

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: P776406

Luminaire Tested: HCDJBS3040CSD-HCD6TRMW-4000lm-3000K

Issue Date: 2/7/2024

Test Information

Test Method: LM-79-2019
Report Number: P776406
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-3000K
Description: 6 INCH ROUND MEDIUM MATTE WHITE TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 3000K CCT
Ballast/Driver: -

Summary

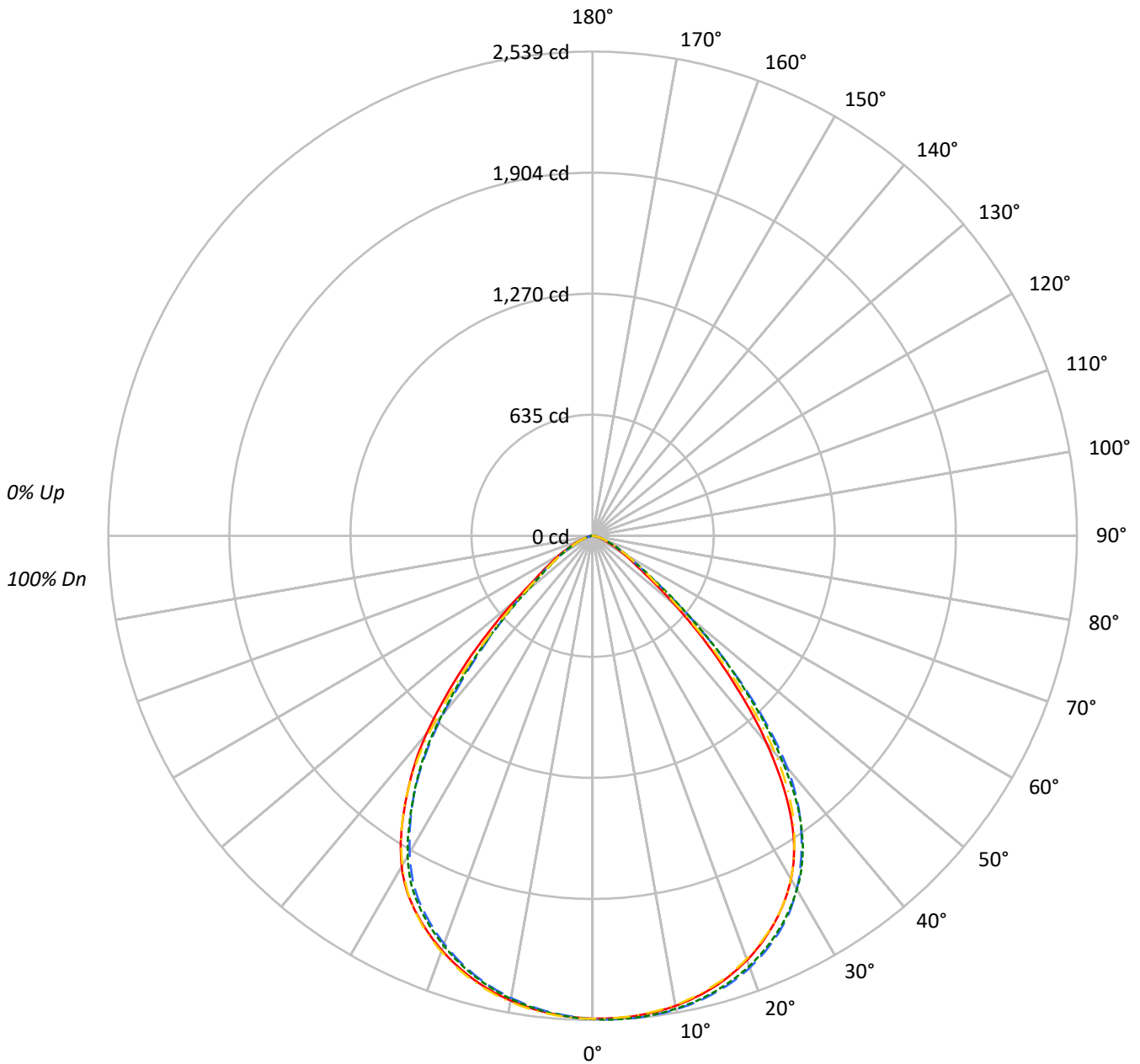
Lumens per Lamp: N/A
Luminaire Lumens: 4232.6 lumens
Efficiency: N/A
Efficacy: 109.9 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.19 / 1.18
Luminous Opening: Circular (Dia: 0.5' x H: 0')
CIE Type: Direct

