

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: P776231

Luminaire Tested: HCDJBL3040CSD-HCD42TRMW-3500lm-3000K

Issue Date: 2/13/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P776231  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA ( A2312156A001)  
Test Lab:  
Issue Date: 2/13/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCDJBS3040CSD-HCD42TRMW-3500lm-3000K  
Description: 4 INCH ROUND NARROW MATTE WHITE TRIM  
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 3000K CCT  
Ballast/Driver: -

**Summary**

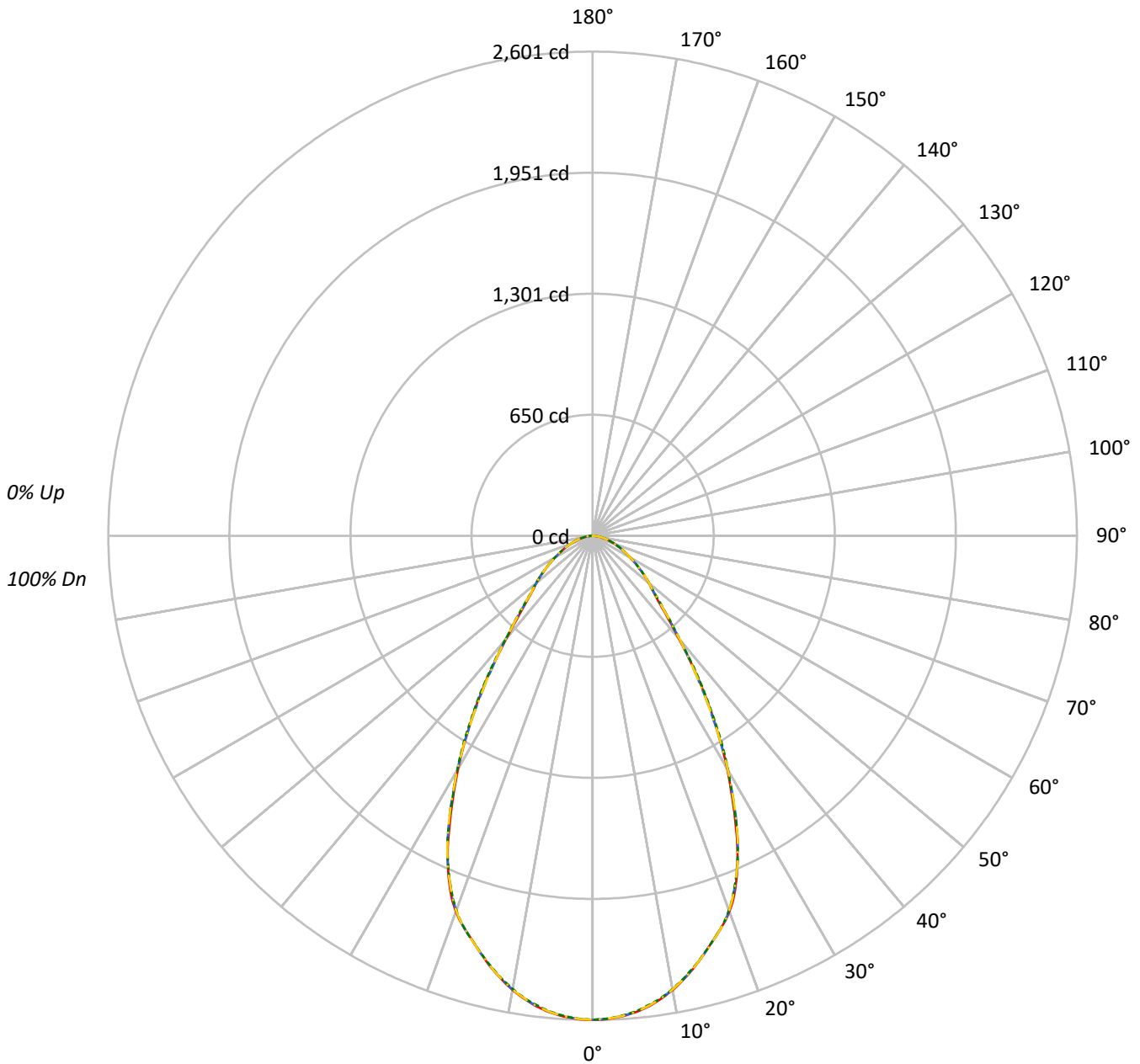
Lumens per Lamp: N/A  
Luminaire Lumens: 3357.8 lumens  
Efficiency: N/A  
Efficacy: 100.2 lumens/watt  
Spacing Criteria (0/90/45): 0.96 / 0.97 / 0.95  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 33.5  
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									
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	112	108	105	102	109	106	103	100	102	99	97	98	96	94	94	93	91	89																			
2	104	98	93	88	102	96	91	87	93	89	85	90	86	83	87	84	82	80																			
3	97	89	83	78	95	88	82	77	85	80	76	82	78	74	80	76	73	71																			
4	91	81	74	69	89	80	74	69	78	72	68	76	71	67	74	70	66	64																			
5	85	75	68	62	83	74	67	62	72	66	61	70	65	61	68	64	60	58																			
6	80	69	62	57	78	68	61	56	67	60	56	65	60	55	64	59	55	53																			
7	75	64	57	52	74	63	56	52	62	56	51	61	55	51	59	54	51	49																			
8	71	60	52	48	70	59	52	47	58	52	47	57	51	47	56	51	47	45																			
9	67	56	49	44	66	55	48	44	54	48	44	53	48	44	52	47	43	42																			
10	63	52	45	41	62	52	45	41	51	45	41	50	44	41	49	44	40	39																			

