

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: P776475

Luminaire Tested: HCDJBL3040CSD-HCD82TRMB-4000lm-2700K

Issue Date: 2/13/2024

Test Information

Test Method: LM-79-2019
Report Number: P776475
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2312156B065-HCD82TRMB)
Test Lab:
Issue Date: 2/13/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBS3040CSD-HCD82TRMB-4000lm-2700K
Description: 8 INCH ROUND NARROW MATTE BLACK TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 2700K CCT
Ballast/Driver: -

Summary

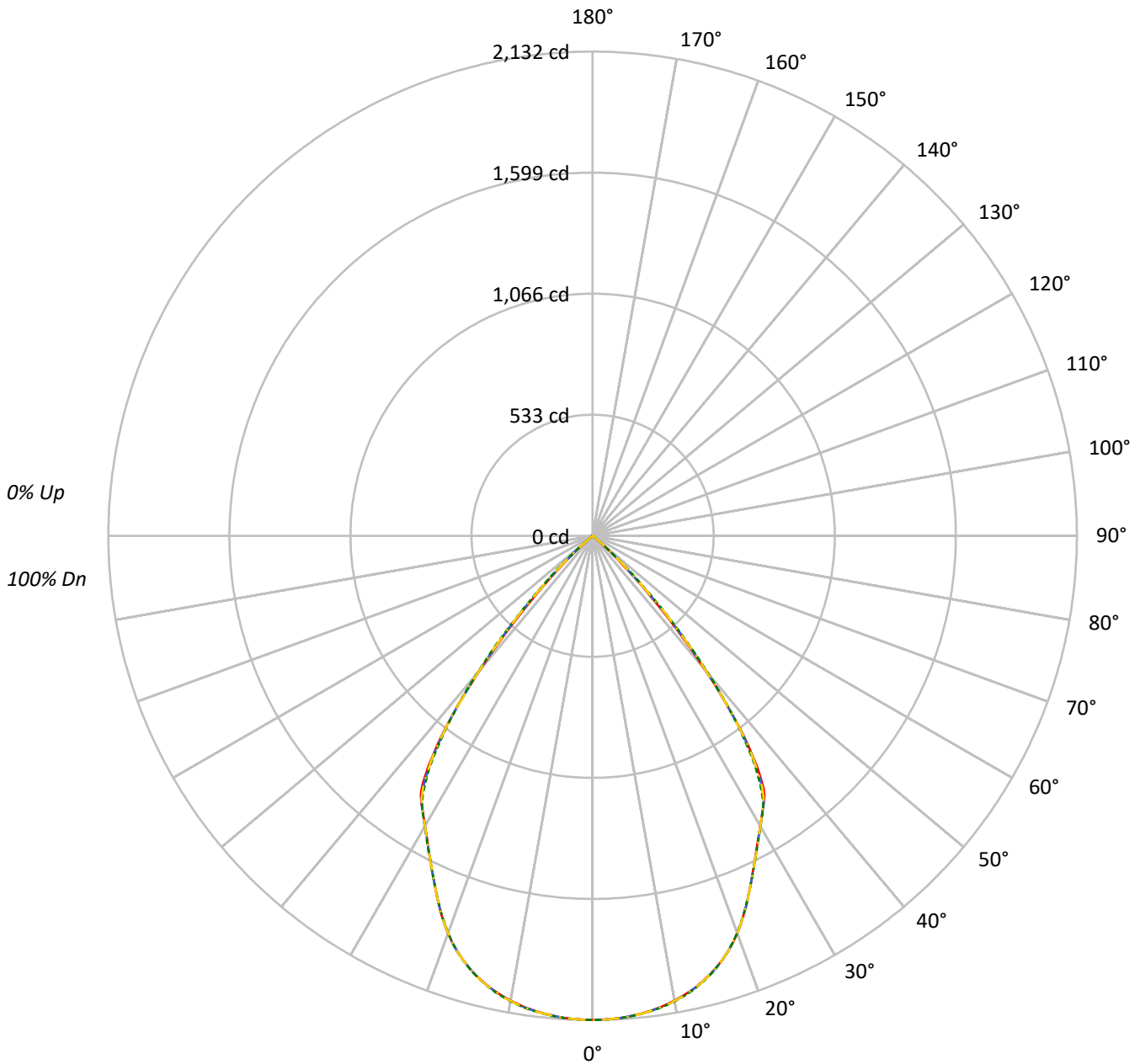
Lumens per Lamp: N/A
Luminaire Lumens: 2535.8 lumens
Efficiency: N/A
Efficacy: 65.9 lumens/watt
Spacing Criteria (0/90/45): 1.06 / 1.06 / 1.08
Luminous Opening: Circular (Dia: 0.67' x H: 0')
CIE Type: Direct

