6	6651.7	6633.2
11.5°	6452.7	6446.6	6430.8	6410.1	6400.1	6410.1	6430.8	6446.6	6452.7	6446.6	6430.8
12°	6239.6	6234.6	6215.4	6196.2	6183.2	6196.2	6215.4	6234.6	6239.6	6234.6	6215.4
12.5°	6015.7	6007.3	5991.9	5973.5	5962.0	5973.5	5991.9	6007.3	6015.7	6007.3	5991.9
13°	5781.5	5777.2	5763.0	5752.3	5745.4	5752.3	5763.0	5777.2	5781.5	5777.2	5763.0
13.5°	5530.3	5533.4	5529.9	5526.1	5522.6	5526.1	5529.9	5533.4	5530.3	5533.4	5529.9
14°	5282.2	5287.6	5291.8	5297.2	5301.4	5297.2	5291.8	5287.6	5282.2	5287.6	5291.8
14.5°	5036.5	5044.9	5059.1	5072.9	5082.9	5072.9	5059.1	5044.9	5036.5	5044.9	5059.1
15°	4804.9	4811.8	4831.0	4849.1	4861.3	4849.1	4831.0	4811.8	4804.9	4811.8	4831.0
15.5°	4586.0	4595.2	4612.1	4632.1	4647.1	4632.1	4612.1	4595.2	4586.0	4595.2	4612.1
16°	4382.9	4388.6	4403.6	4427.4	4444.7	4427.4	4403.6	4388.6	4382.9	4388.6	4403.6
16.5°	4188.2	4192.8	4210.8	4232.3	4248.8	4232.3	4210.8	4192.8	4188.2	4192.8	4210.8
17°	4001.9	4006.9	4023.0	4044.5	4061.8	4044.5	4023.0	4006.9	4001.9	4006.9	4023.0
17.5°	3825.3	3830.2	3846.0	3863.7	3879.0	3863.7	3846.0	3830.2	3825.3	3830.2	3846.0
18°	3660.5	3664.7	3675.5	3692.4	3707.7	3692.4	3675.5	3664.7	3660.5	3664.7	3675.5
18.5°	3506.1	3507.3	3518.0	3538.8	3543.4	3538.8	3518.0	3507.3	3506.1	3507.3	3518.0
19°	3357.9	3361.0	3376.7	3396.3	3397.1	3396.3	3376.7	3361.0	3357.9	3361.0	3376.7
19.5°	3220.8	3229.2	3243.5	3260.4	3261.9	3260.4	3243.5	3229.2	3220.8	3229.2	3243.5
20°	3102.1	3104.1	3116.0	3133.2	3135.2	3133.2	3116.0	3104.1	3102.1	3104.1	3116.0
20.5°	2988.5	2991.5	2997.7	3013.0	3016.9	3013.0	2997.7	2991.5	2988.5	2991.5	2997.7
21°	2878.6	2883.6	2897.5	2906.7	2912.0	2906.7	2897.5	2883.6	2878.6	2883.6	2897.5