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

	0°	90°	180°	270°
0°	327260	327260	327260	327260
5°	324947	324253	324947	324253
10°	316564	315849	316564	315849
15°	302558	302193	302558	302193
20°	287674	286656	287674	286656
25°	255336	256155	255336	256155
30°	210073	211192	210073	211192
35°	162975	164742	162975	164742
40°	118368	120438	118368	120438
45°	89630	91855	89630	91855
50°	77179	77806	77179	77806
55°	67096	67864	67096	67864
60°	58646	59175	58646	59175
65°	51547	51964	51547	51964
70°	45480	45737	45480	45737
75°	39969	39969	39969	39969
80°	34570	34353	34570	34353
85°	27724	27724	27724	27724

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 91855 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	242.3	7.2
10°-20°	652.3	19.4
20°-30°	835.4	24.9
30°-40°	662.0	19.7
40°-50°	405.3	12.1
50°-60°	277.1	8.3
60°-70°	173.4	5.2
70°-80°	87.9	2.6
80°-90°	22.2	0.7
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°	1730.0	51.5
0°-40°	2391.9	71.2
0°-60°	3074.3	91.6
0°-90°	3357.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3357.8	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	2600	2600	2600	2600	2600	
5°	2572	2567	2572	2567	2572	243
15°	2322	2319	2322	2319	2322	653
25°	1839	1845	1839	1845	1839	834
35°	1061	1072	1061	1072	1061	661
45°	504	516	504	516	504	400
55°	306	309	306	309	306	276
65°	173	174	173	174	173	173
75°	82	82	82	82	82	88
85°	19	19	19	19	19	22
90°	0	1	0	1	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°	2600.4	2600.4	2600.4	2600.4	2600.4	2600.4	2600.4	2600.4	2600.4	2600.4	2600.4
0.5°	2600.8	2600.4	2599.7	2599.4	2598.3	2599.4	2599.7	2600.4	2600.8	2600.4	2599.7
1°	2599.7	2599.4	2599.0	2598.7	2597.3	2598.7	2599.0	2599.4	2599.7	2599.4	2599.0
1.5°	2598.3	2597.6	2597.6	2597.0	2595.9	2597.0	2597.6	2597.6	2598.3	2597.6	2597.6
2°	2596.3	2595.9	2595.2	2594.9	2593.5	2594.9	2595.2	2595.9	2596.3	2595.9	2595.2
2.5°	2593.8	2593.1	2592.4	2592.1	2590.3	2592.1	2592.4	2593.1	2593.8	2593.1	2592.4
3°	2590.3	2589.6	2588.9	2588.2	2586.5	2588.2	2588.9	2589.6	2590.3	2589.6	2588.9
3.5°	2586.5	2585.8	2584.8	2584.1	2583.0	2584.1	2584.8	2585.8	2586.5	2585.8	2584.8
4°	2582.0	2581.6	2580.2	2579.5	2577.8	2579.5	2580.2	2581.6	2582.0	2581.6	2580.2
4.5°	2577.1	2576.4	2575.0	2574.3	2572.2	2574.3	2575.0	2576.4	2577.1	2576.4	2575.0
5°	2572.2	2571.2	2569.8	2569.1	2566.7	2569.1	2569.8	2571.2	2572.2	2571.2	2569.8
5.5°	2567.0	2564.6	2562.8	2562.1	2560.0	2562.1	2562.8	2564.6	2567.0	2564.6	2562.8
6°	2559.0	2557.6	2555.9	2554.8	2552.0	2554.8	2555.9	2557.6	2559.0	2557.6	2555.9
6.5°	2551.0	2549.9	2547.8	2546.8	2544.0	2546.8	2547.8	2549.9	2551.0	2549.9	2547.8
7°	2542.6	2541.2	2540.2	2538.4	2536.0	2538.4	2540.2	2541.2	2542.6	2541.2	2540.2
7.5°	2533.2	2531.8	2530.4	2529.7	2527.3	2529.7	2530.4	2531.8	2533.2	2531.8	2530.4
8°	2523.1	2522.1	2520.7	2519.6	2518.2	2519.6	2520.7	2522.1	2523.1	2522.1	2520.7
8.5°	2512.7	2511.3	2509.9	2508.8	2507.5	2508.8	2509.9	2511.3	2512.7	2511.3	2509.9
9°	2501.5	2500.5	2498.7	2497.7	2496.3	2497.7	2498.7	2500.5	2501.5	2500.5	2498.7
9.5°	2489.3	2488.6	2486.9	2485.9	2484.5	2485.9	2486.9	2488.6	2489.3	2488.6	2486.9
10°	2477.2	2476.1	2474.7	2473.3	2471.6	2473.3	2474.7	2476.1	2477.2	2476.1	2474.7
10.5°	2463.6	2462.9	2461.1	2460.1	2458.7	2460.1	2461.1	2462.9	2463.6	2462.9	2461.1
11°	2450.0	2449.3	2447.9	2446.5	2444.8	2446.5	2447.9	2449.3	2450.0	2449.3	2447.9
11.5°	2435.7	2435.0	2433.6	2432.2	2430.8	2432.2	2433.6	2435.0	2435.7	2435.0	2433.6
12°	2421.1	2420.4	2419.3	2417.6	2416.2	2417.6	2419.3	2420.4	2421.1	2420.4	2419.3
12.5°	2405.8	2405.1	2404.0	2402.3	2400.5	2402.3	2404.0	2405.1	2405.8	2405.1	2404.0
13°	2390.1	2389.4	2388.3	2387.0	2385.2	2387.0	2388.3	2389.4	2390.1	2389.4	2388.3
13.5°	2373.7	2373.0	2372.3	2370.9	2369.5	2370.9	2372.3	2373.0	2373.7	2373.0	2372.3
14°	2357.0	2356.7	2356.0	2354.6	2353.2	2354.6	2356.0	2356.7	2357.0	2356.7	2356.0
14.5°	2339.6	2339.2	2338.9	2337.5	2336.1	2337.5	2338.9	2339.2	2339.6	2339.2	2338.9
15°	2322.2	2322.2	2321.5	2320.8	2319.4	2320.8	2321.5	2322.2	2322.2	2322.2	2321.5
15.5°	2304.1	2304.1	2304.8	2304.1	2303.4	2304.1	2304.8	2304.1	2304.1	2304.1	2304.8
16°	2286.7	2287.0	2288.0	2287.7	2287.0	2287.7	2288.0	2287.0	2286.7	2287.0	2288.0
16.5°	2269.2	2269.9	2271.3	2271.3	2271.0	2271.3	2271.3	2269.9	2269.2	2269.9	2271.3
17°	2252.9	2253.6	2255.0	2254.6	2255.0	2254.6	2255.0	2253.6	2252.9	2253.6	2255.0
17.5°	2236.9	2237.6	2238.6	2238.2	2237.9	2238.2	2238.6	2237.6	2236.9	2237.6	2238.6
18°	2221.2	2221.5	2222.2	2221.5	2220.8	2221.5	2222.2	2221.5	2221.2	2221.5	2222.2
18.5°	2204.5	2204.5	2204.5	2203.8	2202.7	2203.8	2204.5	2204.5	2204.5	2204.5	2204.5
19°	2187.4	2186.4	2185.7	2184.6	2183.6	2184.6	2185.7	2186.4	2187.4	2186.4	2185.7
19.5°	2168.6	2167.2	2165.1	2164.4	2163.4	2164.4	2165.1	2167.2	2168.6	2167.2	2165.1
20°	2148.0	2146.3	2142.5	2142.8	2140.4	2142.8	2142.5	2146.3	2148.0	2146.3	2142.5
20.5°	2125.4	2122.6	2118.1	2119.5	2116.7	2119.5	2118.1	2122.6	2125.4	2122.6	2118.1
21°	2101.7	2097.6	2092.3	2094.1	2090.6	2094.1	2092.3	2097.6	2101.7	2097.6	2092.3



