

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: P776478

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

Issue Date: 2/13/2024

Test Information

Test Method: LM-79-2019
Report Number: P776478
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: HCDJBL3040CSD-HCD82TRMB-4000lm-4000K
Description: 8 INCH ROUND NARROW MATTE BLACK TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 4000K CCT
Ballast/Driver: -

Summary

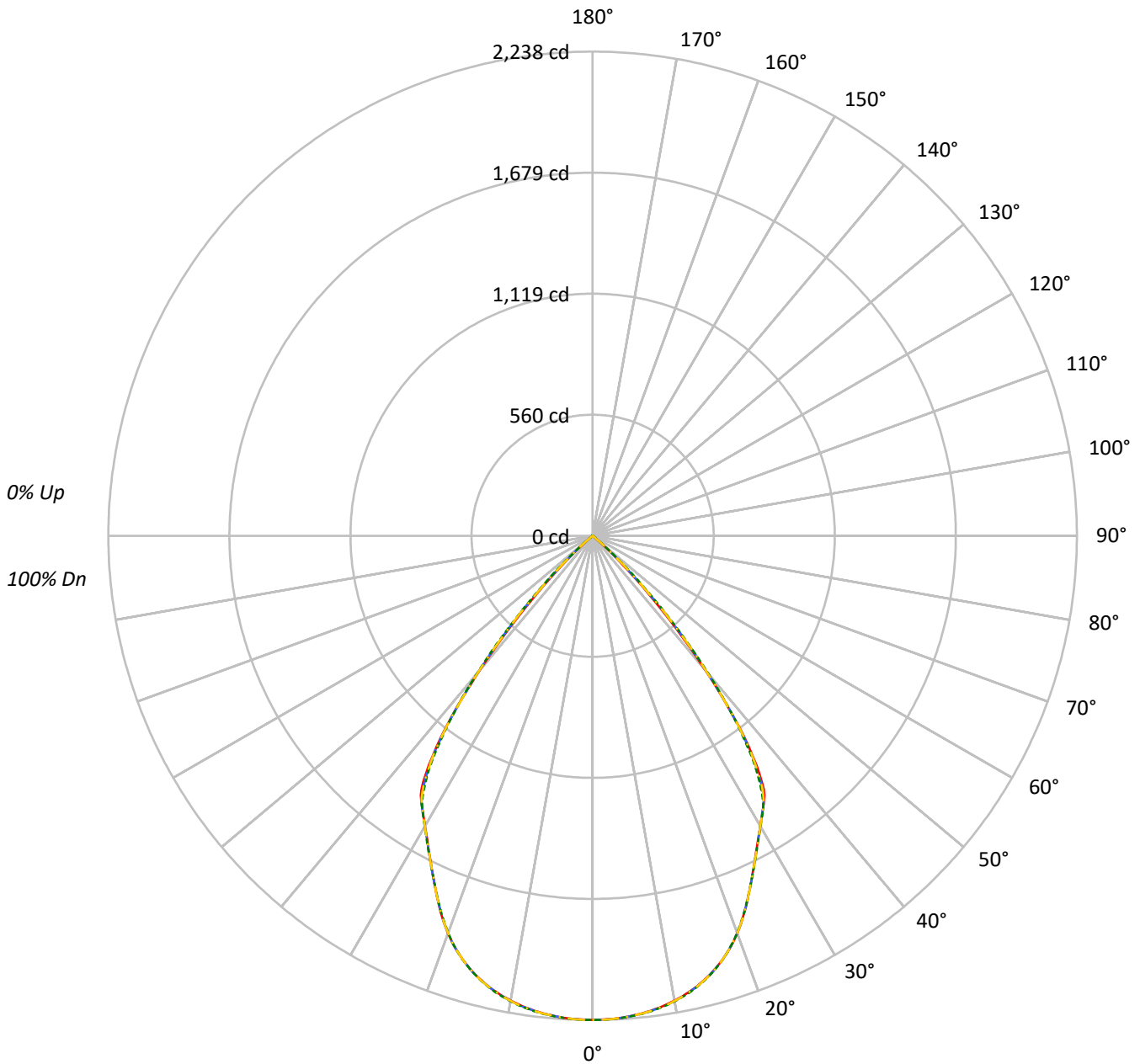
Lumens per Lamp: N/A
Luminaire Lumens: 2661.9 lumens
Efficiency: N/A
Efficacy: 69.1 lumens/watt
Spacing Criteria (0/90/45): 1.06 / 1.06 / 1.08
Luminous Opening: Circular (Dia: 0.67' x H: 0')
CIE Type: Direct

