

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: P776405

Luminaire Tested: HCDJBL3040CSD-HCD6TRMW-4000lm-2700K

Issue Date: 2/7/2024

Test Information

Test Method: LM-79-2019
Report Number: P776405
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2310613A001)
Test Lab:
Issue Date: 2/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBL3040CSD-HCD6TRMW-4000lm-2700K
Description: 6 INCH ROUND MEDIUM MATTE WHITE TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 2700K CCT
Ballast/Driver: -

Summary

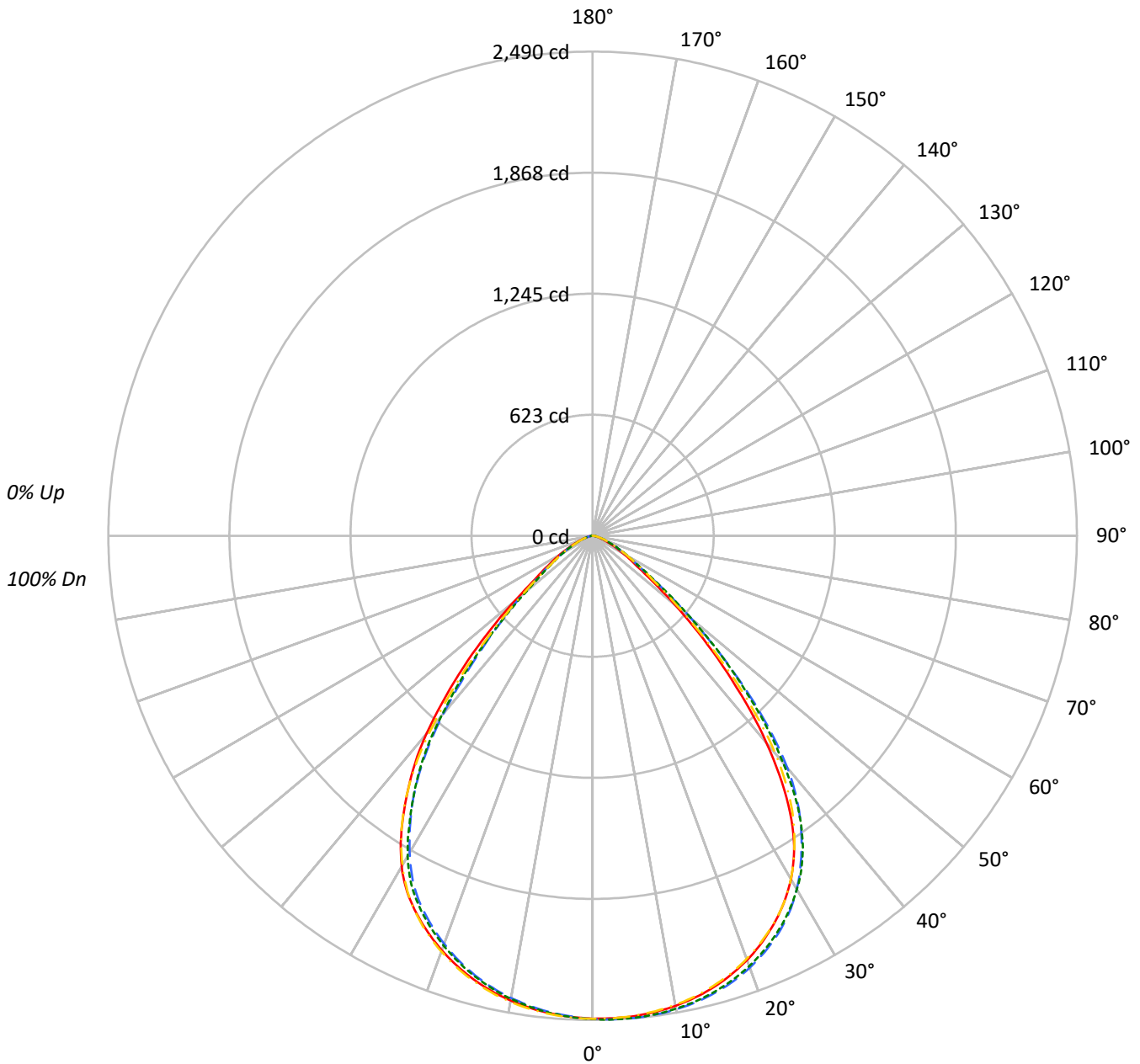
Lumens per Lamp: N/A
Luminaire Lumens: 4150.8 lumens
Efficiency: N/A
Efficacy: 107.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.19 / 1.18
Luminous Opening: Circular (Dia: 0.5' x H: 0')
CIE Type: Direct

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	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	112	109	106	103	109	106	104	101	102	100	98	99	97	95	95	94	92	90					90			
2	105	99	94	89	102	97	92	88	94	90	86	90	87	85	88	85	83	81					81			
3	98	90	84	79	96	88	83	78	86	81	77	83	79	75	81	77	74	72					72			
4	91	82	75	70	89	81	74	69	78	73	69	76	72	68	74	70	67	65					65			
5	85	75	68	62	83	74	67	62	72	66	62	70	65	61	69	64	60	59					59			
6	80	69	62	56	78	68	61	56	66	60	56	65	59	55	63	59	55	53					53			
7	75	63	56	51	73	63	56	51	61	55	51	60	54	50	59	54	50	48					48			
8	70	59	51	46	69	58	51	46	57	51	46	56	50	46	55	49	46	44					44			
9	66	54	47	43	65	54	47	42	53	47	42	52	46	42	51	46	42	40					40			
10	62	51	44	39	61	50	44	39	49	43	39	48	43	39	48	42	39	37					37			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	136190	136190	136190	136190
5°	136435	136919	135697	135609
10°	136643	137478	135129	134617
15°	136420	137748	134087	133082
20°	135456	137358	132323	130801
25°	133296	135988	129624	127441
30°	129115	132957	124279	120417
35°	119237	125769	112357	106675
40°	99651	108990	95221	86569
45°	73364	84024	70333	61340
50°	47086	56646	45252	37850
55°	28147	34159	29571	25653
60°	19823	23233	21424	18650
65°	13542	16487	15086	13348
70°	9296	11941	10515	9665
75°	6418	8854	7477	6990
80°	4357	6787	5335	4956
85°	1950	5284	3145	2893