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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°	2015.0	2010.8	2007.4	2007.0	2005.3	2007.0	2007.4	2010.8	2015.0	2010.8	2007.4
23°	1981.9	1978.4	1977.8	1975.3	1974.6	1975.3	1977.8	1978.4	1981.9	1978.4	1977.8
23.5°	1948.1	1945.0	1946.8	1942.6	1944.3	1942.6	1946.8	1945.0	1948.1	1945.0	1946.8
24°	1913.0	1910.5	1914.7	1909.1	1912.3	1909.1	1914.7	1910.5	1913.0	1910.5	1914.7
24.5°	1876.8	1875.7	1880.9	1875.4	1879.5	1875.4	1880.9	1875.7	1876.8	1875.7	1880.9
25°	1838.8	1839.5	1845.8	1841.6	1844.7	1841.6	1845.8	1839.5	1838.8	1839.5	1845.8
25.5°	1799.4	1804.0	1809.5	1807.8	1808.5	1807.8	1809.5	1804.0	1799.4	1804.0	1809.5
26°	1759.0	1767.1	1772.3	1772.6	1769.8	1772.6	1772.3	1767.1	1759.0	1767.1	1772.3
26.5°	1717.6	1729.4	1733.6	1736.1	1729.8	1736.1	1733.6	1729.4	1717.6	1729.4	1733.6
27°	1677.2	1690.4	1694.6	1698.4	1689.0	1698.4	1694.6	1690.4	1677.2	1690.4	1694.6
27.5°	1637.5	1650.0	1654.9	1659.8	1647.6	1659.8	1654.9	1650.0	1637.5	1650.0	1654.9
28°	1597.8	1609.6	1614.5	1619.4	1606.2	1619.4	1614.5	1609.6	1597.8	1609.6	1614.5
28.5°	1559.1	1568.5	1574.1	1578.3	1566.1	1578.3	1574.1	1568.5	1559.1	1568.5	1574.1
29°	1520.8	1527.1	1533.7	1536.5	1528.2	1536.5	1533.7	1527.1	1520.8	1527.1	1533.7
29.5°	1483.2	1486.4	1493.7	1494.7	1490.9	1494.7	1493.7	1486.4	1483.2	1486.4	1493.7
30°	1445.6	1444.6	1452.6	1452.9	1453.3	1452.9	1452.6	1444.6	1445.6	1444.6	1452.6
30.5°	1406.6	1404.2	1411.8	1412.5	1417.8	1412.5	1411.8	1404.2	1406.6	1404.2	1411.8
31°	1368.0	1362.7	1370.7	1372.1	1380.1	1372.1	1370.7	1362.7	1368.0	1362.7	1370.7
31.5°	1328.3	1323.0	1329.6	1332.1	1342.2	1332.1	1329.6	1323.0	1328.3	1323.0	1329.6
32°	1287.9	1283.0	1288.9	1292.7	1303.2	1292.7	1288.9	1283.0	1287.9	1283.0	1288.9
32.5°	1248.8	1244.7	1248.8	1253.7	1264.2	1253.7	1248.8	1244.7	1248.8	1244.7	1248.8
33°	1209.5	1206.4	1207.8	1214.7	1224.5	1214.7	1207.8	1206.4	1209.5	1206.4	1207.8
33.5°	1174.3	1168.1	1167.0	1175.7	1184.4	1175.7	1167.0	1168.1	1174.3	1168.1	1167.0
34°	1136.4	1129.7	1126.6	1137.4	1146.5	1137.4	1126.6	1129.7	1136.4	1129.7	1126.6
34.5°	1098.8	1091.8	1087.3	1098.8	1108.9	1098.8	1087.3	1091.8	1098.8	1091.8	1087.3
35°	1060.8	1054.9	1050.0	1061.5	1072.3	1061.5	1050.0	1054.9	1060.8	1054.9	1050.0
35.5°	1023.9	1018.3	1013.1	1024.6	1036.4	1024.6	1013.1	1018.3	1023.9	1018.3	1013.1
36°	987.7	981.7	977.2	989.0	1001.2	989.0	977.2	981.7	987.7	981.7	977.2
36.5°	951.8	946.6	942.4	953.9	965.4	953.9	942.4	946.6	951.8	946.6	942.4
37°	915.6	911.7	908.3	919.7	929.8	919.7	908.3	911.7	915.6	911.7	908.3
37.5°	880.4	878.0	875.5	887.0	894.3	887.0	875.5	878.0	880.4	878.0	875.5
38°	845.6	845.2	844.2	855.0	859.1	855.0	844.2	845.2	845.6	845.2	844.2
38.5°	812.8	813.5	814.2	823.6	825.4	823.6	814.2	813.5	812.8	813.5	814.2
39°	781.1	782.9	784.3	793.3	793.0	793.3	784.3	782.9	781.1	782.9	784.3
39.5°	750.1	753.3	755.7	763.4	762.3	763.4	755.7	753.3	750.1	753.3	755.7
40°	720.5	724.0	728.2	734.5	733.1	734.5	728.2	724.0	720.5	724.0	728.2
40.5°	692.7	696.2	701.7	706.3	705.9	706.3	701.7	696.2	692.7	696.2	701.7
41°	665.9	669.3	676.7	679.8	680.8	679.8	676.7	669.3	665.9	669.3	676.7
41.5°	640.4	644.3	652.6	654.4	657.5	654.4	652.6	644.3	640.4	644.3	652.6
42°	616.8	620.6	629.6	630.7	634.9	630.7	629.6	620.6	616.8	620.6	629.6
42.5°	594.5	598.3	608.1	608.4	612.9	608.4	608.1	598.3	594.5	598.3	608.1
43°	573.2	577.4	586.8	587.5	591.7	587.5	586.8	577.4	573.2	577.4	586.8
43.5°	553.7	557.9	567.0	567.3	571.1	567.3	567.0	557.9	553.7	557.9	567.0