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

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	68330	68330	68330	68330
5°	68171	68232	68171	68232
10°	67635	67735	67635	67735
15°	66331	66394	66331	66394
20°	63517	63452	63517	63452
25°	58672	58726	58672	58726
30°	54618	54706	54618	54706
35°	50140	49119	50140	49119
40°	32354	33255	32354	33255
45°	11873	14278	11873	14278
50°	1358	2185	1358	2185
55°	213	213	213	213
60°	122	122	122	122
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: 14278 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	211.1	7.9
10°-20°	588.7	22.1
20°-30°	802.5	30.1
30°-40°	792.4	29.8
40°-50°	259.5	9.7
50°-60°	6.1	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°	1602.3	60.2
0°-40°	2394.7	90.0
0°-60°	2660.3	99.9
0°-90°	2661.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2661.9	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2238	2238	2238	2238	2238	
5°	2224	2226	2224	2226	2224	211
15°	2099	2101	2099	2101	2099	589
25°	1742	1743	1742	1743	1742	802
35°	1345	1318	1345	1318	1345	795
45°	275	331	275	331	275	243
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°	2238.1	2238.1	2238.1	2238.1	2238.1	2238.1	2238.1	2238.1	2238.1	2238.1	2238.1
0.5°	2237.7	2237.7	2238.1	2237.7	2238.1	2237.7	2238.1	2237.7	2237.7	2237.7	2238.1
1°	2237.3	2237.3	2237.7	2237.3	2238.1	2237.3	2237.7	2237.3	2237.3	2237.3	2237.7
1.5°	2236.5	2236.9	2236.9	2236.9	2237.3	2236.9	2236.9	2236.9	2236.5	2236.9	2236.9
2°	2235.7	2235.7	2236.1	2236.1	2236.5	2236.1	2236.1	2235.7	2235.7	2235.7	2236.1
2.5°	2234.5	2234.9	2234.9	2234.9	2235.3	2234.9	2234.9	2234.9	2234.5	2234.9	2234.9
3°	2233.3	2233.3	2233.7	2233.7	2234.1	2233.7	2233.7	2233.3	2233.3	2233.3	2233.7
3.5°	2231.7	2231.7	2232.1	2232.1	2232.5	2232.1	2232.1	2231.7	2231.7	2231.7	2232.1
4°	2229.6	2229.6	2230.0	2230.0	2230.9	2230.0	2230.0	2229.6	2229.6	2229.6	2230.0
4.5°	2227.2	2227.2	2227.6	2228.0	2228.4	2228.0	2227.6	2227.2	2227.2	2227.2	2227.6
5°	2224.4	2224.8	2225.2	2225.6	2226.4	2225.6	2225.2	2224.8	2224.4	2224.8	2225.2
5.5°	2222.0	2222.0	2222.4	2222.8	2223.6	2222.8	2222.4	2222.0	2222.0	2222.0	2222.4
6°	2218.8	2218.8	2219.6	2220.0	2220.8	2220.0	2219.6	2218.8	2218.8	2218.8	2219.6
6.5°	2215.1	2215.5	2216.3	2216.7	2217.5	2216.7	2216.3	2215.5	2215.1	2215.5	2216.3
7°	2211.5	2211.5	2212.7	2213.1	2213.9	2213.1	2212.7	2211.5	2211.5	2211.5	2212.7