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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°	2607.5	2610.6	2627.5	2642.8	2657.4	2642.8	2627.5	2610.6	2607.5	2610.6	2627.5
23°	2532.6	2535.7	2546.5	2564.9	2581.4	2564.9	2546.5	2535.7	2532.6	2535.7	2546.5
23.5°	2462.0	2464.3	2474.6	2488.5	2506.9	2488.5	2474.6	2464.3	2462.0	2464.3	2474.6
24°	2395.2	2397.5	2406.7	2421.3	2433.6	2421.3	2406.7	2397.5	2395.2	2397.5	2406.7
24.5°	2333.3	2334.5	2341.8	2357.5	2367.5	2357.5	2341.8	2334.5	2333.3	2334.5	2341.8
25°	2274.2	2275.3	2281.1	2297.2	2306.4	2297.2	2281.1	2275.3	2274.2	2275.3	2281.1
25.5°	2217.3	2218.1	2224.3	2239.6	2248.1	2239.6	2224.3	2218.1	2217.3	2218.1	2224.3
26°	2162.8	2163.6	2169.3	2184.7	2193.2	2184.7	2169.3	2163.6	2162.8	2163.6	2169.3
26.5°	2109.4	2110.6	2116.0	2130.6	2139.0	2130.6	2116.0	2110.6	2109.4	2110.6	2116.0
27°	2059.5	2060.7	2065.3	2079.5	2089.1	2079.5	2065.3	2060.7	2059.5	2060.7	2065.3
27.5°	2012.3	2013.0	2017.3	2030.3	2039.5	2030.3	2017.3	2013.0	2012.3	2013.0	2017.3
28°	1966.6	1967.0	1971.6	1983.5	1991.9	1983.5	1971.6	1967.0	1966.6	1967.0	1971.6
28.5°	1922.4	1922.4	1927.0	1937.8	1946.6	1937.8	1927.0	1922.4	1922.4	1922.4	1927.0
29°	1879.8	1879.4	1883.2	1894.0	1902.1	1894.0	1883.2	1879.4	1879.8	1879.4	1883.2
29.5°	1837.2	1837.2	1841.8	1851.0	1859.1	1851.0	1841.8	1837.2	1837.2	1837.2	1841.8
30°	1796.8	1796.8	1801.5	1810.3	1818.7	1810.3	1801.5	1796.8	1796.8	1796.8	1801.5
30.5°	1758.1	1758.1	1762.3	1770.7	1778.8	1770.7	1762.3	1758.1	1758.1	1758.1	1762.3
31°	1721.2	1720.8	1725.8	1733.5	1741.5	1733.5	1725.8	1720.8	1721.2	1720.8	1725.8
31.5°	1685.9	1685.1	1689.3	1696.2	1704.3	1696.2	1689.3	1685.1	1685.9	1685.1	1689.3
32°	1652.1	1651.3	1655.1	1660.9	1666.7	1660.9	1655.1	1651.3	1652.1	1651.3	1655.1
32.5°	1618.3	1617.9	1619.4	1624.0	1627.9	1624.0	1619.4	1617.9	1618.3	1617.9	1619.4
33°	1583.3	1582.2	1582.2	1585.6	1589.1	1585.6	1582.2	1582.2	1583.3	1582.2	1582.2
33.5°	1546.1	1544.2	1544.5	1546.1	1551.1	1546.1	1544.5	1544.2	1546.1	1544.2	1544.5
34°	1506.5	1504.6	1504.6	1503.4	1508.8	1503.4	1504.6	1504.6	1506.5	1504.6	1504.6
34.5°	1465.4	1463.1	1463.9	1462.4	1467.0	1462.4	1463.9	1463.1	1465.4	1463.1	1463.9
35°	1422.4	1421.7	1421.3	1421.3	1423.6	1421.3	1421.3	1421.7	1422.4	1421.7	1421.3
35.5°	1378.6	1377.5	1377.1	1379.4	1379.4	1379.4	1377.1	1377.5	1378.6	1377.5	1377.1
36°	1333.7	1333.3	1333.3	1336.0	1334.1	1336.0	1333.3	1333.3	1333.7	1333.3	1333.3
36.5°	1286.9	1288.4	1288.4	1292.2	1289.2	1292.2	1288.4	1288.4	1286.9	1288.4	1288.4
37°	1239.6	1241.9	1243.5	1246.9	1243.1	1246.9	1243.5	1241.9	1239.6	1241.9	1243.5
37.5°	1193.2	1194.7	1199.7	1200.5	1197.4	1200.5	1199.7	1194.7	1193.2	1194.7	1199.7
38°	1146.3	1146.7	1152.8	1152.1	1151.7	1152.1	1152.8	1146.7	1146.3	1146.7	1152.8
38.5°	1098.7	1097.9	1105.2	1103.3	1104.8	1103.3	1105.2	1097.9	1098.7	1097.9	1105.2
39°	1048.8	1049.5	1057.6	1054.1	1058.4	1054.1	1057.6	1049.5	1048.8	1049.5	1057.6
39.5°	998.1	1000.4	1009.6	1005.8	1010.4	1005.8	1009.6	1000.4	998.1	1000.4	1009.6
40°	947.4	951.6	961.2	957.8	962.4	957.8	961.2	951.6	947.4	951.6	961.2
40.5°	899.0	903.2	912.1	911.3	914.4	911.3	912.1	903.2	899.0	903.2	912.1
41°	851.4	855.2	862.9	864.4	866.4	864.4	862.9	855.2	851.4	855.2	862.9
41.5°	804.5	808.0	813.7	818.7	819.5	818.7	813.7	808.0	804.5	808.0	813.7
42°	758.1	760.7	765.4	772.7	773.4	772.7	765.4	760.7	758.1	760.7	765.4
42.5°	712.7	714.7	717.7	727.3	729.3	727.3	717.7	714.7	712.7	714.7	717.7
43°	667.0	668.6	670.9	681.6	685.1	681.6	670.9	668.6	667.0	668.6	670.9
43.5°	622.1	622.5	625.6	636.3	641.3	636.3	625.6	622.5	622.1	622.5	625.6