Input Watts (W): 38.5
Input Voltage (V): NR
Input Current (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



TEST NUMBER: P776406
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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					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								
1	112	109	106	103	109	106	104	101	102	100	98	99	97	95	95	94	92	90								
2	105	99	94	89	102	97	92	88	94	90	86	90	87	85	88	85	83	81								
3	98	90	84	79	96	88	83	78	86	81	77	83	79	75	81	77	74	72								
4	91	82	75	70	89	81	74	69	78	73	69	76	72	68	74	70	67	65								
5	85	75	68	62	83	74	67	62	72	66	62	70	65	61	69	64	60	59								
6	80	69	62	56	78	68	61	56	66	60	56	65	59	55	63	59	55	53								
7	75	63	56	51	73	63	56	51	61	55	51	60	54	50	59	54	50	48								
8	70	59	51	46	69	58	51	46	57	51	46	56	50	46	55	49	46	44								
9	66	54	47	43	65	54	47	42	53	47	42	52	46	42	51	46	42	40								
10	62	51	44	39	61	50	44	39	49	43	39	48	43	39	48	42	39	37								

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	138870	138870	138870	138870
5°	139120	139616	138366	138284
10°	139337	140183	137790	137266
15°	139104	140461	136726	135705
20°	138122	140065	134925	133373
25°	135915	138667	132177	129951
30°	131659	135571	126728	122785
35°	121586	128245	114566	108777
40°	101612	111137	97096	88273
45°	74814	85676	71713	62549
50°	48007	57755	46139	38591
55°	28701	34837	30154	26150
60°	20218	23693	21851	19012
65°	13815	16811	15384	13607
70°	9473	12166	10723	9857
75°	6545	9044	7625	7138
80°	4451	6914	5430	5083
85°	1950	5409	3208	2956