Input Watts (W): 38.5
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				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	100	100	100
1	113	110	108	105	111	108	106	104	104	102	101	100	99	98	97	96	95	93	93	93	93
2	107	102	98	94	105	100	97	93	97	94	91	94	92	89	91	89	87	86	86	86	86
3	101	95	89	85	99	93	88	85	91	86	83	88	85	82	86	83	81	79	79	79	79
4	96	88	82	77	94	87	81	77	84	80	76	82	78	75	81	77	74	73	73	73	73
5	90	82	75	71	89	81	75	70	79	74	70	77	73	69	75	72	69	67	67	67	67
6	85	76	70	65	84	75	69	65	74	68	64	72	67	64	71	67	63	62	62	62	62
7	81	71	64	60	79	70	64	60	69	63	59	68	63	59	66	62	59	57	57	57	57
8	76	66	60	55	75	66	60	55	64	59	55	63	58	55	62	58	55	53	53	53	53
9	72	62	56	51	71	61	55	51	60	55	51	60	55	51	59	54	51	49	49	49	49
10	68	58	52	48	67	58	52	48	57	51	48	56	51	47	55	51	47	46	46	46	46

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	65094	65094	65094	65094
5°	64941	64999	64941	64999
10°	64430	64526	64430	64526
15°	63186	63249	63186	63249
20°	60509	60447	60509	60447
25°	55893	55943	55893	55943
30°	52030	52111	52030	52111
35°	47762	46789	47762	46789
40°	30819	31676	30819	31676
45°	11312	13601	11312	13601
50°	1297	2080	1297	2080
55°	202	202	202	202
60°	116	116	116	116
65°	87	87	87	87
70°	71	71	71	71
75°	47	47	47	47
80°	0	0	0	0
85°	0	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 13601 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	201.1	7.9
10°-20°	560.8	22.1
20°-30°	764.5	30.1
30°-40°	754.8	29.8
40°-50°	247.2	9.7
50°-60°	5.8	0.2
60°-70°	1.2	0.0
70°-80°	0.4	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°	1526.4	60.2
0°-40°	2281.2	90.0
0°-60°	2534.2	99.9
0°-90°	2535.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2535.8	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2132	2132	2132	2132	2132	
5°	2119	2121	2119	2121	2119	201
15°	1999	2001	1999	2001	1999	561
25°	1659	1661	1659	1661	1659	764
35°	1282	1255	1282	1255	1282	758
45°	262	315	262	315	262	232
55°	4	4	4	4	4	5
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°	2132.1	2132.1	2132.1	2132.1	2132.1	2132.1	2132.1	2132.1	2132.1	2132.1	2132.1
0.5°	2131.7	2131.7	2132.1	2131.7	2132.1	2131.7	2132.1	2131.7	2131.7	2131.7	2132.1
1°	2131.3	2131.3	2131.7	2131.3	2132.1	2131.3	2131.7	2131.3	2131.3	2131.3	2131.7
1.5°	2130.5	2130.9	2130.9	2130.9	2131.3	2130.9	2130.9	2130.9	2130.5	2130.9	2130.9
2°	2129.8	2129.8	2130.1	2130.1	2130.5	2130.1	2130.1	2129.8	2129.8	2129.8	2130.1
2.5°	2128.6	2129.0	2129.0	2129.0	2129.4	2129.0	2129.0	2129.0	2128.6	2129.0	2129.0
3°	2127.5	2127.5	2127.8	2127.8	2128.2	2127.8	2127.8	2127.5	2127.5	2127.5	2127.8
3.5°	2125.9	2125.9	2126.3	2126.3	2126.7	2126.3	2126.3	2125.9	2125.9	2125.9	2126.3
4°	2124.0	2124.0	2124.4	2124.4	2125.1	2124.4	2124.4	2124.0	2124.0	2124.0	2124.4