7.5°	2207.5	2207.5	2208.7	2209.1	2209.9	2209.1	2208.7	2207.5	2207.5	2207.5	2208.7
8°	2203.0	2203.4	2204.2	2205.0	2205.9	2205.0	2204.2	2203.4	2203.0	2203.4	2204.2
8.5°	2198.2	2198.6	2199.4	2200.2	2201.0	2200.2	2199.4	2198.6	2198.2	2198.6	2199.4
9°	2192.9	2193.3	2194.6	2195.4	2196.2	2195.4	2194.6	2193.3	2192.9	2193.3	2194.6
9.5°	2187.3	2187.7	2188.9	2190.1	2190.9	2190.1	2188.9	2187.7	2187.3	2187.7	2188.9
10°	2181.7	2182.1	2182.9	2184.1	2184.9	2184.1	2182.9	2182.1	2181.7	2182.1	2182.9
10.5°	2175.2	2175.6	2176.8	2178.0	2178.8	2178.0	2176.8	2175.6	2175.2	2175.6	2176.8
11°	2168.8	2169.2	2170.4	2171.2	2172.0	2171.2	2170.4	2169.2	2168.8	2169.2	2170.4
11.5°	2161.5	2161.9	2163.1	2163.9	2165.1	2163.9	2163.1	2161.9	2161.5	2161.9	2163.1
12°	2154.2	2154.2	2155.4	2156.7	2157.5	2156.7	2155.4	2154.2	2154.2	2154.2	2155.4
12.5°	2146.2	2146.2	2147.4	2148.6	2149.4	2148.6	2147.4	2146.2	2146.2	2146.2	2147.4
13°	2137.7	2138.1	2138.9	2140.1	2140.5	2140.1	2138.9	2138.1	2137.7	2138.1	2138.9
13.5°	2128.4	2128.8	2130.0	2130.8	2131.7	2130.8	2130.0	2128.8	2128.4	2128.8	2130.0
14°	2119.1	2119.6	2120.4	2121.2	2122.0	2121.2	2120.4	2119.6	2119.1	2119.6	2120.4
14.5°	2109.1	2109.5	2110.3	2111.1	2111.9	2111.1	2110.3	2109.5	2109.1	2109.5	2110.3
15°	2098.6	2098.6	2099.4	2100.2	2100.6	2100.2	2099.4	2098.6	2098.6	2098.6	2099.4
15.5°	2087.3	2087.3	2088.1	2088.9	2089.3	2088.9	2088.1	2087.3	2087.3	2087.3	2088.1
16°	2075.2	2075.6	2076.0	2076.4	2077.2	2076.4	2076.0	2075.6	2075.2	2075.6	2076.0
16.5°	2063.1	2063.1	2063.5	2063.9	2064.3	2063.9	2063.5	2063.1	2063.1	2063.1	2063.5
17°	2049.8	2049.8	2050.2	2050.6	2051.0	2050.6	2050.2	2049.8	2049.8	2049.8	2050.2
17.5°	2035.7	2035.7	2036.1	2036.1	2036.5	2036.1	2036.1	2035.7	2035.7	2035.7	2036.1
18°	2021.6	2021.2	2021.2	2021.2	2021.6	2021.2	2021.2	2021.2	2021.6	2021.2	2021.2
18.5°	2005.8	2005.8	2005.4	2005.4	2005.4	2005.4	2005.4	2005.8	2005.8	2005.8	2005.4
19°	1989.7	1989.7	1989.3	1988.9	1988.9	1988.9	1989.3	1989.7	1989.7	1989.7	1989.3
19.5°	1972.8	1972.4	1972.0	1971.6	1971.6	1971.6	1972.0	1972.4	1972.8	1972.4	1972.0
20°	1955.0	1954.6	1954.2	1953.4	1953.0	1953.4	1954.2	1954.6	1955.0	1954.6	1954.2
20.5°	1936.1	1935.7	1934.9	1934.1	1933.6	1934.1	1934.9	1935.7	1936.1	1935.7	1934.9
21°	1916.3	1916.3	1915.5	1913.9	1913.1	1913.9	1915.5	1916.3	1916.3	1916.3	1915.5