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 88257 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	239.8	5.7
10°-20°	685.5	16.2
20°-30°	1017.9	24.0
30°-40°	1092.3	25.8
40°-50°	732.0	17.3
50°-60°	297.9	7.0
60°-70°	119.0	2.8
70°-80°	40.7	1.0
80°-90°	7.4	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°	1943.2	45.9
0°-40°	3035.5	71.7
0°-60°	4065.5	96.1
0°-90°	4232.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4232.6	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2533	2533	2533	2533	2533	
5°	2528	2537	2514	2513	2528	241
15°	2451	2475	2409	2391	2451	691
25°	2247	2292	2185	2148	2247	1032
35°	1817	1916	1712	1625	1817	1118
45°	965	1105	925	807	965	744
55°	300	364	316	274	300	290
65°	106	130	119	105	106	110
75°	31	43	36	34	31	35
85°	3	9	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°	2533.2	2533.2	2533.2	2533.2	2533.2	2533.2	2533.2	2533.2	2533.2	2533.2	2533.2
0.5°	2532.0	2533.2	2534.8	2536.0	2536.3	2536.0	2532.8	2530.5	2530.9	2530.9	2532.0
1°	2532.8	2534.4	2536.0	2537.1	2537.5	2536.7	2532.8	2530.1	2529.7	2529.3	2530.1
1.5°	2532.8	2535.2	2537.1	2538.3	2537.9	2536.7	2532.8	2529.3	2528.9	2527.3	2528.1
2°	2532.4	2535.6	2537.9	2539.1	2538.3	2537.1	2532.4	2528.5	2527.3	2525.4	2525.8
2.5°	2532.0	2536.0	2538.3	2539.5	2538.7	2537.1	2532.0	2527.3	2525.8	2523.4	2523.4
3°	2531.7	2536.0	2538.7	2539.9	2538.7	2536.7	2531.3	2526.2	2524.2	2521.1	2521.1
3.5°	2531.3	2536.0	2539.1	2539.9	2538.7	2536.3	2530.1	2524.6	2521.9	2518.3	2517.9
4°	2530.5	2536.0	2538.7	2539.9	2538.3	2535.6	2528.9	2522.6	2519.5	2515.6	2515.2
4.5°	2529.3	2535.2	2538.7	2539.9	2537.9	2534.8	2527.7	2521.1	2517.2	2512.5	2512.1
5°	2528.1	2534.8	2538.3	2539.1	2537.1	2533.6	2525.8	2518.7	2514.4	2509.3	2508.6
5.5°	2527.0	2533.6	2537.5	2538.7	2536.3	2532.0	2524.2	2516.4	2511.7	2505.8	2504.6
6°	2525.0	2532.8	2536.7	2537.9	2535.2	2530.5	2522.3	2513.6	2508.6	2502.3	2501.1
6.5°	2523.0	2531.3	2535.6	2536.7	2533.6	2528.9	2519.9	2510.9	2505.4	2498.4	2496.8
7°	2521.1	2530.1	2534.4	2535.6	2532.4	2527.0	2517.2	2507.8	2501.9	2494.1	2492.5
7.5°	2518.7	2528.1	2532.8	2534.0	2530.5	2524.6	2514.8	2504.6	2498.0	2489.8	2487.8
8°	2516.0	2526.2	2531.3	2532.4	2528.5	2522.3	2511.7	2501.1	2494.1	2485.1	2483.1
8.5°	2513.3	2524.2	2529.3	2530.5	2526.6	2519.9	2508.6	2497.2	2489.4	2480.4	2478.0
9°	2509.7	2521.9	2527.3	2528.5	2523.8	2516.8	2505.4	2493.3	2485.1	2475.3	2472.1
9.5°	2506.6	2519.1	2524.6	2526.2	2521.1	2514.0	2501.5	2489.0	2480.4	2469.8	2466.7
10°	2503.1	2516.4	2522.3	2523.4	2518.3	2510.9	2497.6	2484.7	2475.3	2463.9	2461.2
10.5°	2499.2	2512.9	2519.1	2520.7	2514.8	2507.0	2493.7	2479.6	2470.2	2458.1	2454.9
11°	2494.9	2509.7	2516.0	2517.6	2511.7	2503.5	2489.4	2474.9	2464.3	2452.2	2448.3
11.5°	2490.5	2505.8	2512.5	2514.4	2507.8	2499.2	2484.7	2469.4	2458.4	2445.5	2441.6
12°	2485.5	2501.9	2508.9	2510.5	2504.2	2494.5	2479.6	2463.9	2452.2	2438.5	2434.6
12.5°	2480.4	2497.2	2505.0	2506.6	2499.9	2490.2	2474.5	2458.1	2445.9	2431.4	2427.1
13°	2475.3	2492.9	2501.1	2502.7	2495.2	2485.1	2469.0	2451.8	2438.9	2424.0	2419.7
13.5°	2469.8	2488.2	2496.4	2498.0	2490.5	2480.0	2463.1	2445.5	2431.8	2416.2	2411.5
14°	2463.9	2483.5	2491.7	2493.3	2485.8	2474.5	2457.3	2438.5	2424.8	2407.9	2402.9
14.5°	2457.7	2477.6	2486.6	2488.6	2480.4	2468.6	2450.6	2431.4	2416.9	2399.7	2394.2
15°	2451.0	2472.1	2481.2	2483.5	2474.9	2462.8	2444.0	2424.0	2409.1	2391.1	2385.2
15.5°	2444.4	2465.9	2475.3	2478.0	2468.6	2456.5	2437.3	2416.9	2400.5	2381.7	2375.8
16°	2436.9	2459.6	2469.4	2471.8	2462.4	2449.8	2430.3	2408.7	2392.3	2372.3	2366.1
16.5°	2429.5	2453.0	2463.1	2465.5	2456.1	2442.8	2422.8	2400.5	2383.3	2362.9	2356.3
17°	2421.3	2446.3	2456.9	2459.2	2449.0	2435.7	2415.0	2391.9	2373.9	2352.7	2346.1
17.5°	2413.4	2438.9	2449.8	2452.2	2442.0	2427.9	2406.8	2383.3	2364.5	2342.2	2335.1
18°	2404.8	2431.0	2442.4	2445.1	2434.2	2420.1	2398.2	2373.9	2354.7	2331.6	2324.2
18.5°	2395.8	2423.2	2435.0	2437.3	2426.3	2411.9	2389.2	2364.5	2344.9	2320.6	2312.8
19°	2386.8	2414.6	2426.7	2429.5	2418.1	2403.2	2380.2	2354.7	2334.3	2309.7	2301.1
19.5°	2377.4	2406.0	2418.5	2421.3	2409.9	2394.2	2370.8	2344.9	2323.8	2297.9	2288.9
20°	2367.6	2397.0	2409.9	2413.0	2400.9	2384.8	2361.0	2334.3	2312.8	2286.2	2276.8
20.5°	2357.4	2387.6	2400.5	2404.0	2391.9	2375.5	2350.8	2323.8	2301.5	2273.3	2264.3
21°	2346.5	2377.8	2391.5	2394.6	2382.1	2365.3	2340.2	2312.8	2289.7	2261.1	2251.0