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	490.4	491.5	496.9	508.4	514.6	508.4	496.9	491.5	490.4	491.5	496.9
45.5°	449.7	451.2	456.6	468.5	473.9	468.5	456.6	451.2	449.7	451.2	456.6
46°	411.3	411.7	417.4	428.6	434.7	428.6	417.4	411.7	411.3	411.7	417.4
46.5°	373.3	374.0	379.0	389.4	397.1	389.4	379.0	374.0	373.3	374.0	379.0
47°	336.4	337.2	342.9	352.9	360.6	352.9	342.9	337.2	336.4	337.2	342.9
47.5°	299.9	302.2	309.1	317.6	326.8	317.6	309.1	302.2	299.9	302.2	309.1
48°	266.9	268.4	276.5	284.9	293.0	284.9	276.5	268.4	266.9	268.4	276.5
48.5°	235.0	236.6	245.4	254.2	262.7	254.2	245.4	236.6	235.0	236.6	245.4
49°	205.5	207.0	216.2	225.0	235.0	225.0	216.2	207.0	205.5	207.0	216.2
49.5°	177.4	180.5	188.9	197.8	207.8	197.8	188.9	180.5	177.4	180.5	188.9
50°	151.7	155.1	164.0	172.0	180.5	172.0	164.0	155.1	151.7	155.1	164.0
50.5°	127.9	133.3	140.9	147.8	153.2	147.8	140.9	133.3	127.9	133.3	140.9
51°	107.1	112.5	119.4	125.2	128.3	125.2	119.4	112.5	107.1	112.5	119.4
51.5°	90.2	94.1	99.1	105.2	107.5	105.2	99.1	94.1	90.2	94.1	99.1
52°	74.9	78.3	82.2	87.6	88.7	87.6	82.2	78.3	74.9	78.3	82.2
52.5°	61.4	63.0	67.6	72.2	71.4	72.2	67.6	63.0	61.4	63.0	67.6
53°	48.0	50.7	53.8	57.6	56.8	57.6	53.8	50.7	48.0	50.7	53.8
53.5°	34.6	38.4	41.5	44.2	43.8	44.2	41.5	38.4	34.6	38.4	41.5
54°	25.0	26.5	30.0	33.4	36.1	33.4	30.0	26.5	25.0	26.5	30.0
54.5°	15.7	17.7	21.5	23.8	28.4	23.8	21.5	17.7	15.7	17.7	21.5
55°	9.6	11.1	14.6	16.5	20.7	16.5	14.6	11.1	9.6	11.1	14.6
55.5°	6.9	6.9	8.4	10.4	13.4	10.4	8.4	6.9	6.9	8.4	10.4
56°	5.0	4.6	5.4	6.5	6.9	6.5	5.4	4.6	5.0	4.6	5.4
56.5°	3.5	3.1	3.8	5.0	3.8	5.0	3.8	3.1	3.5	3.1	3.8
57°	1.9	2.7	2.7	3.5	2.3	3.5	2.7	2.7	1.9	2.7	2.7
57.5°	1.9	1.9	1.9	2.7	1.9	2.7	1.9	1.9	1.9	1.9	1.9
58°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
58.5°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
59°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
59.5°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
60°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
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: P776360