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CATALOG NUMBER: HCDJBL3040CSD-HCD42TRMW-3500lm-3000K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	503.6	507.1	512.6	514.4	516.1	514.4	512.6	507.1	503.6	507.1	512.6
45.5°	489.0	491.7	497.0	498.7	500.1	498.7	497.0	491.7	489.0	491.7	497.0
46°	475.0	477.5	482.0	484.4	485.1	484.4	482.0	477.5	475.0	477.5	482.0
46.5°	462.1	464.2	467.7	470.5	471.2	470.5	467.7	464.2	462.1	464.2	467.7
47°	449.9	451.3	454.8	457.6	458.7	457.6	454.8	451.3	449.9	451.3	454.8
47.5°	438.5	439.5	442.6	445.8	447.2	445.8	442.6	439.5	438.5	439.5	442.6
48°	427.7	429.1	432.2	435.0	436.4	435.0	432.2	429.1	427.7	429.1	432.2
48.5°	419.0	419.6	422.1	424.9	425.9	424.9	422.1	419.6	419.0	419.6	422.1
49°	410.6	410.9	413.0	415.1	416.2	415.1	413.0	410.9	410.6	410.9	413.0
49.5°	402.6	402.9	404.3	406.1	406.4	406.1	404.3	402.9	402.6	402.9	404.3
50°	394.2	394.6	395.6	397.0	397.4	397.0	395.6	394.6	394.2	394.6	395.6
50.5°	385.9	386.2	386.9	388.3	388.3	388.3	386.9	386.2	385.9	386.2	386.9
51°	376.5	377.2	378.2	379.6	379.6	379.6	378.2	377.2	376.5	377.2	378.2
51.5°	367.4	367.8	369.2	370.9	371.2	370.9	369.2	367.8	367.4	367.8	369.2
52°	358.0	358.7	360.1	361.8	362.2	361.8	360.1	358.7	358.0	358.7	360.1
52.5°	348.6	349.3	351.0	352.4	353.1	352.4	351.0	349.3	348.6	349.3	351.0
53°	339.9	340.6	342.0	343.4	344.1	343.4	342.0	340.6	339.9	340.6	342.0
53.5°	330.8	331.5	332.9	334.7	335.4	334.7	332.9	331.5	330.8	331.5	332.9
54°	322.5	322.8	324.2	325.6	326.3	325.6	324.2	322.8	322.5	322.8	324.2
54.5°	314.1	314.5	315.9	317.3	318.0	317.3	315.9	314.5	314.1	314.5	315.9
55°	305.8	306.5	307.9	308.9	309.3	308.9	307.9	306.5	305.8	306.5	307.9
55.5°	297.8	298.5	299.8	300.9	301.2	300.9	299.8	298.5	297.8	298.5	299.8
56°	290.1	290.8	291.8	292.9	293.2	292.9	291.8	290.8	290.1	290.8	291.8
56.5°	282.4	283.1	284.2	285.2	285.6	285.2	284.2	283.1	282.4	283.1	284.2
57°	274.8	275.5	276.5	277.6	277.9	277.6	276.5	275.5	274.8	275.5	276.5
57.5°	267.1	268.2	269.2	269.9	270.6	269.9	269.2	268.2	267.1	268.2	269.2
58°	260.5	260.8	261.9	262.9	263.3	262.9	261.9	260.8	260.5	260.8	261.9
58.5°	253.5	253.9	254.9	255.6	256.0	255.6	254.9	253.9	253.5	253.9	254.9
59°	246.6	246.9	247.6	248.3	249.0	248.3	247.6	246.9	246.6	246.9	247.6
59.5°	239.6	239.9	240.6	241.7	242.0	241.7	240.6	239.9	239.6	239.9	240.6
60°	233.0	233.3	234.0	234.7	235.1	234.7	234.0	233.3	233.0	233.3	234.0
60.5°	226.4	226.7	227.4	228.1	228.5	228.1	227.4	226.7	226.4	226.7	227.4
61°	220.1	220.4	221.1	221.8	222.2	221.8	221.1	220.4	220.1	220.4	221.1
61.5°	213.8	214.2	214.9	215.6	215.9	215.6	214.9	214.2	213.8	214.2	214.9
62°	207.9	207.9	208.6	209.3	209.3	209.3	208.6	207.9	207.9	207.9	208.6
62.5°	201.6	202.0	202.3	203.0	203.4	203.0	202.3	202.0	201.6	202.0	202.3
63°	195.7	196.1	196.4	197.1	197.1	197.1	196.4	196.1	195.7	196.1	196.4
63.5°	189.8	190.1	190.5	191.2	191.5	191.2	190.5	190.1	189.8	190.1	190.5
64°	184.2	184.6	184.9	185.3	185.6	185.3	184.9	184.6	184.2	184.6	184.9
64.5°	178.7	179.0	179.4	179.7	180.0	179.7	179.4	179.0	178.7	179.0	179.4
65°	173.1	173.4	173.8	174.1	174.5	174.1	173.8	173.4	173.1	173.4	173.8
65.5°	167.9	167.9	168.2	168.9	168.9	168.9	168.2	167.9	167.9	167.9	168.2
66°	162.3	162.6	163.0	163.3	163.7	163.3	163.0	162.6	162.3	162.6	163.0