4.5°	2121.7	2121.7	2122.1	2122.5	2122.8	2122.5	2122.1	2121.7	2121.7	2121.7	2122.1
5°	2119.0	2119.4	2119.8	2120.2	2120.9	2120.2	2119.8	2119.4	2119.0	2119.4	2119.8
5.5°	2116.7	2116.7	2117.1	2117.5	2118.2	2117.5	2117.1	2116.7	2116.7	2116.7	2117.1
6°	2113.6	2113.6	2114.4	2114.8	2115.5	2114.8	2114.4	2113.6	2113.6	2113.6	2114.4
6.5°	2110.2	2110.5	2111.3	2111.7	2112.5	2111.7	2111.3	2110.5	2110.2	2110.5	2111.3
7°	2106.7	2106.7	2107.9	2108.2	2109.0	2108.2	2107.9	2106.7	2106.7	2106.7	2107.9
7.5°	2102.9	2102.9	2104.0	2104.4	2105.2	2104.4	2104.0	2102.9	2102.9	2102.9	2104.0
8°	2098.6	2099.0	2099.8	2100.6	2101.3	2100.6	2099.8	2099.0	2098.6	2099.0	2099.8
8.5°	2094.0	2094.4	2095.2	2096.0	2096.7	2096.0	2095.2	2094.4	2094.0	2094.4	2095.2
9°	2089.0	2089.4	2090.6	2091.3	2092.1	2091.3	2090.6	2089.4	2089.0	2089.4	2090.6
9.5°	2083.7	2084.0	2085.2	2086.3	2087.1	2086.3	2085.2	2084.0	2083.7	2084.0	2085.2
10°	2078.3	2078.7	2079.4	2080.6	2081.4	2080.6	2079.4	2078.7	2078.3	2078.7	2079.4
10.5°	2072.1	2072.5	2073.7	2074.8	2075.6	2074.8	2073.7	2072.5	2072.1	2072.5	2073.7
11°	2066.0	2066.4	2067.5	2068.3	2069.1	2068.3	2067.5	2066.4	2066.0	2066.4	2067.5
11.5°	2059.1	2059.5	2060.6	2061.4	2062.5	2061.4	2060.6	2059.5	2059.1	2059.5	2060.6
12°	2052.2	2052.2	2053.3	2054.5	2055.2	2054.5	2053.3	2052.2	2052.2	2052.2	2053.3
12.5°	2044.5	2044.5	2045.6	2046.8	2047.5	2046.8	2045.6	2044.5	2044.5	2044.5	2045.6
13°	2036.4	2036.8	2037.6	2038.7	2039.1	2038.7	2037.6	2036.8	2036.4	2036.8	2037.6
13.5°	2027.6	2028.0	2029.1	2029.9	2030.6	2029.9	2029.1	2028.0	2027.6	2028.0	2029.1
14°	2018.7	2019.1	2019.9	2020.7	2021.4	2020.7	2019.9	2019.1	2018.7	2019.1	2019.9
14.5°	2009.1	2009.5	2010.3	2011.1	2011.8	2011.1	2010.3	2009.5	2009.1	2009.5	2010.3
15°	1999.1	1999.1	1999.9	2000.7	2001.1	2000.7	1999.9	1999.1	1999.1	1999.1	1999.9
15.5°	1988.4	1988.4	1989.2	1989.9	1990.3	1989.9	1989.2	1988.4	1988.4	1988.4	1989.2
16°	1976.9	1977.2	1977.6	1978.0	1978.8	1978.0	1977.6	1977.2	1976.9	1977.2	1977.6
16.5°	1965.3	1965.3	1965.7	1966.1	1966.5	1966.1	1965.7	1965.3	1965.3	1965.3	1965.7
17°	1952.7	1952.7	1953.0	1953.4	1953.8	1953.4	1953.0	1952.7	1952.7	1952.7	1953.0
17.5°	1939.2	1939.2	1939.6	1939.6	1940.0	1939.6	1939.6	1939.2	1939.2	1939.2	1939.6
18°	1925.8	1925.4	1925.4	1925.4	1925.8	1925.4	1925.4	1925.4	1925.8	1925.4	1925.4
18.5°	1910.8	1910.8	1910.4	1910.4	1910.4	1910.4	1910.4	1910.8	1910.8	1910.8	1910.4
19°	1895.4	1895.4	1895.0	1894.7	1894.7	1894.7	1895.0	1895.4	1895.4	1895.4	1895.0
19.5°	1879.3	1878.9	1878.5	1878.1	1878.1	1878.1	1878.5	1878.9	1879.3	1878.9	1878.5
20°	1862.4	1862.0	1861.6	1860.8	1860.5	1860.8	1861.6	1862.0	1862.4	1862.0	1861.6
20.5°	1844.3	1843.9	1843.2	1842.4	1842.0	1842.4	1843.2	1843.9	1844.3	1843.9	1843.2
21°	1825.5	1825.5	1824.7	1823.2	1822.4	1823.2	1824.7	1825.5	1825.5	1825.5	1824.7