CATALOG NUMBER: HCDJBL3040CSD-HCD62TRC-4000lm-2700K

**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: P776360  
CATALOG NUMBER: HCDJBL3040CSD-HCD62TRC-4000lm-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: P776360

CATALOG NUMBER: HCDJBL3040CSD-HCD62TRC-4000lm-2700K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	8693.5	8693.5	8693.5	8693.5	8693.5	8693.5
0.5°	8684.7	8698.1	8684.7	8683.1	8683.1	8683.1
1°	8659.3	8668.5	8659.3	8658.9	8660.1	8660.1
1.5°	8617.1	8622.9	8617.1	8619.0	8622.1	8622.5
2°	8563.7	8564.5	8563.7	8568.3	8572.5	8574.8
2.5°	8502.7	8500.3	8502.7	8510.3	8516.5	8518.0
3°	8438.9	8434.7	8438.9	8449.3	8456.2	8458.1
3.5°	8377.1	8371.7	8377.1	8387.4	8395.5	8398.2
4°	8318.7	8313.3	8318.7	8326.8	8334.4	8338.7
4.5°	8262.3	8258.0	8262.3	8267.6	8273.4	8277.2
5°	8205.8	8205.0	8205.8	8208.1	8211.6	8214.3
5.5°	8146.3	8149.4	8146.3	8144.7	8144.7	8146.3
6°	8081.0	8084.5	8081.0	8074.9	8072.5	8072.5
6.5°	8003.4	8008.0	8003.4	7996.9	7992.3	7990.4
7°	7912.0	7917.4	7912.0	7905.1	7900.9	7897.0
7.5°	7803.3	7806.4	7803.3	7798.4	7793.0	7791.4
8°	7677.8	7679.3	7677.8	7674.7	7671.6	7670.9
8.5°	7532.6	7529.9	7532.6	7533.4	7533.0	7533.0
9°	7372.9	7370.6	7372.9	7378.2	7381.7	7382.1
9.5°	7200.0	7193.9	7200.0	7207.7	7216.6	7217.7
10°	7012.3	7002.7	7012.3	7026.5	7039.1	7043.0
10.5°	6817.6	6803.7	6817.6	6834.8	6849.0	6857.1
11°	6619.0	6606.3	6619.0	6633.2	6651.7	6658.6
11.5°	6410.1	6400.1	6410.1	6430.8	6446.6	6452.7
12°	6196.2	6183.2	6196.2	6215.4	6234.6	6239.6
12.5°	5973.5	5962.0	5973.5	5991.9	6007.3	6015.7
13°	5752.3	5745.4	5752.3	5763.0	5777.2	5781.5
13.5°	5526.1	5522.6	5526.1	5529.9	5533.4	5530.3
14°	5297.2	5301.4	5297.2	5291.8	5287.6	5282.2
14.5°	5072.9	5082.9	5072.9	5059.1	5044.9	5036.5
15°	4849.1	4861.3	4849.1	4831.0	4811.8	4804.9
15.5°	4632.1	4647.1	4632.1	4612.1	4595.2	4586.0
16°	4427.4	4444.7	4427.4	4403.6	4388.6	4382.9
16.5°	4232.3	4248.8	4232.3	4210.8	4192.8	4188.2
17°	4044.5	4061.8	4044.5	4023.0	4006.9	4001.9
17.5°	3863.7	3879.0	3863.7	3846.0	3830.2	3825.3
18°	3692.4	3707.7	3692.4	3675.5	3664.7	3660.5
18.5°	3538.8	3543.4	3538.8	3518.0	3507.3	3506.1
19°	3396.3	3397.1	3396.3	3376.7	3361.0	3357.9
19.5°	3260.4	3261.9	3260.4	3243.5	3229.2	3220.8
20°	3133.2	3135.2	3133.2	3116.0	3104.1	3102.1
20.5°	3013.0	3016.9	3013.0	2997.7	2991.5	2988.5
21°	2906.7	2912.0	2906.7	2897.5	2883.6	2878.6