TEST NUMBER: P776231

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRMW-3500lm-3000K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	147.0	147.3	147.7	148.0	148.0	148.0	147.7	147.3	147.0	147.3	147.7
68°	142.1	142.4	142.8	143.1	143.1	143.1	142.8	142.4	142.1	142.4	142.8
68.5°	137.2	137.6	137.9	137.9	138.3	137.9	137.9	137.6	137.2	137.6	137.9
69°	132.7	132.7	132.7	133.4	133.4	133.4	132.7	132.7	132.7	132.7	132.7
69.5°	127.8	128.2	128.2	128.5	128.9	128.5	128.2	128.2	127.8	128.2	128.2
70°	123.6	124.0	123.6	124.0	124.3	124.0	123.6	124.0	123.6	124.0	123.6
70.5°	119.1	119.5	119.5	119.5	119.8	119.5	119.5	119.5	119.1	119.5	119.5
71°	114.9	114.9	114.9	114.9	115.3	114.9	114.9	114.9	114.9	114.9	114.9
71.5°	110.4	110.4	110.7	110.7	110.7	110.7	110.7	110.4	110.4	110.4	110.7
72°	106.2	106.2	106.2	106.6	106.6	106.6	106.2	106.2	106.2	106.2	106.2
72.5°	102.0	102.0	102.0	102.4	102.4	102.4	102.0	102.0	102.0	102.0	102.0
73°	97.9	97.9	97.9	98.2	98.2	98.2	97.9	97.9	97.9	97.9	97.9
73.5°	93.7	93.7	94.0	94.0	94.0	94.0	94.0	93.7	93.7	93.7	94.0
74°	89.9	89.9	89.9	90.2	90.2	90.2	89.9	89.9	89.9	89.9	89.9
74.5°	86.0	86.0	86.0	86.0	86.0	86.0	86.0	86.0	86.0	86.0	86.0
75°	82.2	82.2	82.2	82.2	82.2	82.2	82.2	82.2	82.2	82.2	82.2
75.5°	78.4	78.4	78.4	78.4	78.7	78.4	78.4	78.4	78.4	78.4	78.4
76°	74.9	74.5	74.5	74.9	74.9	74.9	74.5	74.5	74.9	74.5	74.5
76.5°	71.0	71.0	71.0	71.0	71.0	71.0	71.0	71.0	71.0	71.0	71.0
77°	67.6	67.6	67.6	67.6	67.6	67.6	67.6	67.6	67.6	67.6	67.6
77.5°	64.1	64.1	64.1	64.1	64.1	64.1	64.1	64.1	64.1	64.1	64.1
78°	60.6	60.6	60.6	60.6	60.6	60.6	60.6	60.6	60.6	60.6	60.6
78.5°	57.5	57.5	57.1	57.1	57.5	57.1	57.1	57.5	57.5	57.5	57.1
79°	54.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0
79.5°	50.8	50.8	50.5	50.8	50.8	50.8	50.5	50.8	50.8	50.8	50.5
80°	47.7	47.7	47.4	47.4	47.4	47.4	47.4	47.7	47.7	47.7	47.4
80.5°	44.6	44.6	44.6	44.6	44.6	44.6	44.6	44.6	44.6	44.6	44.6
81°	41.4	41.4	41.4	41.4	41.4	41.4	41.4	41.4	41.4	41.4	41.4
81.5°	38.3	38.3	38.3	38.3	38.3	38.3	38.3	38.3	38.3	38.3	38.3
82°	35.5	35.5	35.5	35.5	35.5	35.5	35.5	35.5	35.5	35.5	35.5
82.5°	32.7	32.7	32.7	32.7	32.4	32.7	32.7	32.7	32.7	32.7	32.7
83°	30.0	30.0	30.0	29.6	29.6	29.6	30.0	30.0	30.0	30.0	30.0
83.5°	27.2	27.2	27.2	26.8	26.8	26.8	27.2	27.2	27.2	27.2	27.2
84°	24.4	24.4	24.4	24.4	24.4	24.4	24.4	24.4	24.4	24.4	24.4
84.5°	21.9	21.6	21.6	21.6	21.6	21.6	21.6	21.6	21.9	21.6	21.6
85°	19.2	19.2	19.2	19.2	19.2	19.2	19.2	19.2	19.2	19.2	19.2
85.5°	16.7	16.4	16.7	16.4	16.7	16.4	16.7	16.4	16.7	16.4	16.7
86°	13.9	13.9	13.9	13.9	13.9	13.9	13.9	13.9	13.9	13.9	13.9
86.5°	11.8	11.5	11.5	11.5	11.8	11.5	11.5	11.5	11.8	11.5	11.5
87°	9.4	9.4	9.4	9.1	9.4	9.1	9.4	9.4	9.4	9.4	9.4
87.5°	7.0	7.0	7.0	7.0	7.3	7.0	7.0	7.0	7.0	7.0	7.0
88°	4.5	4.9	4.9	5.2	5.2	5.2	4.9	4.9	4.5	4.9	4.9
88.5°	2.8	2.8	3.1	3.5	4.2	3.5	3.1	2.8	2.8	2.8	3.1