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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°	1853.0	1853.0	1852.2	1851.0	1851.0	1851.0	1852.2	1853.0	1853.0	1853.0	1852.2
23°	1830.8	1830.8	1830.4	1829.2	1829.2	1829.2	1830.4	1830.8	1830.8	1830.8	1830.4
23.5°	1808.2	1808.6	1808.2	1807.4	1807.4	1807.4	1808.2	1808.6	1808.2	1808.6	1808.2
24°	1785.7	1786.1	1786.1	1785.7	1786.1	1785.7	1786.1	1786.1	1785.7	1786.1	1786.1
24.5°	1763.9	1763.9	1764.3	1763.9	1764.7	1763.9	1764.3	1763.9	1763.9	1763.9	1764.3
25°	1741.7	1742.1	1742.5	1742.5	1743.3	1742.5	1742.5	1742.1	1741.7	1742.1	1742.5
25.5°	1720.7	1720.7	1721.1	1721.5	1722.3	1721.5	1721.1	1720.7	1720.7	1720.7	1721.1
26°	1699.8	1700.2	1700.6	1701.0	1701.8	1701.0	1700.6	1700.2	1699.8	1700.2	1700.6
26.5°	1679.2	1679.6	1680.0	1680.4	1681.6	1680.4	1680.0	1679.6	1679.2	1679.6	1680.0
27°	1659.4	1659.4	1660.2	1660.2	1661.4	1660.2	1660.2	1659.4	1659.4	1659.4	1660.2
27.5°	1639.7	1640.1	1640.5	1641.3	1642.1	1641.3	1640.5	1640.1	1639.7	1640.1	1640.5
28°	1620.3	1620.7	1621.5	1621.9	1623.1	1621.9	1621.5	1620.7	1620.3	1620.7	1621.5
28.5°	1601.8	1602.6	1603.0	1603.4	1604.6	1603.4	1603.0	1602.6	1601.8	1602.6	1603.0
29°	1584.0	1584.4	1584.8	1585.2	1586.4	1585.2	1584.8	1584.4	1584.0	1584.4	1584.8
29.5°	1566.3	1566.7	1567.5	1567.9	1568.7	1567.9	1567.5	1566.7	1566.3	1566.7	1567.5
30°	1549.3	1549.3	1550.1	1550.5	1551.8	1550.5	1550.1	1549.3	1549.3	1549.3	1550.1
30.5°	1532.4	1532.8	1533.2	1534.0	1534.8	1534.0	1533.2	1532.8	1532.4	1532.8	1533.2
31°	1516.3	1516.7	1517.5	1517.9	1519.1	1517.9	1517.5	1516.7	1516.3	1516.7	1517.5
31.5°	1500.9	1501.3	1501.3	1501.8	1502.6	1501.8	1501.3	1501.3	1500.9	1501.3	1501.3
32°	1486.0	1486.0	1486.0	1485.6	1486.4	1485.6	1486.0	1486.0	1486.0	1486.0	1486.0
32.5°	1471.5	1471.1	1470.3	1468.7	1467.1	1468.7	1470.3	1471.1	1471.5	1471.1	1470.3
33°	1455.8	1455.0	1450.9	1446.9	1442.5	1446.9	1450.9	1455.0	1455.8	1455.0	1450.9
33.5°	1438.8	1434.8	1427.1	1420.3	1414.6	1420.3	1427.1	1434.8	1438.8	1434.8	1427.1
34°	1414.6	1409.4	1398.9	1390.0	1384.0	1390.0	1398.9	1409.4	1414.6	1409.4	1398.9
34.5°	1382.8	1378.4	1366.7	1358.2	1352.1	1358.2	1366.7	1378.4	1382.8	1378.4	1366.7
35°	1345.3	1340.9	1330.4	1323.5	1317.9	1323.5	1330.4	1340.9	1345.3	1340.9	1330.4
35.5°	1304.2	1301.7	1292.1	1284.8	1279.2	1284.8	1292.1	1301.7	1304.2	1301.7	1292.1
36°	1260.2	1258.2	1250.1	1242.9	1236.8	1242.9	1250.1	1258.2	1260.2	1258.2	1250.1
36.5°	1213.4	1211.8	1205.0	1197.3	1190.8	1197.3	1205.0	1211.8	1213.4	1211.8	1205.0
37°	1161.0	1159.8	1155.8	1150.1	1143.7	1150.1	1155.8	1159.8	1161.0	1159.8	1155.8
37.5°	1107.0	1105.3	1103.7	1100.1	1094.9	1100.1	1103.7	1105.3	1107.0	1105.3	1103.7
38°	1049.7	1047.3	1048.1	1047.7	1045.3	1047.7	1048.1	1047.3	1049.7	1047.3	1048.1
38.5°	994.0	990.4	991.2	993.2	995.3	993.2	991.2	990.4	994.0	990.4	991.2
39°	934.0	932.7	933.6	938.4	943.6	938.4	933.6	932.7	934.0	932.7	933.6
39.5°	874.3	875.1	876.7	882.7	890.0	882.7	876.7	875.1	874.3	875.1	876.7
40°	811.8	815.8	819.4	827.5	834.4	827.5	819.4	815.8	811.8	815.8	819.4
40.5°	751.7	757.3	764.2	773.1	779.1	773.1	764.2	757.3	751.7	757.3	764.2
41°	690.0	697.6	708.9	719.0	725.1	719.0	708.9	697.6	690.0	697.6	708.9
41.5°	631.5	639.6	653.3	665.4	671.0	665.4	653.3	639.6	631.5	639.6	653.3
42°	574.2	581.5	597.6	612.2	617.4	612.2	597.6	581.5	574.2	581.5	597.6
42.5°	518.6	527.5	545.6	560.1	565.0	560.1	545.6	527.5	518.6	527.5	545.6
43°	465.0	475.0	493.2	508.5	513.8	508.5	493.2	475.0	465.0	475.0	493.2
43.5°	415.0	424.6	442.4	458.1	465.4	458.1	442.4	424.6	415.0	424.6	442.4