TEST NUMBER: P776360

CATALOG NUMBER: HCDJBL3040CSD-HCD62TRC-4000lm-2700K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	2642.8	2657.4	2642.8	2627.5	2610.6	2607.5
23°	2564.9	2581.4	2564.9	2546.5	2535.7	2532.6
23.5°	2488.5	2506.9	2488.5	2474.6	2464.3	2462.0
24°	2421.3	2433.6	2421.3	2406.7	2397.5	2395.2
24.5°	2357.5	2367.5	2357.5	2341.8	2334.5	2333.3
25°	2297.2	2306.4	2297.2	2281.1	2275.3	2274.2
25.5°	2239.6	2248.1	2239.6	2224.3	2218.1	2217.3
26°	2184.7	2193.2	2184.7	2169.3	2163.6	2162.8
26.5°	2130.6	2139.0	2130.6	2116.0	2110.6	2109.4
27°	2079.5	2089.1	2079.5	2065.3	2060.7	2059.5
27.5°	2030.3	2039.5	2030.3	2017.3	2013.0	2012.3
28°	1983.5	1991.9	1983.5	1971.6	1967.0	1966.6
28.5°	1937.8	1946.6	1937.8	1927.0	1922.4	1922.4
29°	1894.0	1902.1	1894.0	1883.2	1879.4	1879.8
29.5°	1851.0	1859.1	1851.0	1841.8	1837.2	1837.2
30°	1810.3	1818.7	1810.3	1801.5	1796.8	1796.8
30.5°	1770.7	1778.8	1770.7	1762.3	1758.1	1758.1
31°	1733.5	1741.5	1733.5	1725.8	1720.8	1721.2
31.5°	1696.2	1704.3	1696.2	1689.3	1685.1	1685.9
32°	1660.9	1666.7	1660.9	1655.1	1651.3	1652.1
32.5°	1624.0	1627.9	1624.0	1619.4	1617.9	1618.3
33°	1585.6	1589.1	1585.6	1582.2	1582.2	1583.3
33.5°	1546.1	1551.1	1546.1	1544.5	1544.2	1546.1
34°	1503.4	1508.8	1503.4	1504.6	1504.6	1506.5
34.5°	1462.4	1467.0	1462.4	1463.9	1463.1	1465.4
35°	1421.3	1423.6	1421.3	1421.3	1421.7	1422.4
35.5°	1379.4	1379.4	1379.4	1377.1	1377.5	1378.6
36°	1336.0	1334.1	1336.0	1333.3	1333.3	1333.7
36.5°	1292.2	1289.2	1292.2	1288.4	1288.4	1286.9
37°	1246.9	1243.1	1246.9	1243.5	1241.9	1239.6
37.5°	1200.5	1197.4	1200.5	1199.7	1194.7	1193.2
38°	1152.1	1151.7	1152.1	1152.8	1146.7	1146.3
38.5°	1103.3	1104.8	1103.3	1105.2	1097.9	1098.7
39°	1054.1	1058.4	1054.1	1057.6	1049.5	1048.8
39.5°	1005.8	1010.4	1005.8	1009.6	1000.4	998.1
40°	957.8	962.4	957.8	961.2	951.6	947.4
40.5°	911.3	914.4	911.3	912.1	903.2	899.0
41°	864.4	866.4	864.4	862.9	855.2	851.4
41.5°	818.7	819.5	818.7	813.7	808.0	804.5
42°	772.7	773.4	772.7	765.4	760.7	758.1
42.5°	727.3	729.3	727.3	717.7	714.7	712.7
43°	681.6	685.1	681.6	670.9	668.6	667.0
43.5°	636.3	641.3	636.3	625.6	622.5	622.1