TEST NUMBER: P776406

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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°	2312.4	2346.1	2360.6	2364.9	2351.6	2333.6	2306.9	2277.6	2253.3	2220.8	2209.9
23°	2299.9	2334.7	2350.0	2353.9	2340.2	2321.8	2294.8	2265.4	2240.0	2206.7	2195.4
23.5°	2287.0	2323.0	2338.3	2342.6	2328.9	2309.7	2282.3	2252.9	2227.1	2192.6	2180.5
24°	2274.1	2310.9	2326.9	2331.2	2317.1	2297.5	2269.8	2239.6	2213.4	2178.2	2165.2
24.5°	2260.8	2297.9	2314.0	2319.1	2305.0	2285.4	2257.2	2226.3	2199.3	2163.3	2150.0
25°	2247.0	2285.0	2301.9	2306.9	2292.5	2272.5	2243.9	2212.6	2185.2	2148.0	2134.3
25.5°	2232.6	2272.1	2288.5	2293.6	2279.5	2259.2	2230.2	2198.9	2170.7	2132.0	2117.9
26°	2218.1	2258.4	2275.2	2280.7	2266.2	2245.9	2216.5	2184.4	2155.4	2115.1	2100.2
26.5°	2202.8	2243.9	2260.4	2267.0	2252.5	2231.4	2201.6	2169.5	2139.8	2096.7	2081.5
27°	2187.5	2228.7	2246.3	2252.5	2238.0	2216.9	2186.4	2153.5	2123.3	2077.5	2061.5
27.5°	2170.3	2213.4	2230.6	2237.7	2223.2	2202.0	2170.3	2136.7	2106.1	2058.0	2040.4
28°	2154.3	2196.9	2214.2	2222.0	2207.9	2186.4	2153.5	2119.0	2087.3	2037.2	2018.0
28.5°	2135.9	2179.7	2196.2	2205.6	2193.0	2170.3	2136.3	2101.0	2067.8	2015.7	1994.9
29°	2118.3	2161.7	2178.9	2188.3	2176.2	2153.9	2117.9	2081.5	2047.4	1991.8	1969.9
29.5°	2099.1	2143.3	2160.1	2170.3	2159.4	2136.3	2099.1	2061.5	2025.5	1967.9	1944.4
30°	2079.9	2124.1	2141.0	2151.9	2141.7	2118.6	2078.7	2040.0	2002.0	1943.3	1918.2
30.5°	2058.4	2103.8	2120.2	2132.7	2124.1	2099.1	2058.0	2017.3	1978.1	1917.4	1891.6
31°	2037.6	2082.6	2099.9	2112.8	2104.9	2079.5	2036.8	1994.2	1952.3	1890.0	1863.4
31.5°	2014.5	2061.1	2077.9	2091.2	2085.0	2059.1	2014.1	1969.9	1925.7	1861.8	1836.4
32°	1990.6	2038.0	2054.8	2070.1	2064.6	2037.2	1991.4	1943.7	1897.9	1833.3	1807.8
32.5°	1965.2	2014.1	2031.7	2047.0	2042.7	2015.3	1967.1	1917.0	1868.5	1803.1	1779.2
33°	1939.7	1989.5	2007.9	2023.9	2020.0	1992.2	1942.5	1889.2	1838.7	1772.6	1749.1
33.5°	1911.6	1964.8	1983.6	1999.6	1996.1	1967.5	1917.4	1861.1	1807.8	1740.9	1719.7
34°	1881.4	1938.6	1959.3	1974.6	1971.5	1943.3	1891.6	1831.3	1776.5	1707.6	1687.2
34.5°	1849.3	1912.7	1933.9	1949.5	1944.4	1915.5	1865.0	1800.0	1744.8	1674.7	1656.3
35°	1816.8	1884.2	1907.6	1922.5	1916.3	1888.5	1836.8	1769.1	1711.9	1641.1	1622.7
35.5°	1782.8	1856.0	1881.0	1895.5	1887.3	1859.9	1808.6	1738.9	1680.2	1606.6	1588.2
36°	1746.0	1826.2	1854.4	1867.7	1856.4	1831.3	1778.8	1706.0	1647.3	1571.4	1551.4
36.5°	1708.0	1796.5	1825.4	1839.5	1823.5	1799.6	1747.5	1674.7	1614.4	1535.4	1514.6
37°	1669.6	1764.0	1796.5	1809.8	1789.0	1767.1	1714.3	1641.4	1580.0	1498.9	1475.1
37.5°	1629.7	1730.7	1764.8	1778.1	1752.6	1732.3	1680.2	1609.7	1545.9	1462.9	1434.7
38°	1589.0	1695.1	1733.4	1746.0	1714.3	1697.8	1645.0	1574.9	1511.1	1423.0	1394.0
38.5°	1547.5	1659.1	1699.4	1711.5	1675.5	1659.1	1608.6	1541.6	1475.5	1382.7	1352.1
39°	1506.0	1620.7	1663.8	1676.3	1636.4	1619.9	1570.6	1504.8	1438.3	1341.2	1307.1
39.5°	1463.3	1579.6	1626.2	1638.7	1595.2	1578.4	1531.0	1468.4	1398.3	1300.5	1262.1
40°	1419.9	1536.1	1587.8	1598.8	1553.0	1535.0	1489.9	1427.7	1356.8	1255.1	1215.5
40.5°	1376.0	1491.5	1546.7	1556.5	1511.9	1489.2	1446.9	1387.0	1313.4	1210.8	1168.2
41°	1331.0	1445.7	1503.3	1512.3	1469.2	1443.4	1402.6	1343.1	1268.8	1167.4	1121.6
41.5°	1285.2	1399.5	1460.2	1466.5	1426.5	1397.2	1356.1	1299.7	1224.5	1123.9	1074.2
42°	1238.2	1352.5	1414.4	1419.1	1381.9	1349.8	1307.5	1252.3	1179.1	1078.5	1030.0
42.5°	1190.9	1307.1	1368.2	1372.1	1338.1	1301.3	1260.5	1206.5	1136.4	1035.8	986.9
43°	1143.9	1261.3	1319.3	1325.9	1293.0	1255.5	1213.2	1159.1	1093.8	992.0	944.6
43.5°	1098.1	1215.9	1271.9	1278.9	1245.3	1206.9	1166.2	1112.6	1051.5	950.1	903.1