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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°	1765.2	1765.2	1764.4	1763.3	1763.3	1763.3	1764.4	1765.2	1765.2	1765.2	1764.4
23°	1744.1	1744.1	1743.7	1742.5	1742.5	1742.5	1743.7	1744.1	1744.1	1744.1	1743.7
23.5°	1722.6	1722.9	1722.6	1721.8	1721.8	1721.8	1722.6	1722.9	1722.6	1722.9	1722.6
24°	1701.0	1701.4	1701.4	1701.0	1701.4	1701.0	1701.4	1701.4	1701.0	1701.4	1701.4
24.5°	1680.3	1680.3	1680.7	1680.3	1681.1	1680.3	1680.7	1680.3	1680.3	1680.3	1680.7
25°	1659.2	1659.6	1659.9	1659.9	1660.7	1659.9	1659.9	1659.6	1659.2	1659.6	1659.9
25.5°	1639.2	1639.2	1639.6	1640.0	1640.7	1640.0	1639.6	1639.2	1639.2	1639.2	1639.6
26°	1619.2	1619.6	1620.0	1620.4	1621.1	1620.4	1620.0	1619.6	1619.2	1619.6	1620.0
26.5°	1599.6	1600.0	1600.4	1600.8	1601.9	1600.8	1600.4	1600.0	1599.6	1600.0	1600.4
27°	1580.8	1580.8	1581.6	1581.6	1582.7	1581.6	1581.6	1580.8	1580.8	1580.8	1581.6
27.5°	1562.0	1562.4	1562.7	1563.5	1564.3	1563.5	1562.7	1562.4	1562.0	1562.4	1562.7
28°	1543.5	1543.9	1544.7	1545.1	1546.2	1545.1	1544.7	1543.9	1543.5	1543.9	1544.7
28.5°	1525.9	1526.6	1527.0	1527.4	1528.6	1527.4	1527.0	1526.6	1525.9	1526.6	1527.0
29°	1509.0	1509.3	1509.7	1510.1	1511.3	1510.1	1509.7	1509.3	1509.0	1509.3	1509.7
29.5°	1492.1	1492.4	1493.2	1493.6	1494.4	1493.6	1493.2	1492.4	1492.1	1492.4	1493.2
30°	1475.9	1475.9	1476.7	1477.1	1478.2	1477.1	1476.7	1475.9	1475.9	1475.9	1476.7
30.5°	1459.8	1460.2	1460.6	1461.3	1462.1	1461.3	1460.6	1460.2	1459.8	1460.2	1460.6
31°	1444.4	1444.8	1445.6	1446.0	1447.1	1446.0	1445.6	1444.8	1444.4	1444.8	1445.6
31.5°	1429.8	1430.2	1430.2	1430.6	1431.4	1430.6	1430.2	1430.2	1429.8	1430.2	1430.2
32°	1415.6	1415.6	1415.6	1415.2	1416.0	1415.2	1415.6	1415.6	1415.6	1415.6	1415.6
32.5°	1401.8	1401.4	1400.6	1399.1	1397.6	1399.1	1400.6	1401.4	1401.8	1401.4	1400.6
33°	1386.8	1386.0	1382.2	1378.3	1374.1	1378.3	1382.2	1386.0	1386.8	1386.0	1382.2
33.5°	1370.7	1366.8	1359.5	1353.0	1347.6	1353.0	1359.5	1366.8	1370.7	1366.8	1359.5
34°	1347.6	1342.6	1332.6	1324.2	1318.4	1324.2	1332.6	1342.6	1347.6	1342.6	1332.6
34.5°	1317.3	1313.0	1301.9	1293.8	1288.1	1293.8	1301.9	1313.0	1317.3	1313.0	1301.9
35°	1281.5	1277.3	1267.3	1260.8	1255.4	1260.8	1267.3	1277.3	1281.5	1277.3	1267.3
35.5°	1242.4	1240.1	1230.8	1223.9	1218.5	1223.9	1230.8	1240.1	1242.4	1240.1	1230.8
36°	1200.5	1198.6	1190.9	1184.0	1178.2	1184.0	1190.9	1198.6	1200.5	1198.6	1190.9
36.5°	1155.9	1154.4	1147.9	1140.6	1134.4	1140.6	1147.9	1154.4	1155.9	1154.4	1147.9
37°	1106.0	1104.8	1101.0	1095.6	1089.5	1095.6	1101.0	1104.8	1106.0	1104.8	1101.0
37.5°	1054.5	1053.0	1051.4	1048.0	1043.0	1048.0	1051.4	1053.0	1054.5	1053.0	1051.4
38°	1000.0	997.7	998.4	998.0	995.7	998.0	998.4	997.7	1000.0	997.7	998.4
38.5°	946.9	943.5	944.3	946.2	948.1	946.2	944.3	943.5	946.9	943.5	944.3
39°	889.7	888.6	889.3	893.9	898.9	893.9	889.3	888.6	889.7	888.6	889.3
39.5°	832.8	833.6	835.2	840.9	847.8	840.9	835.2	833.6	832.8	833.6	835.2
40°	773.3	777.1	780.6	788.3	794.8	788.3	780.6	777.1	773.3	777.1	780.6
40.5°	716.1	721.4	728.0	736.4	742.2	736.4	728.0	721.4	716.1	721.4	728.0
41°	657.3	664.6	675.3	684.9	690.7	684.9	675.3	664.6	657.3	664.6	675.3
41.5°	601.6	609.3	622.3	633.9	639.2	633.9	622.3	609.3	601.6	609.3	622.3
42°	547.0	554.0	569.3	583.1	588.1	583.1	569.3	554.0	547.0	554.0	569.3
42.5°	494.0	502.5	519.8	533.6	538.2	533.6	519.8	502.5	494.0	502.5	519.8
43°	442.9	452.5	469.8	484.4	489.4	484.4	469.8	452.5	442.9	452.5	469.8
43.5°	395.3	404.5	421.4	436.4	443.3	436.4	421.4	404.5	395.3	404.5	421.4