TEST NUMBER: P776231

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRMW-3500lm-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	0.3	0.7	1.0	0.7	0.3	0.0	0.0	0.0	0.3



TEST NUMBER: P776231

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRMW-3500lm-3000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2600.4	2600.4	2600.4	2600.4	2600.4	2600.4
0.5°	2599.4	2598.3	2599.4	2599.7	2600.4	2600.8
1°	2598.7	2597.3	2598.7	2599.0	2599.4	2599.7
1.5°	2597.0	2595.9	2597.0	2597.6	2597.6	2598.3
2°	2594.9	2593.5	2594.9	2595.2	2595.9	2596.3
2.5°	2592.1	2590.3	2592.1	2592.4	2593.1	2593.8
3°	2588.2	2586.5	2588.2	2588.9	2589.6	2590.3
3.5°	2584.1	2583.0	2584.1	2584.8	2585.8	2586.5
4°	2579.5	2577.8	2579.5	2580.2	2581.6	2582.0
4.5°	2574.3	2572.2	2574.3	2575.0	2576.4	2577.1
5°	2569.1	2566.7	2569.1	2569.8	2571.2	2572.2
5.5°	2562.1	2560.0	2562.1	2562.8	2564.6	2567.0
6°	2554.8	2552.0	2554.8	2555.9	2557.6	2559.0
6.5°	2546.8	2544.0	2546.8	2547.8	2549.9	2551.0
7°	2538.4	2536.0	2538.4	2540.2	2541.2	2542.6
7.5°	2529.7	2527.3	2529.7	2530.4	2531.8	2533.2
8°	2519.6	2518.2	2519.6	2520.7	2522.1	2523.1
8.5°	2508.8	2507.5	2508.8	2509.9	2511.3	2512.7
9°	2497.7	2496.3	2497.7	2498.7	2500.5	2501.5
9.5°	2485.9	2484.5	2485.9	2486.9	2488.6	2489.3
10°	2473.3	2471.6	2473.3	2474.7	2476.1	2477.2
10.5°	2460.1	2458.7	2460.1	2461.1	2462.9	2463.6
11°	2446.5	2444.8	2446.5	2447.9	2449.3	2450.0
11.5°	2432.2	2430.8	2432.2	2433.6	2435.0	2435.7
12°	2417.6	2416.2	2417.6	2419.3	2420.4	2421.1
12.5°	2402.3	2400.5	2402.3	2404.0	2405.1	2405.8
13°	2387.0	2385.2	2387.0	2388.3	2389.4	2390.1
13.5°	2370.9	2369.5	2370.9	2372.3	2373.0	2373.7
14°	2354.6	2353.2	2354.6	2356.0	2356.7	2357.0
14.5°	2337.5	2336.1	2337.5	2338.9	2339.2	2339.6
15°	2320.8	2319.4	2320.8	2321.5	2322.2	2322.2
15.5°	2304.1	2303.4	2304.1	2304.8	2304.1	2304.1
16°	2287.7	2287.0	2287.7	2288.0	2287.0	2286.7
16.5°	2271.3	2271.0	2271.3	2271.3	2269.9	2269.2
17°	2254.6	2255.0	2254.6	2255.0	2253.6	2252.9
17.5°	2238.2	2237.9	2238.2	2238.6	2237.6	2236.9
18°	2221.5	2220.8	2221.5	2222.2	2221.5	2221.2
18.5°	2203.8	2202.7	2203.8	2204.5	2204.5	2204.5
19°	2184.6	2183.6	2184.6	2185.7	2186.4	2187.4
19.5°	2164.4	2163.4	2164.4	2165.1	2167.2	2168.6
20°	2142.8	2140.4	2142.8	2142.5	2146.3	2148.0
20.5°	2119.5	2116.7	2119.5	2118.1	2122.6	2125.4
21°	2094.1	2090.6	2094.1	2092.3	2097.6	2101.7