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 86552 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	235.2	5.7
10°-20°	672.3	16.2
20°-30°	998.2	24.0
30°-40°	1071.2	25.8
40°-50°	717.9	17.3
50°-60°	292.2	7.0
60°-70°	116.7	2.8
70°-80°	39.9	1.0
80°-90°	7.3	0.2
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°	1905.7	45.9
0°-40°	2976.9	71.7
0°-60°	3987.0	96.1
0°-90°	4150.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4150.8	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2484	2484	2484	2484	2484	
5°	2479	2488	2466	2464	2479	236
15°	2404	2427	2363	2345	2404	678
25°	2204	2248	2143	2107	2204	1012
35°	1782	1879	1679	1594	1782	1096
45°	946	1084	907	791	946	730
55°	294	357	309	268	294	284
65°	104	127	116	103	104	108
75°	30	42	35	33	30	34
85°	3	8	5	5	3	5
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°	2484.3	2484.3	2484.3	2484.3	2484.3	2484.3	2484.3	2484.3	2484.3	2484.3	2484.3
0.5°	2483.2	2484.3	2485.8	2487.0	2487.4	2487.0	2483.9	2481.6	2482.0	2482.0	2483.2
1°	2483.9	2485.5	2487.0	2488.1	2488.5	2487.8	2483.9	2481.2	2480.8	2480.5	2481.2
1.5°	2483.9	2486.2	2488.1	2489.3	2488.9	2487.8	2483.9	2480.5	2480.1	2478.5	2479.3
2°	2483.5	2486.6	2488.9	2490.1	2489.3	2488.1	2483.5	2479.7	2478.5	2476.6	2477.0
2.5°	2483.2	2487.0	2489.3	2490.4	2489.7	2488.1	2483.2	2478.5	2477.0	2474.7	2474.7
3°	2482.8	2487.0	2489.7	2490.8	2489.7	2487.8	2482.4	2477.4	2475.5	2472.4	2472.4
3.5°	2482.4	2487.0	2490.1	2490.8	2489.7	2487.4	2481.2	2475.9	2473.2	2469.7	2469.3
4°	2481.6	2487.0	2489.7	2490.8	2489.3	2486.6	2480.1	2473.9	2470.9	2467.0	2466.6
4.5°	2480.5	2486.2	2489.7	2490.8	2488.9	2485.8	2478.9	2472.4	2468.6	2464.0	2463.6
5°	2479.3	2485.8	2489.3	2490.1	2488.1	2484.7	2477.0	2470.1	2465.9	2460.9	2460.1
5.5°	2478.2	2484.7	2488.5	2489.7	2487.4	2483.2	2475.5	2467.8	2463.2	2457.4	2456.3
6°	2476.2	2483.9	2487.8	2488.9	2486.2	2481.6	2473.6	2465.1	2460.1	2454.0	2452.8
6.5°	2474.3	2482.4	2486.6	2487.8	2484.7	2480.1	2471.2	2462.4	2457.0	2450.1	2448.6
7°	2472.4	2481.2	2485.5	2486.6	2483.5	2478.2	2468.6	2459.3	2453.6	2445.9	2444.4
7.5°	2470.1	2479.3	2483.9	2485.1	2481.6	2475.9	2466.3	2456.3	2449.8	2441.7	2439.8
8°	2467.4	2477.4	2482.4	2483.5	2479.7	2473.6	2463.2	2452.8	2445.9	2437.1	2435.2
8.5°	2464.7	2475.5	2480.5	2481.6	2477.8	2471.2	2460.1	2449.0	2441.3	2432.5	2430.2
9°	2461.3	2473.2	2478.5	2479.7	2475.1	2468.2	2457.0	2445.1	2437.1	2427.5	2424.4
9.5°	2458.2	2470.5	2475.9	2477.4	2472.4	2465.5	2453.2	2440.9	2432.5	2422.1	2419.0
10°	2454.7	2467.8	2473.6	2474.7	2469.7	2462.4	2449.4	2436.7	2427.5	2416.3	2413.7
10.5°	2450.9	2464.3	2470.5	2472.0	2466.3	2458.6	2445.5	2431.7	2422.5	2410.6	2407.5
11°	2446.7	2461.3	2467.4	2468.9	2463.2	2455.1	2441.3	2427.1	2416.7	2404.8	2401.0
11.5°	2442.5	2457.4	2464.0	2465.9	2459.3	2450.9	2436.7	2421.7	2411.0	2398.3	2394.5
12°	2437.5	2453.6	2460.5	2462.0	2455.9	2446.3	2431.7	2416.3	2404.8	2391.4	2387.6
12.5°	2432.5	2449.0	2456.7	2458.2	2451.7	2442.1	2426.7	2410.6	2398.7	2384.5	2380.3
13°	2427.5	2444.8	2452.8	2454.4	2447.1	2437.1	2421.3	2404.4	2391.8	2377.2	2373.0
13.5°	2422.1	2440.2	2448.2	2449.8	2442.5	2432.1	2415.6	2398.3	2384.9	2369.5	2364.9
14°	2416.3	2435.5	2443.6	2445.1	2437.8	2426.7	2409.8	2391.4	2378.0	2361.5	2356.5
14.5°	2410.2	2429.8	2438.6	2440.5	2432.5	2421.0	2403.3	2384.5	2370.3	2353.4	2348.0
15°	2403.7	2424.4	2433.2	2435.5	2427.1	2415.2	2396.8	2377.2	2362.6	2344.9	2339.2
15.5°	2397.2	2418.3	2427.5	2430.2	2421.0	2409.1	2390.2	2370.3	2354.2	2335.7	2330.0
16°	2389.9	2412.1	2421.7	2424.0	2414.8	2402.5	2383.3	2362.2	2346.1	2326.5	2320.4
16.5°	2382.6	2405.6	2415.6	2417.9	2408.7	2395.6	2376.0	2354.2	2337.3	2317.3	2310.8
17°	2374.5	2399.1	2409.4	2411.7	2401.8	2388.7	2368.4	2345.7	2328.0	2307.3	2300.8
17.5°	2366.8	2391.8	2402.5	2404.8	2394.9	2381.0	2360.3	2337.3	2318.8	2297.0	2290.0
18°	2358.4	2384.1	2395.2	2397.9	2387.2	2373.4	2351.9	2328.0	2309.2	2286.6	2279.3
18.5°	2349.5	2376.4	2387.9	2390.2	2379.5	2365.3	2343.0	2318.8	2299.6	2275.8	2268.2
19°	2340.7	2368.0	2379.9	2382.6	2371.4	2356.8	2334.2	2309.2	2289.3	2265.1	2256.6
19.5°	2331.5	2359.5	2371.8	2374.5	2363.4	2348.0	2325.0	2299.6	2278.9	2253.6	2244.7
20°	2321.9	2350.7	2363.4	2366.4	2354.5	2338.8	2315.4	2289.3	2268.2	2242.1	2232.8
20.5°	2311.9	2341.5	2354.2	2357.6	2345.7	2329.6	2305.4	2278.9	2257.0	2229.4	2220.6
21°	2301.2	2331.9	2345.3	2348.4	2336.1	2319.6	2295.0	2268.2	2245.5	2217.5	2207.5