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	262.0	270.1	287.7	305.4	315.0	305.4	287.7	270.1	262.0	270.1	287.7
45.5°	221.7	231.3	249.3	267.8	276.6	267.8	249.3	231.3	221.7	231.3	249.3
46°	186.3	194.4	214.7	232.8	243.6	232.8	214.7	194.4	186.3	194.4	214.7
46.5°	154.4	162.9	182.1	199.4	210.9	199.4	182.1	162.9	154.4	162.9	182.1
47°	129.5	134.5	150.6	167.9	177.9	167.9	150.6	134.5	129.5	134.5	150.6
47.5°	105.6	108.7	123.3	138.3	144.8	138.3	123.3	108.7	105.6	108.7	123.3
48°	84.1	87.2	98.3	111.8	118.7	111.8	98.3	87.2	84.1	98.3	111.8
48.5°	67.6	69.1	78.8	88.7	94.9	88.7	78.8	69.1	67.6	78.8	94.9
49°	50.7	52.6	60.7	70.3	73.8	70.3	60.7	52.6	50.7	60.7	73.8
49.5°	38.4	39.2	44.6	53.0	57.6	53.0	44.6	39.2	38.4	44.6	57.6
50°	27.3	26.5	33.8	41.5	43.8	41.5	33.8	26.5	27.3	33.8	43.8
50.5°	16.9	18.4	23.8	31.1	35.3	31.1	23.8	18.4	16.9	23.8	35.3
51°	9.2	12.3	16.5	20.7	26.9	20.7	16.5	12.3	9.2	16.5	26.9
51.5°	7.3	7.7	10.8	13.4	20.0	13.4	10.8	7.7	7.3	10.8	20.0
52°	6.1	6.5	6.9	8.5	13.1	8.5	6.9	6.5	6.1	6.9	13.1
52.5°	5.0	5.8	5.8	6.5	6.1	6.5	5.8	5.8	5.0	5.8	6.1
53°	5.0	5.0	5.4	5.4	5.0	5.4	5.4	5.0	5.0	5.4	5.4
53.5°	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
54°	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
54.5°	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
55°	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
55.5°	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
56°	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
56.5°	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
57°	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
57.5°	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
58°	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
58.5°	2.3	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.3	2.7	2.7
59°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
59.5°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
60°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
60.5°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
61°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
61.5°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
62°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
62.5°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
63°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
63.5°	1.2	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.2	1.5	1.5
64°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
64.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
65°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
65.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
66°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2