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	275.0	283.5	302.0	320.6	330.7	320.6	302.0	283.5	275.0	283.5	302.0
45.5°	232.7	242.8	261.7	281.1	290.3	281.1	261.7	242.8	232.7	242.8	261.7
46°	195.6	204.1	225.4	244.4	255.7	244.4	225.4	204.1	195.6	204.1	225.4
46.5°	162.1	171.0	191.1	209.3	221.4	209.3	191.1	171.0	162.1	171.0	191.1
47°	135.9	141.1	158.1	176.2	186.7	176.2	158.1	141.1	135.9	141.1	158.1
47.5°	110.9	114.1	129.4	145.2	152.0	145.2	129.4	114.1	110.9	114.1	129.4
48°	88.3	91.5	103.2	117.3	124.6	117.3	103.2	91.5	88.3	91.5	103.2
48.5°	71.0	72.6	82.7	93.2	99.6	93.2	82.7	72.6	71.0	72.6	82.7
49°	53.2	55.2	63.7	73.8	77.4	73.8	63.7	55.2	53.2	55.2	63.7
49.5°	40.3	41.1	46.8	55.7	60.5	55.7	46.8	41.1	40.3	41.1	46.8
50°	28.6	27.8	35.5	43.6	46.0	43.6	35.5	27.8	28.6	27.8	35.5
50.5°	17.7	19.4	25.0	32.7	37.1	32.7	25.0	19.4	17.7	19.4	25.0
51°	9.7	12.9	17.3	21.8	28.2	21.8	17.3	12.9	9.7	12.9	17.3
51.5°	7.7	8.1	11.3	14.1	21.0	14.1	11.3	8.1	7.7	8.1	11.3
52°	6.5	6.9	7.3	8.9	13.7	8.9	7.3	6.9	6.5	6.9	7.3
52.5°	5.2	6.0	6.0	6.9	6.5	6.9	6.0	6.0	5.2	6.0	6.0
53°	5.2	5.2	5.6	5.6	5.2	5.6	5.6	5.2	5.2	5.2	5.6
53.5°	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
54°	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
54.5°	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
55°	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
55.5°	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
56°	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
56.5°	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
57°	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
57.5°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
58°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
58.5°	2.4	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.4	2.8	2.8
59°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
59.5°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
60°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
60.5°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
61°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
61.5°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
62°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
62.5°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
63°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
63.5°	1.2	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.2	1.6	1.6
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: P776478