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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°	2267.8	2300.8	2315.0	2319.2	2306.2	2288.5	2262.4	2233.6	2209.8	2177.9	2167.2
23°	2255.5	2289.7	2304.6	2308.5	2295.0	2277.0	2250.5	2221.7	2196.8	2164.1	2153.0
23.5°	2242.8	2278.1	2293.1	2297.3	2283.9	2265.1	2238.2	2209.4	2184.1	2150.3	2138.4
24°	2230.2	2266.2	2282.0	2286.2	2272.4	2253.2	2225.9	2196.4	2170.6	2136.1	2123.4
24.5°	2217.1	2253.6	2269.3	2274.3	2260.5	2241.3	2213.6	2183.3	2156.8	2121.5	2108.5
25°	2203.7	2240.9	2257.4	2262.4	2248.2	2228.6	2200.6	2169.9	2143.0	2106.5	2093.1
25.5°	2189.5	2228.2	2244.4	2249.3	2235.5	2215.6	2187.2	2156.4	2128.8	2090.8	2077.0
26°	2175.3	2214.8	2231.3	2236.7	2222.5	2202.5	2173.7	2142.2	2113.8	2074.3	2059.7
26.5°	2160.3	2200.6	2216.7	2223.2	2209.0	2188.3	2159.1	2127.6	2098.5	2056.2	2041.3
27°	2145.3	2185.6	2202.9	2209.0	2194.8	2174.1	2144.2	2111.9	2082.3	2037.4	2021.7
27.5°	2128.4	2170.6	2187.5	2194.4	2180.2	2159.5	2128.4	2095.4	2065.5	2018.2	2001.0
28°	2112.7	2154.5	2171.4	2179.1	2165.3	2144.2	2111.9	2078.1	2047.0	1997.9	1979.1
28.5°	2094.6	2137.6	2153.8	2163.0	2150.7	2128.4	2095.0	2060.5	2027.8	1976.8	1956.4
29°	2077.4	2120.0	2136.9	2146.1	2134.2	2112.3	2077.0	2041.3	2007.9	1953.4	1931.9
29.5°	2058.5	2101.9	2118.4	2128.4	2117.7	2095.0	2058.5	2021.7	1986.4	1929.9	1906.9
30°	2039.7	2083.1	2099.6	2110.4	2100.4	2077.7	2038.6	2000.6	1963.3	1905.7	1881.2
30.5°	2018.6	2063.1	2079.3	2091.6	2083.1	2058.5	2018.2	1978.3	1939.9	1880.4	1855.1
31°	1998.3	2042.4	2059.3	2072.0	2064.3	2039.3	1997.5	1955.7	1914.6	1853.5	1827.4
31.5°	1975.6	2021.3	2037.8	2050.9	2044.7	2019.4	1975.2	1931.9	1888.5	1825.9	1800.9
32°	1952.2	1998.7	2015.2	2030.1	2024.8	1997.9	1953.0	1906.1	1861.2	1797.9	1772.9
32.5°	1927.2	1975.2	1992.5	2007.5	2003.3	1976.4	1929.2	1880.0	1832.4	1768.3	1744.9
33°	1902.3	1951.0	1969.1	1984.8	1981.0	1953.7	1905.0	1852.8	1803.2	1738.4	1715.3
33.5°	1874.6	1926.9	1945.3	1961.0	1957.6	1929.5	1880.4	1825.1	1772.9	1707.3	1686.5
34°	1845.1	1901.1	1921.5	1936.5	1933.4	1905.7	1855.1	1795.9	1742.2	1674.6	1654.7
34.5°	1813.6	1875.8	1896.5	1911.9	1906.9	1878.5	1829.0	1765.2	1711.1	1642.4	1624.3
35°	1781.7	1847.8	1870.8	1885.4	1879.3	1852.0	1801.3	1734.9	1678.9	1609.4	1591.3
35.5°	1748.3	1820.1	1844.7	1858.9	1850.8	1824.0	1773.7	1705.3	1647.8	1575.6	1557.5
36°	1712.3	1791.0	1818.6	1831.6	1820.5	1795.9	1744.5	1673.1	1615.5	1541.0	1521.4
36.5°	1675.0	1761.8	1790.2	1804.0	1788.3	1764.8	1713.8	1642.4	1583.3	1505.7	1485.4
37°	1637.4	1729.9	1761.8	1774.8	1754.5	1733.0	1681.2	1609.7	1549.5	1470.0	1446.6
37.5°	1598.2	1697.3	1730.7	1743.7	1718.8	1698.8	1647.8	1578.7	1516.1	1434.7	1407.0
38°	1558.3	1662.3	1700.0	1712.3	1681.2	1665.0	1613.2	1544.5	1481.9	1395.5	1367.1
38.5°	1517.6	1627.0	1666.6	1678.5	1643.1	1627.0	1577.5	1511.9	1447.0	1356.0	1326.0
39°	1476.9	1589.4	1631.6	1643.9	1604.8	1588.6	1540.3	1475.8	1410.5	1315.3	1281.9
39.5°	1435.1	1549.1	1594.8	1607.1	1564.4	1547.9	1501.5	1440.1	1371.3	1275.4	1237.7
40°	1392.5	1506.5	1557.2	1567.9	1523.0	1505.3	1461.2	1400.1	1330.6	1230.8	1192.1
40.5°	1349.5	1462.7	1516.8	1526.4	1482.7	1460.4	1418.9	1360.2	1288.0	1187.4	1145.6
41°	1305.3	1417.8	1474.2	1483.1	1440.8	1415.5	1375.6	1317.2	1244.3	1144.8	1099.9
41.5°	1260.4	1372.5	1432.0	1438.1	1399.0	1370.2	1329.9	1274.6	1200.9	1102.2	1053.5
42°	1214.3	1326.4	1387.1	1391.7	1355.2	1323.7	1282.3	1228.1	1156.3	1057.7	1010.1