TEST NUMBER: P776475

CATALOG NUMBER: HCDJBL3040CSD-HCD82TRMB-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	0.8	0.8	0.8	0.8	0.8	0.8	0.8
68°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
68.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
69°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
69.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
70°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
70.5°	0.4	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.4	0.8	0.8
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°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
76°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
76.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
77°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
77.5°	0.0	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.0	0.4	0.4
78°	0.0	0.0	0.0	0.4	0.4	0.4	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: P776475

CATALOG NUMBER: HCDJBL3040CSD-HCD82TRMB-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: P776475

CATALOG NUMBER: HCDJBL3040CSD-HCD82TRMB-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2132.1	2132.1	2132.1	2132.1	2132.1	2132.1
0.5°	2131.7	2132.1	2131.7	2132.1	2131.7	2131.7
1°	2131.3	2132.1	2131.3	2131.7	2131.3	2131.3
1.5°	2130.9	2131.3	2130.9	2130.9	2130.9	2130.5
2°	2130.1	2130.5	2130.1	2130.1	2129.8	2129.8
2.5°	2129.0	2129.4	2129.0	2129.0	2129.0	2128.6
3°	2127.8	2128.2	2127.8	2127.8	2127.5	2127.5
3.5°	2126.3	2126.7	2126.3	2126.3	2125.9	2125.9
4°	2124.4	2125.1	2124.4	2124.4	2124.0	2124.0
4.5°	2122.5	2122.8	2122.5	2122.1	2121.7	2121.7
5°	2120.2	2120.9	2120.2	2119.8	2119.4	2119.0
5.5°	2117.5	2118.2	2117.5	2117.1	2116.7	2116.7
6°	2114.8	2115.5	2114.8	2114.4	2113.6	2113.6
6.5°	2111.7	2112.5	2111.7	2111.3	2110.5	2110.2
7°	2108.2	2109.0	2108.2	2107.9	2106.7	2106.7
7.5°	2104.4	2105.2	2104.4	2104.0	2102.9	2102.9
8°	2100.6	2101.3	2100.6	2099.8	2099.0	2098.6
8.5°	2096.0	2096.7	2096.0	2095.2	2094.4	2094.0
9°	2091.3	2092.1	2091.3	2090.6	2089.4	2089.0
9.5°	2086.3	2087.1	2086.3	2085.2	2084.0	2083.7
10°	2080.6	2081.4	2080.6	2079.4	2078.7	2078.3
10.5°	2074.8	2075.6	2074.8	2073.7	2072.5	2072.1
11°	2068.3	2069.1	2068.3	2067.5	2066.4	2066.0
11.5°	2061.4	2062.5	2061.4	2060.6	2059.5	2059.1
12°	2054.5	2055.2	2054.5	2053.3	2052.2	2052.2
12.5°	2046.8	2047.5	2046.8	2045.6	2044.5	2044.5
13°	2038.7	2039.1	2038.7	2037.6	2036.8	2036.4
13.5°	2029.9	2030.6	2029.9	2029.1	2028.0	2027.6
14°	2020.7	2021.4	2020.7	2019.9	2019.1	2018.7
14.5°	2011.1	2011.8	2011.1	2010.3	2009.5	2009.1
15°	2000.7	2001.1	2000.7	1999.9	1999.1	1999.1
15.5°	1989.9	1990.3	1989.9	1989.2	1988.4	1988.4
16°	1978.0	1978.8	1978.0	1977.6	1977.2	1976.9
16.5°	1966.1	1966.5	1966.1	1965.7	1965.3	1965.3
17°	1953.4	1953.8	1953.4	1953.0	1952.7	1952.7
17.5°	1939.6	1940.0	1939.6	1939.6	1939.2	1939.2
18°	1925.4	1925.8	1925.4	1925.4	1925.4	1925.8
18.5°	1910.4	1910.4	1910.4	1910.4	1910.8	1910.8
19°	1894.7	1894.7	1894.7	1895.0	1895.4	1895.4
19.5°	1878.1	1878.1	1878.1	1878.5	1878.9	1879.3
20°	1860.8	1860.5	1860.8	1861.6	1862.0	1862.4
20.5°	1842.4	1842.0	1842.4	1843.2	1843.9	1844.3
21°	1823.2	1822.4	1823.2	1824.7	1825.5	1825.5