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

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: P776478

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

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: P776478

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

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2238.1	2238.1	2238.1	2238.1	2238.1	2238.1
0.5°	2237.7	2238.1	2237.7	2238.1	2237.7	2237.7
1°	2237.3	2238.1	2237.3	2237.7	2237.3	2237.3
1.5°	2236.9	2237.3	2236.9	2236.9	2236.9	2236.5
2°	2236.1	2236.5	2236.1	2236.1	2235.7	2235.7
2.5°	2234.9	2235.3	2234.9	2234.9	2234.9	2234.5
3°	2233.7	2234.1	2233.7	2233.7	2233.3	2233.3
3.5°	2232.1	2232.5	2232.1	2232.1	2231.7	2231.7
4°	2230.0	2230.9	2230.0	2230.0	2229.6	2229.6
4.5°	2228.0	2228.4	2228.0	2227.6	2227.2	2227.2
5°	2225.6	2226.4	2225.6	2225.2	2224.8	2224.4
5.5°	2222.8	2223.6	2222.8	2222.4	2222.0	2222.0
6°	2220.0	2220.8	2220.0	2219.6	2218.8	2218.8
6.5°	2216.7	2217.5	2216.7	2216.3	2215.5	2215.1
7°	2213.1	2213.9	2213.1	2212.7	2211.5	2211.5
7.5°	2209.1	2209.9	2209.1	2208.7	2207.5	2207.5
8°	2205.0	2205.9	2205.0	2204.2	2203.4	2203.0
8.5°	2200.2	2201.0	2200.2	2199.4	2198.6	2198.2
9°	2195.4	2196.2	2195.4	2194.6	2193.3	2192.9
9.5°	2190.1	2190.9	2190.1	2188.9	2187.7	2187.3
10°	2184.1	2184.9	2184.1	2182.9	2182.1	2181.7
10.5°	2178.0	2178.8	2178.0	2176.8	2175.6	2175.2
11°	2171.2	2172.0	2171.2	2170.4	2169.2	2168.8
11.5°	2163.9	2165.1	2163.9	2163.1	2161.9	2161.5
12°	2156.7	2157.5	2156.7	2155.4	2154.2	2154.2
12.5°	2148.6	2149.4	2148.6	2147.4	2146.2	2146.2
13°	2140.1	2140.5	2140.1	2138.9	2138.1	2137.7
13.5°	2130.8	2131.7	2130.8	2130.0	2128.8	2128.4
14°	2121.2	2122.0	2121.2	2120.4	2119.6	2119.1
14.5°	2111.1	2111.9	2111.1	2110.3	2109.5	2109.1
15°	2100.2	2100.6	2100.2	2099.4	2098.6	2098.6
15.5°	2088.9	2089.3	2088.9	2088.1	2087.3	2087.3
16°	2076.4	2077.2	2076.4	2076.0	2075.6	2075.2
16.5°	2063.9	2064.3	2063.9	2063.5	2063.1	2063.1
17°	2050.6	2051.0	2050.6	2050.2	2049.8	2049.8
17.5°	2036.1	2036.5	2036.1	2036.1	2035.7	2035.7
18°	2021.2	2021.6	2021.2	2021.2	2021.2	2021.6
18.5°	2005.4	2005.4	2005.4	2005.4	2005.8	2005.8
19°	1988.9	1988.9	1988.9	1989.3	1989.7	1989.7
19.5°	1971.6	1971.6	1971.6	1972.0	1972.4	1972.8
20°	1953.4	1953.0	1953.4	1954.2	1954.6	1955.0
20.5°	1934.1	1933.6	1934.1	1934.9	1935.7	1936.1
21°	1913.9	1913.1	1913.9	1915.5	1916.3	1916.3