42.5°	1167.9	1281.9	1341.8	1345.6	1312.2	1276.1	1236.2	1183.2	1114.5	1015.8	967.8
43°	1121.8	1237.0	1293.8	1300.3	1268.1	1231.2	1189.7	1136.8	1072.7	972.8	926.4
43.5°	1076.9	1192.4	1247.3	1254.2	1221.2	1183.6	1143.7	1091.1	1031.2	931.8	885.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	946.3	1056.9	1103.4	1116.4	1083.8	1043.9	1003.2	958.6	907.2	809.7	770.1
45.5°	904.5	1011.6	1054.2	1071.1	1038.1	998.6	957.5	915.2	866.1	771.7	734.4
46°	861.9	967.1	1005.5	1026.2	995.5	953.6	911.0	872.3	825.8	734.4	699.9
46.5°	819.3	922.9	959.0	981.7	952.5	910.6	866.9	829.3	785.5	699.1	665.7
47°	777.0	877.6	912.2	936.0	909.9	868.4	822.3	785.5	745.9	663.0	633.8
47.5°	737.1	834.6	866.9	891.1	866.5	827.3	780.5	744.0	707.9	630.4	603.1
48°	697.6	791.6	822.3	847.7	824.3	787.8	739.4	703.7	670.7	598.1	574.0
48.5°	658.8	749.8	780.5	804.7	783.2	749.8	701.0	664.6	634.6	567.4	544.8
49°	621.9	708.7	739.0	762.1	742.9	711.4	663.0	626.5	597.8	537.5	517.9
49.5°	587.0	668.0	699.1	721.8	702.9	673.8	627.3	590.5	563.2	509.1	491.8
50°	552.1	628.8	658.8	681.1	664.2	637.7	592.0	556.7	530.6	482.2	466.8
50.5°	519.1	590.8	621.6	641.5	626.2	602.4	559.7	524.4	498.3	456.9	443.0
51°	487.2	554.0	585.1	602.4	590.8	568.6	528.6	494.1	468.4	433.1	420.4
51.5°	456.9	518.7	550.1	566.7	555.9	536.3	499.9	466.1	440.7	410.0	398.5
52°	428.1	485.7	516.4	531.7	523.3	504.1	471.8	439.2	415.8	388.1	378.2
52.5°	400.8	454.9	484.5	497.9	490.3	473.7	445.7	414.6	392.4	367.8	359.0
53°	375.1	426.1	454.2	465.7	459.5	446.1	420.8	392.4	372.4	349.4	342.5
53.5°	352.0	399.3	425.4	436.5	430.4	419.6	397.7	371.6	354.0	333.2	325.6
54°	330.5	373.9	398.9	408.9	402.7	394.7	376.6	352.8	339.0	316.7	309.1
54.5°	311.7	351.3	372.8	383.1	377.0	371.6	356.7	337.5	324.0	300.6	292.5
55°	294.5	330.5	349.0	359.3	357.4	352.8	339.8	322.5	309.4	284.5	275.6
55.5°	278.3	311.7	327.5	337.8	338.2	334.4	323.3	307.1	294.5	270.7	262.2
56°	264.1	293.7	307.5	317.9	318.6	316.0	306.4	291.8	279.5	258.0	249.9
56.5°	251.5	277.2	289.9	299.5	299.1	297.5	289.5	276.4	266.8	246.1	239.2
57°	240.7	262.6	273.7	282.6	279.9	279.1	273.0	263.7	254.9	236.5	229.6
57.5°	230.3	249.9	259.1	267.2	265.7	265.3	259.5	251.5	243.8	226.5	220.0
58°	220.4	239.2	247.2	253.8	252.6	252.2	247.6	241.1	234.2	216.9	210.4
58.5°	210.4	228.8	236.9	242.6	242.2	241.9	237.6	231.5	224.2	207.3	200.4
59°	200.0	218.8	226.9	232.7	231.9	231.9	227.7	221.5	214.6	197.7	191.2
59.5°	190.4	208.5	216.5	222.7	221.9	221.9	218.1	211.5	204.6	188.5	182.4
60°	180.8	198.5	206.2	212.3	211.9	211.5	207.7	202.3	195.4	179.7	173.9
60.5°	171.2	188.5	196.2	202.3	201.6	201.6	198.1	192.7	186.6	171.2	165.5
61°	162.4	179.3	186.6	192.3	192.0	192.0	188.9	183.9	177.8	163.2	157.4
61.5°	153.9	170.1	177.4	182.7	182.0	182.7	179.7	175.1	168.9	155.5	150.1
62°	145.9	161.6	168.2	173.5	173.1	173.5	171.2	166.6	160.5	147.8	142.8
62.5°	137.8	153.6	159.7	164.7	164.3	165.1	162.8	158.6	152.4	140.5	135.9
63°	130.9	145.5	151.6	156.3	156.3	156.6	154.7	150.9	144.7	133.2	129.0
63.5°	124.4	137.1	144.0	148.6	148.2	149.0	147.0	143.6	137.1	126.3	122.9
64°	117.5	130.5	137.4	140.9	140.9	141.3	139.7	136.7	129.8	119.8	116.7
64.5°	111.0	124.0	130.5	134.4	134.0	134.4	132.8	129.4	122.9	113.6	111.0
65°	104.4	117.5	124.0	127.8	127.1	127.8	126.3	122.9	116.3	107.9	105.2
65.5°	98.3	111.0	117.5	121.3	120.5	121.3	119.8	116.7	110.2	102.1	100.2
66°	92.9	104.8	111.0	115.2	114.4	115.2	114.0	110.6	104.0	96.4	94.8