TEST NUMBER: P776475

CATALOG NUMBER: HCDJBL3040CSD-HCD82TRMB-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	1763.3	1763.3	1763.3	1764.4	1765.2	1765.2
23°	1742.5	1742.5	1742.5	1743.7	1744.1	1744.1
23.5°	1721.8	1721.8	1721.8	1722.6	1722.9	1722.6
24°	1701.0	1701.4	1701.0	1701.4	1701.4	1701.0
24.5°	1680.3	1681.1	1680.3	1680.7	1680.3	1680.3
25°	1659.9	1660.7	1659.9	1659.9	1659.6	1659.2
25.5°	1640.0	1640.7	1640.0	1639.6	1639.2	1639.2
26°	1620.4	1621.1	1620.4	1620.0	1619.6	1619.2
26.5°	1600.8	1601.9	1600.8	1600.4	1600.0	1599.6
27°	1581.6	1582.7	1581.6	1581.6	1580.8	1580.8
27.5°	1563.5	1564.3	1563.5	1562.7	1562.4	1562.0
28°	1545.1	1546.2	1545.1	1544.7	1543.9	1543.5
28.5°	1527.4	1528.6	1527.4	1527.0	1526.6	1525.9
29°	1510.1	1511.3	1510.1	1509.7	1509.3	1509.0
29.5°	1493.6	1494.4	1493.6	1493.2	1492.4	1492.1
30°	1477.1	1478.2	1477.1	1476.7	1475.9	1475.9
30.5°	1461.3	1462.1	1461.3	1460.6	1460.2	1459.8
31°	1446.0	1447.1	1446.0	1445.6	1444.8	1444.4
31.5°	1430.6	1431.4	1430.6	1430.2	1430.2	1429.8
32°	1415.2	1416.0	1415.2	1415.6	1415.6	1415.6
32.5°	1399.1	1397.6	1399.1	1400.6	1401.4	1401.8
33°	1378.3	1374.1	1378.3	1382.2	1386.0	1386.8
33.5°	1353.0	1347.6	1353.0	1359.5	1366.8	1370.7
34°	1324.2	1318.4	1324.2	1332.6	1342.6	1347.6
34.5°	1293.8	1288.1	1293.8	1301.9	1313.0	1317.3
35°	1260.8	1255.4	1260.8	1267.3	1277.3	1281.5
35.5°	1223.9	1218.5	1223.9	1230.8	1240.1	1242.4
36°	1184.0	1178.2	1184.0	1190.9	1198.6	1200.5
36.5°	1140.6	1134.4	1140.6	1147.9	1154.4	1155.9
37°	1095.6	1089.5	1095.6	1101.0	1104.8	1106.0
37.5°	1048.0	1043.0	1048.0	1051.4	1053.0	1054.5
38°	998.0	995.7	998.0	998.4	997.7	1000.0
38.5°	946.2	948.1	946.2	944.3	943.5	946.9
39°	893.9	898.9	893.9	889.3	888.6	889.7
39.5°	840.9	847.8	840.9	835.2	833.6	832.8
40°	788.3	794.8	788.3	780.6	777.1	773.3
40.5°	736.4	742.2	736.4	728.0	721.4	716.1
41°	684.9	690.7	684.9	675.3	664.6	657.3
41.5°	633.9	639.2	633.9	622.3	609.3	601.6
42°	583.1	588.1	583.1	569.3	554.0	547.0
42.5°	533.6	538.2	533.6	519.8	502.5	494.0
43°	484.4	489.4	484.4	469.8	452.5	442.9
43.5°	436.4	443.3	436.4	421.4	404.5	395.3