TEST NUMBER: P776478

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

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	1851.0	1851.0	1851.0	1852.2	1853.0	1853.0
23°	1829.2	1829.2	1829.2	1830.4	1830.8	1830.8
23.5°	1807.4	1807.4	1807.4	1808.2	1808.6	1808.2
24°	1785.7	1786.1	1785.7	1786.1	1786.1	1785.7
24.5°	1763.9	1764.7	1763.9	1764.3	1763.9	1763.9
25°	1742.5	1743.3	1742.5	1742.5	1742.1	1741.7
25.5°	1721.5	1722.3	1721.5	1721.1	1720.7	1720.7
26°	1701.0	1701.8	1701.0	1700.6	1700.2	1699.8
26.5°	1680.4	1681.6	1680.4	1680.0	1679.6	1679.2
27°	1660.2	1661.4	1660.2	1660.2	1659.4	1659.4
27.5°	1641.3	1642.1	1641.3	1640.5	1640.1	1639.7
28°	1621.9	1623.1	1621.9	1621.5	1620.7	1620.3
28.5°	1603.4	1604.6	1603.4	1603.0	1602.6	1601.8
29°	1585.2	1586.4	1585.2	1584.8	1584.4	1584.0
29.5°	1567.9	1568.7	1567.9	1567.5	1566.7	1566.3
30°	1550.5	1551.8	1550.5	1550.1	1549.3	1549.3
30.5°	1534.0	1534.8	1534.0	1533.2	1532.8	1532.4
31°	1517.9	1519.1	1517.9	1517.5	1516.7	1516.3
31.5°	1501.8	1502.6	1501.8	1501.3	1501.3	1500.9
32°	1485.6	1486.4	1485.6	1486.0	1486.0	1486.0
32.5°	1468.7	1467.1	1468.7	1470.3	1471.1	1471.5
33°	1446.9	1442.5	1446.9	1450.9	1455.0	1455.8
33.5°	1420.3	1414.6	1420.3	1427.1	1434.8	1438.8
34°	1390.0	1384.0	1390.0	1398.9	1409.4	1414.6
34.5°	1358.2	1352.1	1358.2	1366.7	1378.4	1382.8
35°	1323.5	1317.9	1323.5	1330.4	1340.9	1345.3
35.5°	1284.8	1279.2	1284.8	1292.1	1301.7	1304.2
36°	1242.9	1236.8	1242.9	1250.1	1258.2	1260.2
36.5°	1197.3	1190.8	1197.3	1205.0	1211.8	1213.4
37°	1150.1	1143.7	1150.1	1155.8	1159.8	1161.0
37.5°	1100.1	1094.9	1100.1	1103.7	1105.3	1107.0
38°	1047.7	1045.3	1047.7	1048.1	1047.3	1049.7
38.5°	993.2	995.3	993.2	991.2	990.4	994.0
39°	938.4	943.6	938.4	933.6	932.7	934.0
39.5°	882.7	890.0	882.7	876.7	875.1	874.3
40°	827.5	834.4	827.5	819.4	815.8	811.8
40.5°	773.1	779.1	773.1	764.2	757.3	751.7
41°	719.0	725.1	719.0	708.9	697.6	690.0
41.5°	665.4	671.0	665.4	653.3	639.6	631.5
42°	612.2	617.4	612.2	597.6	581.5	574.2
42.5°	560.1	565.0	560.1	545.6	527.5	518.6
43°	508.5	513.8	508.5	493.2	475.0	465.0
43.5°	458.1	465.4	458.1	442.4	424.6	415.0