TEST NUMBER: P776405

CATALOG NUMBER: HCDJBL3040CSD-HCD6TRMW-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	77.9	88.7	94.4	97.5	97.5	98.3	97.5	94.1	87.9	81.8	81.0
68°	73.7	84.1	89.5	92.5	92.5	93.3	92.5	89.1	82.9	77.2	76.8
68.5°	69.1	79.1	84.5	87.5	87.5	88.3	87.5	84.5	78.3	72.9	72.6
69°	65.3	74.9	80.2	82.9	82.9	83.7	83.3	79.9	74.1	68.7	68.7
69.5°	61.4	70.6	75.6	78.3	78.7	79.1	78.7	75.2	69.9	64.9	64.9
70°	58.0	66.4	71.8	74.5	74.5	75.2	74.5	71.4	65.6	61.4	61.4
70.5°	54.5	63.0	67.6	70.3	70.3	71.0	70.6	67.2	61.8	57.6	58.0
71°	51.1	59.1	64.1	66.4	66.8	67.2	66.8	63.7	58.4	54.5	54.9
71.5°	48.0	55.7	60.7	63.0	63.0	63.7	63.3	59.9	54.9	51.1	51.8
72°	44.9	52.6	57.2	59.5	59.5	60.3	59.9	56.4	51.8	48.0	48.8
72.5°	42.2	49.5	53.7	56.1	56.1	56.8	56.4	53.4	48.8	45.3	46.1
73°	39.5	46.5	50.7	53.0	53.0	53.7	53.4	49.9	45.7	42.6	43.4
73.5°	37.2	43.4	48.0	49.9	50.3	50.7	50.3	47.2	43.0	39.9	40.7
74°	34.9	40.7	44.9	47.2	47.2	48.0	47.2	44.2	40.3	37.2	38.4
74.5°	32.6	38.4	42.2	44.5	44.5	44.9	44.5	41.5	37.6	34.9	35.7
75°	30.3	36.1	39.9	41.8	41.8	42.6	41.8	39.2	35.3	33.0	33.4
75.5°	28.4	33.8	37.2	39.2	39.5	39.9	39.5	36.5	33.0	30.7	31.5
76°	26.5	31.5	34.9	36.9	37.2	37.6	36.9	34.2	31.1	28.8	29.6
76.5°	24.6	29.2	33.0	34.6	34.9	35.3	34.6	32.2	29.2	26.5	27.6
77°	22.7	27.3	30.7	32.6	32.6	33.0	32.6	30.3	26.9	24.6	25.7
77.5°	21.1	25.3	28.8	30.3	30.7	31.1	30.7	28.0	25.0	22.7	23.8
78°	19.6	23.4	26.9	28.4	28.8	29.2	28.8	26.1	23.0	21.1	21.9
78.5°	18.0	21.9	25.0	26.5	26.9	27.3	26.5	24.2	21.5	19.6	20.3
79°	16.5	20.3	23.0	25.0	25.0	25.3	24.6	22.3	20.0	18.0	18.8
79.5°	15.0	18.8	21.5	23.0	23.0	23.4	23.0	20.7	18.4	16.5	17.3
80°	13.8	17.3	20.0	21.5	21.5	21.9	21.1	18.8	16.9	15.0	15.7
80.5°	12.7	15.7	18.4	20.0	20.0	20.3	19.6	17.3	15.4	13.8	14.6
81°	11.5	14.2	16.9	18.4	18.4	18.8	18.0	16.1	14.2	12.3	13.1
81.5°	10.0	13.1	15.4	16.9	16.9	17.3	16.9	14.6	12.7	11.1	11.9
82°	9.2	11.9	14.2	15.7	15.7	15.7	15.4	13.1	11.5	10.0	10.7
82.5°	8.1	10.4	13.1	14.2	14.2	14.6	14.2	11.9	10.4	8.8	9.6
83°	6.9	9.2	11.9	13.1	13.1	13.4	12.7	10.7	9.2	7.7	8.4
83.5°	6.1	8.1	10.7	11.9	11.9	12.3	11.5	9.6	8.1	6.5	7.3
84°	5.0	7.3	9.2	10.7	10.7	11.1	10.4	8.4	6.9	5.4	6.5
84.5°	4.2	6.1	8.4	9.6	9.6	10.0	9.2	7.3	6.1	4.6	5.8
85°	3.1	5.0	7.3	8.4	8.4	8.8	8.1	6.1	5.0	3.5	4.6
85.5°	2.3	4.2	6.5	7.7	7.7	7.7	7.3	5.4	4.2	3.1	3.8
86°	1.9	3.5	5.4	6.5	6.5	6.9	6.1	4.6	3.1	2.3	3.1
86.5°	1.5	2.7	4.6	5.8	5.8	5.8	5.4	3.8	2.7	1.9	2.3
87°	1.2	2.3	3.8	4.6	4.6	5.0	4.6	3.1	1.9	1.5	1.5
87.5°	0.8	1.9	3.1	3.8	3.8	3.8	3.8	2.7	1.5	1.2	1.2
88°	0.4	1.2	2.3	3.1	3.1	3.1	2.7	1.9	1.2	0.4	0.4
88.5°	0.0	0.8	1.5	2.3	2.3	2.3	1.9	1.5	0.8	0.0	0.0