TEST NUMBER: P776231

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRMW-3500lm-3000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	2007.0	2005.3	2007.0	2007.4	2010.8	2015.0
23°	1975.3	1974.6	1975.3	1977.8	1978.4	1981.9
23.5°	1942.6	1944.3	1942.6	1946.8	1945.0	1948.1
24°	1909.1	1912.3	1909.1	1914.7	1910.5	1913.0
24.5°	1875.4	1879.5	1875.4	1880.9	1875.7	1876.8
25°	1841.6	1844.7	1841.6	1845.8	1839.5	1838.8
25.5°	1807.8	1808.5	1807.8	1809.5	1804.0	1799.4
26°	1772.6	1769.8	1772.6	1772.3	1767.1	1759.0
26.5°	1736.1	1729.8	1736.1	1733.6	1729.4	1717.6
27°	1698.4	1689.0	1698.4	1694.6	1690.4	1677.2
27.5°	1659.8	1647.6	1659.8	1654.9	1650.0	1637.5
28°	1619.4	1606.2	1619.4	1614.5	1609.6	1597.8
28.5°	1578.3	1566.1	1578.3	1574.1	1568.5	1559.1
29°	1536.5	1528.2	1536.5	1533.7	1527.1	1520.8
29.5°	1494.7	1490.9	1494.7	1493.7	1486.4	1483.2
30°	1452.9	1453.3	1452.9	1452.6	1444.6	1445.6
30.5°	1412.5	1417.8	1412.5	1411.8	1404.2	1406.6
31°	1372.1	1380.1	1372.1	1370.7	1362.7	1368.0
31.5°	1332.1	1342.2	1332.1	1329.6	1323.0	1328.3
32°	1292.7	1303.2	1292.7	1288.9	1283.0	1287.9
32.5°	1253.7	1264.2	1253.7	1248.8	1244.7	1248.8
33°	1214.7	1224.5	1214.7	1207.8	1206.4	1209.5
33.5°	1175.7	1184.4	1175.7	1167.0	1168.1	1174.3
34°	1137.4	1146.5	1137.4	1126.6	1129.7	1136.4
34.5°	1098.8	1108.9	1098.8	1087.3	1091.8	1098.8
35°	1061.5	1072.3	1061.5	1050.0	1054.9	1060.8
35.5°	1024.6	1036.4	1024.6	1013.1	1018.3	1023.9
36°	989.0	1001.2	989.0	977.2	981.7	987.7
36.5°	953.9	965.4	953.9	942.4	946.6	951.8
37°	919.7	929.8	919.7	908.3	911.7	915.6
37.5°	887.0	894.3	887.0	875.5	878.0	880.4
38°	855.0	859.1	855.0	844.2	845.2	845.6
38.5°	823.6	825.4	823.6	814.2	813.5	812.8
39°	793.3	793.0	793.3	784.3	782.9	781.1
39.5°	763.4	762.3	763.4	755.7	753.3	750.1
40°	734.5	733.1	734.5	728.2	724.0	720.5
40.5°	706.3	705.9	706.3	701.7	696.2	692.7
41°	679.8	680.8	679.8	676.7	669.3	665.9
41.5°	654.4	657.5	654.4	652.6	644.3	640.4
42°	630.7	634.9	630.7	629.6	620.6	616.8
42.5°	608.4	612.9	608.4	608.1	598.3	594.5
43°	587.5	591.7	587.5	586.8	577.4	573.2
43.5°	567.3	571.1	567.3	567.0	557.9	553.7



TEST NUMBER: P776231

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRMW-3500lm-3000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
45°	514.4	516.1	514.4	512.6	507.1	503.6
45.5°	498.7	500.1	498.7	497.0	491.7	489.0
46°	484.4	485.1	484.4	482.0	477.5	475.0
46.5°	470.5	471.2	470.5	467.7	464.2	462.1
47°	457.6	458.7	457.6	454.8	451.3	449.9
47.5°	445.8	447.2	445.8	442.6	439.5	438.5
48°	435.0	436.4	435.0	432.2	429.1	427.7
48.5°	424.9	425.9	424.9	422.1	419.6	419.0
49°	415.1	416.2	415.1	413.0	410.9	410.6
49.5°	406.1	406.4	406.1	404.3	402.9	402.6
50°	397.0	397.4	397.0	395.6	394.6	394.2
50.5°	388.3	388.3	388.3	386.9	386.2	385.9
51°	379.6	379.6	379.6	378.2	377.2	376.5
51.5°	370.9	371.2	370.9	369.2	367.8	367.4
52°	361.8	362.2	361.8	360.1	358.7	358.0
52.5°	352.4	353.1	352.4	351.0	349.3	348.6
53°	343.4	344.1	343.4	342.0	340.6	339.9
53.5°	334.7	335.4	334.7	332.9	331.5	330.8
54°	325.6	326.3	325.6	324.2	322.8	322.5
54.5°	317.3	318.0	317.3	315.9	314.5	314.1
55°	308.9	309.3	308.9	307.9	306.5	305.8
55.5°	300.9	301.2	300.9	299.8	298.5	297.8
56°	292.9	293.2	292.9	291.8	290.8	290.1
56.5°	285.2	285.6	285.2	284.2	283.1	282.4
57°	277.6	277.9	277.6	276.5	275.5	274.8
57.5°	269.9	270.6	269.9	269.2	268.2	267.1
58°	262.9	263.3	262.9	261.9	260.8	260.5
58.5°	255.6	256.0	255.6	254.9	253.9	253.5
59°	248.3	249.0	248.3	247.6	246.9	246.6
59.5°	241.7	242.0	241.7	240.6	239.9	239.6
60°	234.7	235.1	234.7	234.0	233.3	233.0
60.5°	228.1	228.5	228.1	227.4	226.7	226.4
61°	221.8	222.2	221.8	221.1	220.4	220.1
61.5°	215.6	215.9	215.6	214.9	214.2	213.8
62°	209.3	209.3	209.3	208.6	207.9	207.9
62.5°	203.0	203.4	203.0	202.3	202.0	201.6
63°	197.1	197.1	197.1	196.4	196.1	195.7
63.5°	191.2	191.5	191.2	190.5	190.1	189.8
64°	185.3	185.6	185.3	184.9	184.6	184.2
64.5°	179.7	180.0	179.7	179.4	179.0	178.7
65°	174.1	174.5	174.1	173.8	173.4	173.1
65.5°	168.9	168.9	168.9	168.2	167.9	167.9
66°	163.3	163.7	163.3	163.0	162.6	162.3