TEST NUMBER: P776360

CATALOG NUMBER: HCDJBL3040CSD-HCD62TRC-4000lm-2700K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
45°	508.4	514.6	508.4	496.9	491.5	490.4
45.5°	468.5	473.9	468.5	456.6	451.2	449.7
46°	428.6	434.7	428.6	417.4	411.7	411.3
46.5°	389.4	397.1	389.4	379.0	374.0	373.3
47°	352.9	360.6	352.9	342.9	337.2	336.4
47.5°	317.6	326.8	317.6	309.1	302.2	299.9
48°	284.9	293.0	284.9	276.5	268.4	266.9
48.5°	254.2	262.7	254.2	245.4	236.6	235.0
49°	225.0	235.0	225.0	216.2	207.0	205.5
49.5°	197.8	207.8	197.8	188.9	180.5	177.4
50°	172.0	180.5	172.0	164.0	155.1	151.7
50.5°	147.8	153.2	147.8	140.9	133.3	127.9
51°	125.2	128.3	125.2	119.4	112.5	107.1
51.5°	105.2	107.5	105.2	99.1	94.1	90.2
52°	87.6	88.7	87.6	82.2	78.3	74.9
52.5°	72.2	71.4	72.2	67.6	63.0	61.4
53°	57.6	56.8	57.6	53.8	50.7	48.0
53.5°	44.2	43.8	44.2	41.5	38.4	34.6
54°	33.4	36.1	33.4	30.0	26.5	25.0
54.5°	23.8	28.4	23.8	21.5	17.7	15.7
55°	16.5	20.7	16.5	14.6	11.1	9.6
55.5°	10.4	13.4	10.4	8.4	6.9	6.9
56°	6.5	6.9	6.5	5.4	4.6	5.0
56.5°	5.0	3.8	5.0	3.8	3.1	3.5
57°	3.5	2.3	3.5	2.7	2.7	1.9
57.5°	2.7	1.9	2.7	1.9	1.9	1.9
58°	1.9	1.9	1.9	1.9	1.9	1.9
58.5°	1.5	1.5	1.5	1.5	1.5	1.5
59°	1.5	1.5	1.5	1.5	1.5	1.5
59.5°	1.5	1.5	1.5	1.5	1.5	1.5
60°	1.5	1.5	1.5	1.5	1.5	1.5
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: P776360

CATALOG NUMBER: HCDJBL3040CSD-HCD62TRC-4000lm-2700K

**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: P776360  
CATALOG NUMBER: HCDJBL3040CSD-HCD62TRC-4000lm-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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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°	2774.9	2786.1	2802.6	2812.6	2815.7	2812.6	2802.6	2786.1	2774.9	2786.1	2802.6
22°	2689.7	2695.8	2712.4	2725.8	2735.0	2725.8	2712.4	2695.8	2689.7	2695.8	2712.4



44°	576.4	577.6	581.0	591.8	598.3	591.8	581.0	577.6	576.4	577.6	581.0
44.5°	533.0	534.2	537.6	549.9	556.1	549.9	537.6	534.2	533.0	534.2	537.6



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°	2812.6	2815.7	2812.6	2802.6	2786.1	2774.9
22°	2725.8	2735.0	2725.8	2712.4	2695.8	2689.7



44°	591.8	598.3	591.8	581.0	577.6	576.4
44.5°	549.9	556.1	549.9	537.6	534.2	533.0

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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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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)