TEST NUMBER: P776405
CATALOG NUMBER: HCDJBL3040CSD-HCD6TRMW-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: P776405

CATALOG NUMBER: HCDJBL3040CSD-HCD6TRMW-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2484.3	2484.3	2484.3	2484.3	2484.3	2484.3
0.5°	2483.9	2485.1	2485.5	2483.2	2482.0	2483.2
1°	2482.4	2483.5	2484.3	2482.8	2482.0	2483.9
1.5°	2480.5	2481.6	2483.2	2482.0	2481.6	2483.9
2°	2478.2	2480.1	2481.2	2480.8	2480.8	2483.5
2.5°	2475.9	2477.8	2479.7	2479.7	2480.1	2483.2
3°	2473.2	2475.5	2477.8	2478.2	2479.3	2482.8
3.5°	2470.5	2473.2	2475.5	2476.6	2478.2	2482.4
4°	2467.8	2470.1	2473.2	2474.7	2477.0	2481.6
4.5°	2464.3	2467.4	2470.5	2472.4	2475.5	2480.5
5°	2460.9	2464.3	2467.4	2470.1	2473.6	2479.3
5.5°	2457.0	2460.5	2464.3	2467.8	2471.6	2478.2
6°	2453.2	2457.0	2460.9	2464.7	2469.3	2476.2
6.5°	2449.4	2453.2	2457.4	2462.0	2467.0	2474.3
7°	2444.4	2448.6	2453.6	2458.6	2464.0	2472.4
7.5°	2440.2	2444.4	2449.8	2455.1	2461.3	2470.1
8°	2435.2	2439.4	2445.5	2451.3	2458.2	2467.4
8.5°	2430.2	2434.8	2440.9	2447.4	2455.1	2464.7
9°	2424.8	2429.4	2435.9	2443.2	2451.3	2461.3
9.5°	2419.0	2424.0	2430.9	2438.6	2447.4	2458.2
10°	2413.3	2418.3	2425.6	2434.0	2443.2	2454.7
10.5°	2407.1	2412.5	2420.2	2428.6	2439.0	2450.9
11°	2400.2	2406.0	2414.0	2423.3	2434.4	2446.7
11.5°	2393.7	2399.5	2407.9	2417.5	2429.4	2442.5
12°	2386.4	2392.5	2401.0	2411.7	2424.0	2437.5
12.5°	2379.5	2385.3	2394.5	2405.6	2418.7	2432.5
13°	2371.4	2378.0	2387.2	2399.1	2412.9	2427.5
13.5°	2363.4	2370.3	2379.9	2392.2	2406.8	2422.1
14°	2354.9	2362.2	2372.2	2384.9	2400.2	2416.3
14.5°	2346.5	2353.4	2364.1	2377.6	2393.7	2410.2
15°	2337.6	2344.9	2356.1	2369.9	2386.8	2403.7
15.5°	2328.4	2336.1	2347.2	2361.8	2379.1	2397.2
16°	2318.8	2326.5	2338.0	2353.4	2371.8	2389.9
16.5°	2309.2	2317.3	2328.8	2344.9	2363.8	2382.6
17°	2298.9	2307.3	2319.6	2335.7	2355.3	2374.5
17.5°	2288.9	2297.0	2309.6	2326.5	2346.5	2366.8
18°	2277.4	2286.6	2299.6	2317.3	2337.6	2358.4
18.5°	2266.6	2275.8	2289.3	2306.9	2328.0	2349.5
19°	2255.1	2264.7	2278.5	2296.6	2318.5	2340.7
19.5°	2243.2	2253.6	2267.4	2286.2	2308.9	2331.5
20°	2230.9	2242.1	2256.3	2275.5	2298.5	2321.9
20.5°	2218.6	2230.2	2244.7	2264.3	2287.7	2311.9
21°	2206.0	2217.9	2232.5	2252.4	2276.6	2301.2