TEST NUMBER: P776478

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

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	320.6	330.7	320.6	302.0	283.5	275.0
45.5°	281.1	290.3	281.1	261.7	242.8	232.7
46°	244.4	255.7	244.4	225.4	204.1	195.6
46.5°	209.3	221.4	209.3	191.1	171.0	162.1
47°	176.2	186.7	176.2	158.1	141.1	135.9
47.5°	145.2	152.0	145.2	129.4	114.1	110.9
48°	117.3	124.6	117.3	103.2	91.5	88.3
48.5°	93.2	99.6	93.2	82.7	72.6	71.0
49°	73.8	77.4	73.8	63.7	55.2	53.2
49.5°	55.7	60.5	55.7	46.8	41.1	40.3
50°	43.6	46.0	43.6	35.5	27.8	28.6
50.5°	32.7	37.1	32.7	25.0	19.4	17.7
51°	21.8	28.2	21.8	17.3	12.9	9.7
51.5°	14.1	21.0	14.1	11.3	8.1	7.7
52°	8.9	13.7	8.9	7.3	6.9	6.5
52.5°	6.9	6.5	6.9	6.0	6.0	5.2
53°	5.6	5.2	5.6	5.6	5.2	5.2
53.5°	4.8	4.8	4.8	4.8	4.8	4.8
54°	4.4	4.4	4.4	4.4	4.4	4.4
54.5°	4.4	4.4	4.4	4.4	4.4	4.4
55°	4.0	4.0	4.0	4.0	4.0	4.0
55.5°	4.0	4.0	4.0	4.0	4.0	4.0
56°	3.6	3.6	3.6	3.6	3.6	3.6
56.5°	3.2	3.2	3.2	3.2	3.2	3.2
57°	3.2	3.2	3.2	3.2	3.2	3.2
57.5°	2.8	2.8	2.8	2.8	2.8	2.8
58°	2.8	2.8	2.8	2.8	2.8	2.8
58.5°	2.8	2.8	2.8	2.8	2.8	2.4
59°	2.4	2.4	2.4	2.4	2.4	2.4
59.5°	2.4	2.4	2.4	2.4	2.4	2.4
60°	2.0	2.0	2.0	2.0	2.0	2.0
60.5°	2.0	2.0	2.0	2.0	2.0	2.0
61°	2.0	2.0	2.0	2.0	2.0	2.0
61.5°	1.6	1.6	1.6	1.6	1.6	1.6
62°	1.6	1.6	1.6	1.6	1.6	1.6
62.5°	1.6	1.6	1.6	1.6	1.6	1.6
63°	1.6	1.6	1.6	1.6	1.6	1.6
63.5°	1.6	1.6	1.6	1.6	1.6	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: P776478

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

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: P776478
CATALOG NUMBER: HCDJBL3040CSD-HCD82TRMB-4000lm-4000K

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



Report Generated By 670245859 / DESKTOP-T8S5UU9

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Scaled Data Report





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

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21.5°	1895.7	1895.3	1894.5	1893.3	1892.9	1893.3	1894.5	1895.3	1895.7	1895.3	1894.5
22°	1874.8	1874.4	1873.6	1872.4	1871.9	1872.4	1873.6	1874.4	1874.8	1874.4	1873.6



44°	366.6	374.2	392.8	409.3	419.0	409.3	392.8	374.2	366.6	374.2	392.8
44.5°	320.2	327.4	346.0	364.1	373.8	364.1	346.0	327.4	320.2	327.4	346.0



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°	1893.3	1892.9	1893.3	1894.5	1895.3	1895.7
22°	1872.4	1871.9	1872.4	1873.6	1874.4	1874.8



44°	409.3	419.0	409.3	392.8	374.2	366.6
44.5°	364.1	373.8	364.1	346.0	327.4	320.2

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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)