TEST NUMBER: P776475

CATALOG NUMBER: HCDJBL3040CSD-HCD82TRMB-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	305.4	315.0	305.4	287.7	270.1	262.0
45.5°	267.8	276.6	267.8	249.3	231.3	221.7
46°	232.8	243.6	232.8	214.7	194.4	186.3
46.5°	199.4	210.9	199.4	182.1	162.9	154.4
47°	167.9	177.9	167.9	150.6	134.5	129.5
47.5°	138.3	144.8	138.3	123.3	108.7	105.6
48°	111.8	118.7	111.8	98.3	87.2	84.1
48.5°	88.7	94.9	88.7	78.8	69.1	67.6
49°	70.3	73.8	70.3	60.7	52.6	50.7
49.5°	53.0	57.6	53.0	44.6	39.2	38.4
50°	41.5	43.8	41.5	33.8	26.5	27.3
50.5°	31.1	35.3	31.1	23.8	18.4	16.9
51°	20.7	26.9	20.7	16.5	12.3	9.2
51.5°	13.4	20.0	13.4	10.8	7.7	7.3
52°	8.5	13.1	8.5	6.9	6.5	6.1
52.5°	6.5	6.1	6.5	5.8	5.8	5.0
53°	5.4	5.0	5.4	5.4	5.0	5.0
53.5°	4.6	4.6	4.6	4.6	4.6	4.6
54°	4.2	4.2	4.2	4.2	4.2	4.2
54.5°	4.2	4.2	4.2	4.2	4.2	4.2
55°	3.8	3.8	3.8	3.8	3.8	3.8
55.5°	3.8	3.8	3.8	3.8	3.8	3.8
56°	3.5	3.5	3.5	3.5	3.5	3.5
56.5°	3.1	3.1	3.1	3.1	3.1	3.1
57°	3.1	3.1	3.1	3.1	3.1	3.1
57.5°	2.7	2.7	2.7	2.7	2.7	2.7
58°	2.7	2.7	2.7	2.7	2.7	2.7
58.5°	2.7	2.7	2.7	2.7	2.7	2.3
59°	2.3	2.3	2.3	2.3	2.3	2.3
59.5°	2.3	2.3	2.3	2.3	2.3	2.3
60°	1.9	1.9	1.9	1.9	1.9	1.9
60.5°	1.9	1.9	1.9	1.9	1.9	1.9
61°	1.9	1.9	1.9	1.9	1.9	1.9
61.5°	1.5	1.5	1.5	1.5	1.5	1.5
62°	1.5	1.5	1.5	1.5	1.5	1.5
62.5°	1.5	1.5	1.5	1.5	1.5	1.5
63°	1.5	1.5	1.5	1.5	1.5	1.5
63.5°	1.5	1.5	1.5	1.5	1.5	1.2
64°	1.2	1.2	1.2	1.2	1.2	1.2
64.5°	1.2	1.2	1.2	1.2	1.2	1.2
65°	1.2	1.2	1.2	1.2	1.2	1.2
65.5°	1.2	1.2	1.2	1.2	1.2	1.2
66°	1.2	1.2	1.2	1.2	1.2	1.2



TEST NUMBER: P776475
 CATALOG NUMBER: HCDJBL3040CSD-HCD82TRMB-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	0.8	0.8	0.8	0.8	0.8	0.8
68°	0.8	0.8	0.8	0.8	0.8	0.8
68.5°	0.8	0.8	0.8	0.8	0.8	0.8
69°	0.8	0.8	0.8	0.8	0.8	0.8
69.5°	0.8	0.8	0.8	0.8	0.8	0.8
70°	0.8	0.8	0.8	0.8	0.8	0.8
70.5°	0.8	0.8	0.8	0.8	0.8	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	0.4
76°	0.4	0.4	0.4	0.4	0.4	0.4
76.5°	0.4	0.4	0.4	0.4	0.4	0.4
77°	0.4	0.4	0.4	0.4	0.4	0.4
77.5°	0.4	0.4	0.4	0.4	0.4	0.0
78°	0.4	0.4	0.4	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: P776475
CATALOG NUMBER: HCDJBL3040CSD-HCD82TRMB-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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Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report





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

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Scaled Data Report



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Peachtree City, GA 30269

Scaled Data Report





21.5°	1805.9	1805.5	1804.8	1803.6	1803.2	1803.6	1804.8	1805.5	1805.9	1805.5	1804.8
22°	1785.9	1785.6	1784.8	1783.6	1783.2	1783.6	1784.8	1785.6	1785.9	1785.6	1784.8



44°	349.2	356.5	374.2	389.9	399.1	389.9	374.2	356.5	349.2	356.5	374.2
44.5°	305.0	311.9	329.6	346.9	356.1	346.9	329.6	311.9	305.0	311.9	329.6



66.5°	0.8	0.8	1.2	1.2	1.2	1.2	1.2	0.8	0.8	0.8	1.2
67°	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°	1803.6	1803.2	1803.6	1804.8	1805.5	1805.9
22°	1783.6	1783.2	1783.6	1784.8	1785.6	1785.9



44°	389.9	399.1	389.9	374.2	356.5	349.2
44.5°	346.9	356.1	346.9	329.6	311.9	305.0

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66.5°	1.2	1.2	1.2	1.2	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)