TEST NUMBER: P776405

CATALOG NUMBER: HCDJBL3040CSD-HCD6TRMW-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	2165.7	2179.1	2194.4	2215.6	2241.3	2267.8
23°	2151.4	2165.3	2181.0	2202.5	2228.2	2255.5
23.5°	2136.9	2150.7	2167.6	2189.1	2215.2	2242.8
24°	2122.3	2136.5	2153.0	2174.9	2201.7	2230.2
24.5°	2107.3	2121.9	2138.8	2160.7	2187.9	2217.1
25°	2091.9	2106.9	2123.8	2146.1	2173.7	2203.7
25.5°	2075.8	2091.2	2108.8	2131.1	2159.1	2189.5
26°	2058.2	2075.1	2091.9	2115.0	2144.2	2175.3
26.5°	2040.1	2057.4	2074.7	2097.7	2128.8	2160.3
27°	2020.5	2039.3	2055.9	2080.0	2112.7	2145.3
27.5°	1999.8	2019.0	2036.7	2061.6	2095.4	2128.4
28°	1978.3	1998.7	2016.3	2041.3	2078.1	2112.7
28.5°	1956.0	1975.6	1994.8	2021.3	2059.3	2094.6
29°	1932.2	1952.6	1972.5	2000.6	2040.1	2077.4
29.5°	1908.0	1927.6	1949.1	1978.7	2020.2	2058.5
30°	1881.9	1902.3	1924.6	1955.3	1999.0	2039.7
30.5°	1855.1	1873.5	1898.8	1932.6	1977.5	2018.6
31°	1827.0	1846.2	1871.2	1908.0	1954.1	1998.3
31.5°	1799.0	1816.3	1843.6	1883.5	1930.3	1975.6
32°	1768.7	1785.2	1814.8	1857.0	1905.7	1952.2
32.5°	1738.0	1752.6	1785.2	1831.6	1880.0	1927.2
33°	1706.1	1723.0	1754.9	1804.8	1852.8	1902.3
33.5°	1673.1	1691.1	1723.4	1776.4	1825.5	1874.6
34°	1640.5	1658.9	1692.3	1745.7	1797.1	1845.1
34.5°	1607.1	1625.5	1660.0	1715.7	1766.8	1813.6
35°	1572.5	1594.0	1628.2	1683.8	1735.3	1781.7
35.5°	1538.0	1561.8	1596.3	1650.8	1703.0	1748.3
36°	1502.3	1528.7	1562.5	1614.0	1668.5	1712.3
36.5°	1466.5	1493.8	1529.1	1579.4	1632.4	1675.0
37°	1429.3	1458.1	1493.8	1541.8	1593.2	1637.4
37.5°	1391.3	1421.6	1456.6	1503.4	1554.1	1598.2
38°	1352.1	1382.9	1418.2	1462.7	1510.7	1558.3
38.5°	1310.7	1341.8	1378.2	1420.5	1468.5	1517.6
39°	1268.4	1298.8	1337.2	1375.9	1421.2	1476.9
39.5°	1225.5	1254.2	1292.6	1330.6	1375.6	1435.1
40°	1181.7	1209.7	1248.5	1283.8	1327.6	1392.5
40.5°	1138.7	1165.9	1202.0	1237.0	1281.1	1349.5
41°	1094.9	1122.9	1156.3	1189.4	1234.3	1305.3
41.5°	1051.2	1081.1	1110.7	1142.5	1187.1	1260.4
42°	1008.5	1039.6	1065.4	1095.7	1139.5	1214.3
42.5°	965.9	998.2	1020.1	1048.9	1094.2	1167.9
43°	923.7	957.5	976.3	1001.2	1048.1	1121.8
43.5°	881.5	914.5	932.5	955.9	1002.8	1076.9



TEST NUMBER: P776405

CATALOG NUMBER: HCDJBL3040CSD-HCD6TRMW-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	763.6	791.2	803.1	823.1	873.0	946.3
45.5°	726.7	750.9	761.7	781.6	833.1	904.5
46°	691.0	712.5	720.6	741.7	793.9	861.9
46.5°	654.6	674.9	680.7	703.7	755.2	819.3
47°	621.2	638.1	642.7	665.3	717.1	777.0
47.5°	589.3	601.2	606.6	630.4	679.9	737.1
48°	559.4	566.3	571.6	596.2	643.4	697.6
48.5°	528.6	532.9	539.0	563.6	609.3	658.8
49°	501.0	501.4	507.9	532.9	574.7	621.9
49.5°	474.5	471.4	478.7	503.7	542.1	587.0
50°	449.6	443.8	451.5	475.3	509.8	552.1
50.5°	425.0	417.7	425.8	448.4	480.3	519.1
51°	403.5	395.0	402.0	423.8	451.5	487.2
51.5°	382.4	374.7	380.8	400.8	425.0	456.9
52°	362.4	356.3	361.3	378.9	400.4	428.1
52.5°	345.9	339.4	342.8	358.2	377.0	400.8
53°	329.8	323.6	326.3	339.0	355.1	375.1
53.5°	313.7	308.7	310.2	321.0	334.4	352.0
54°	297.1	294.8	295.6	304.1	315.6	330.5
54.5°	281.0	281.4	281.8	288.3	298.3	311.7
55°	267.2	268.4	268.4	273.7	282.6	294.5
55.5°	254.9	256.1	256.1	259.9	267.6	278.3
56°	243.8	244.9	244.9	248.0	254.2	264.1
56.5°	233.8	235.3	235.0	237.6	243.0	251.5
57°	224.2	225.4	225.4	227.7	233.0	240.7
57.5°	214.6	215.8	215.4	217.7	223.1	230.3
58°	205.0	206.2	205.8	207.7	213.1	220.4
58.5°	195.4	196.6	195.8	198.1	202.7	210.4
59°	186.6	187.3	187.0	188.5	192.7	200.0
59.5°	177.8	178.9	178.1	179.3	183.5	190.4
60°	168.9	170.1	169.3	170.8	174.7	180.8
60.5°	161.2	162.0	161.2	162.4	165.9	171.2
61°	153.6	154.3	153.2	154.3	157.4	162.4
61.5°	145.9	146.7	145.9	147.0	149.7	153.9
62°	139.0	139.7	138.6	139.7	142.4	145.9
62.5°	132.1	133.6	132.1	133.2	135.5	137.8
63°	125.5	127.5	125.9	127.1	129.0	130.9
63.5°	119.4	120.9	119.8	120.5	122.5	124.4
64°	113.6	114.8	113.6	114.4	115.9	117.5
64.5°	107.9	108.3	107.5	107.9	109.4	111.0
65°	102.5	102.9	102.1	102.5	103.7	104.4
65.5°	97.1	97.5	96.7	97.1	97.9	98.3
66°	92.1	92.5	91.8	92.1	92.5	92.9