TEST NUMBER: P776231

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRMW-3500lm-3000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	148.0	148.0	148.0	147.7	147.3	147.0
68°	143.1	143.1	143.1	142.8	142.4	142.1
68.5°	137.9	138.3	137.9	137.9	137.6	137.2
69°	133.4	133.4	133.4	132.7	132.7	132.7
69.5°	128.5	128.9	128.5	128.2	128.2	127.8
70°	124.0	124.3	124.0	123.6	124.0	123.6
70.5°	119.5	119.8	119.5	119.5	119.5	119.1
71°	114.9	115.3	114.9	114.9	114.9	114.9
71.5°	110.7	110.7	110.7	110.7	110.4	110.4
72°	106.6	106.6	106.6	106.2	106.2	106.2
72.5°	102.4	102.4	102.4	102.0	102.0	102.0
73°	98.2	98.2	98.2	97.9	97.9	97.9
73.5°	94.0	94.0	94.0	94.0	93.7	93.7
74°	90.2	90.2	90.2	89.9	89.9	89.9
74.5°	86.0	86.0	86.0	86.0	86.0	86.0
75°	82.2	82.2	82.2	82.2	82.2	82.2
75.5°	78.4	78.7	78.4	78.4	78.4	78.4
76°	74.9	74.9	74.9	74.5	74.5	74.9
76.5°	71.0	71.0	71.0	71.0	71.0	71.0
77°	67.6	67.6	67.6	67.6	67.6	67.6
77.5°	64.1	64.1	64.1	64.1	64.1	64.1
78°	60.6	60.6	60.6	60.6	60.6	60.6
78.5°	57.1	57.5	57.1	57.1	57.5	57.5
79°	54.0	54.0	54.0	54.0	54.0	54.0
79.5°	50.8	50.8	50.8	50.5	50.8	50.8
80°	47.4	47.4	47.4	47.4	47.7	47.7
80.5°	44.6	44.6	44.6	44.6	44.6	44.6
81°	41.4	41.4	41.4	41.4	41.4	41.4
81.5°	38.3	38.3	38.3	38.3	38.3	38.3
82°	35.5	35.5	35.5	35.5	35.5	35.5
82.5°	32.7	32.4	32.7	32.7	32.7	32.7
83°	29.6	29.6	29.6	30.0	30.0	30.0
83.5°	26.8	26.8	26.8	27.2	27.2	27.2
84°	24.4	24.4	24.4	24.4	24.4	24.4
84.5°	21.6	21.6	21.6	21.6	21.6	21.9
85°	19.2	19.2	19.2	19.2	19.2	19.2
85.5°	16.4	16.7	16.4	16.7	16.4	16.7
86°	13.9	13.9	13.9	13.9	13.9	13.9
86.5°	11.5	11.8	11.5	11.5	11.5	11.8
87°	9.1	9.4	9.1	9.4	9.4	9.4
87.5°	7.0	7.3	7.0	7.0	7.0	7.0
88°	5.2	5.2	5.2	4.9	4.9	4.5
88.5°	3.5	4.2	3.5	3.1	2.8	2.8



TEST NUMBER: P776231

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRMW-3500lm-3000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
90°	0.7	1.0	0.7	0.3	0.0	0.0

Signify Classified - Internal  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269

Scaled Data Report



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Peachtree City, GA 30269

Scaled Data Report





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

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

Scaled Data Report



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Peachtree City, GA 30269

Scaled Data Report





21.5°	2074.2	2070.7	2064.8	2066.6	2063.1	2066.6	2064.8	2070.7	2074.2	2070.7	2064.8
22°	2045.3	2041.8	2036.6	2037.3	2033.8	2037.3	2036.6	2041.8	2045.3	2041.8	2036.6



44°	535.6	539.8	547.8	548.5	552.0	548.5	547.8	539.8	535.6	539.8	547.8
44.5°	518.9	523.1	530.0	531.1	533.5	531.1	530.0	523.1	518.9	523.1	530.0



66.5°	157.1	157.4	157.8	158.1	158.5	158.1	157.8	157.4	157.1	157.4	157.8
67°	152.2	152.2	152.5	152.9	153.2	152.9	152.5	152.2	152.2	152.2	152.5



89°	1.0	1.4	2.1	2.4	2.8	2.4	2.1	1.4	1.0	1.4	2.1
89.5°	0.0	0.3	1.0	1.4	1.7	1.4	1.0	0.3	0.0	0.3	1.0



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21.5°	2066.6	2063.1	2066.6	2064.8	2070.7	2074.2
22°	2037.3	2033.8	2037.3	2036.6	2041.8	2045.3



44°	548.5	552.0	548.5	547.8	539.8	535.6
44.5°	531.1	533.5	531.1	530.0	523.1	518.9

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66.5°	158.1	158.5	158.1	157.8	157.4	157.1
67°	152.9	153.2	152.9	152.5	152.2	152.2

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89°	2.4	2.8	2.4	2.1	1.4	1.0
89.5°	1.4	1.7	1.4	1.0	0.3	0.0

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Scaled Data Report



(END OF REPORT)