TEST NUMBER: P776405

CATALOG NUMBER: HCDJBL3040CSD-HCD6TRMW-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	78.7	79.1	78.3	78.3	78.3	77.9
68°	74.5	74.9	74.1	74.5	73.7	73.7
68.5°	70.6	71.0	70.3	70.3	69.9	69.1
69°	66.8	67.2	66.4	66.8	65.6	65.3
69.5°	63.3	63.7	63.0	63.0	62.2	61.4
70°	59.9	60.3	59.5	59.5	58.4	58.0
70.5°	56.4	56.8	56.1	56.1	54.9	54.5
71°	53.4	53.7	53.0	53.0	51.8	51.1
71.5°	50.3	50.7	49.9	49.9	48.8	48.0
72°	47.6	47.6	47.2	47.2	45.7	44.9
72.5°	44.9	44.9	44.5	44.5	43.0	42.2
73°	42.2	42.2	41.8	41.8	40.3	39.5
73.5°	39.5	39.9	39.2	39.2	37.6	37.2
74°	37.2	37.2	36.9	36.9	35.3	34.9
74.5°	34.9	34.9	34.6	34.6	33.0	32.6
75°	33.0	33.0	32.6	32.2	31.1	30.3
75.5°	31.1	30.7	30.3	30.3	28.8	28.4
76°	29.2	28.8	28.4	28.0	26.9	26.5
76.5°	27.3	26.9	26.5	26.5	25.0	24.6
77°	25.3	25.3	25.0	24.6	23.0	22.7
77.5°	23.4	23.4	23.0	22.7	21.5	21.1
78°	21.5	21.9	21.5	21.1	19.6	19.6
78.5°	20.0	20.3	20.0	19.6	18.0	18.0
79°	18.4	18.8	18.4	18.0	16.9	16.5
79.5°	17.3	17.3	16.9	16.5	15.4	15.0
80°	15.7	15.7	15.7	15.0	13.8	13.8
80.5°	14.2	14.6	14.2	13.8	12.7	12.7
81°	13.1	13.4	13.1	12.7	11.5	11.5
81.5°	11.9	12.3	11.9	11.5	10.0	10.0
82°	10.7	11.1	10.7	10.4	8.8	9.2
82.5°	9.6	9.6	9.6	9.2	7.7	8.1
83°	8.4	8.8	8.4	8.1	6.5	6.9
83.5°	7.7	7.7	7.3	6.9	5.8	6.1
84°	6.5	6.5	6.5	6.1	5.0	5.0
84.5°	5.8	5.8	5.4	5.4	3.8	4.2
85°	4.6	4.6	4.6	4.6	3.5	3.1
85.5°	3.8	3.8	3.8	3.5	2.7	2.3
86°	3.1	3.1	3.1	2.7	2.3	1.9
86.5°	2.3	2.3	1.9	1.9	1.5	1.5
87°	1.2	1.5	1.2	1.2	1.2	1.2
87.5°	0.4	0.8	0.4	0.8	0.8	0.8
88°	0.0	0.0	0.0	0.0	0.4	0.4
88.5°	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P776405

CATALOG NUMBER: HCDJBL3040CSD-HCD6TRMW-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
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Peachtree City, GA 30269

Scaled Data Report





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

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Scaled Data Report



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Scaled Data Report





21.5°	2290.4	2321.9	2335.3	2339.2	2326.5	2309.6	2284.7	2257.0	2234.0	2204.4	2194.4
22°	2279.3	2311.5	2325.7	2329.2	2316.5	2299.3	2273.5	2245.5	2222.1	2191.4	2181.0



44°	1032.7	1147.5	1199.0	1208.6	1174.8	1137.2	1096.1	1045.8	990.1	889.1	846.1
44.5°	989.3	1101.4	1151.4	1162.5	1128.3	1090.7	1048.1	1002.4	948.3	849.6	808.1



66.5°	87.5	99.4	104.8	108.6	108.3	109.0	108.3	104.8	98.3	91.4	90.2
67°	82.5	93.7	99.4	102.9	102.9	103.7	102.5	99.4	92.9	86.4	85.6



89°	0.0	0.4	0.8	1.5	1.5	1.2	0.8	0.4	0.0	0.0
89.5°	0.0	0.0	0.4	0.8	0.8	0.8	0.4	0.0	0.0	0.0

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21.5°	2192.9	2205.2	2220.2	2240.5	2265.1	2290.4
22°	2179.5	2192.1	2207.1	2228.2	2253.6	2279.3



44°	841.5	872.6	889.1	911.4	958.2	1032.7
44.5°	802.4	831.9	845.4	867.3	915.2	989.3



66.5°	87.5	87.9	87.1	87.5	87.5	87.5
67°	82.9	83.3	82.5	82.9	82.9	82.5

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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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(END OF REPORT)