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	965.0	1077.7	1125.1	1138.4	1105.1	1064.4	1022.9	977.5	925.0	825.6	785.3
45.5°	922.3	1031.5	1075.0	1092.2	1058.5	1018.2	976.3	933.3	883.2	786.9	748.9
46°	878.9	986.1	1025.3	1046.4	1015.1	972.4	929.0	889.4	842.1	748.9	713.7
46.5°	835.4	941.1	977.9	1001.0	971.2	928.6	883.9	845.6	801.0	712.9	678.8
47°	792.3	894.9	930.1	954.4	927.8	885.5	838.5	801.0	760.6	676.1	646.3
47.5°	751.6	851.1	883.9	908.6	883.6	843.6	795.9	758.7	721.9	642.8	615.0
48°	711.3	807.2	838.5	864.4	840.5	803.3	754.0	717.6	683.9	609.9	585.3
48.5°	671.8	764.5	795.9	820.5	798.6	764.5	714.8	677.6	647.1	578.6	555.5
49°	634.2	722.7	753.6	777.1	757.5	725.4	676.1	638.9	609.5	548.1	528.1
49.5°	598.6	681.2	712.9	736.0	716.8	687.0	639.7	602.1	574.3	519.1	501.5
50°	562.9	641.2	671.8	694.5	677.2	650.2	603.7	567.6	541.0	491.7	476.0
50.5°	529.3	602.5	633.8	654.1	638.5	614.2	570.8	534.8	508.1	465.9	451.8
51°	496.8	564.9	596.6	614.2	602.5	579.8	539.1	503.8	477.6	441.6	428.7
51.5°	465.9	528.9	561.0	577.8	566.9	546.9	509.7	475.2	449.4	418.1	406.3
52°	436.5	495.2	526.5	542.2	533.6	514.0	481.1	447.8	424.0	395.8	385.6
52.5°	408.7	463.9	494.0	507.7	499.9	483.1	454.5	422.8	400.1	375.0	366.0
53°	382.5	434.5	463.1	474.9	468.6	454.9	429.1	400.1	379.7	356.2	349.2
53.5°	359.0	407.1	433.8	445.1	438.8	427.9	405.6	378.9	360.9	339.8	332.0
54°	337.1	381.3	406.7	416.9	410.7	402.4	384.0	359.8	345.7	323.0	315.1
54.5°	317.9	358.2	380.1	390.7	384.4	378.9	363.7	344.1	330.4	306.5	298.3
55°	300.3	337.1	355.8	366.4	364.5	359.8	346.5	328.8	315.5	290.1	281.1
55.5°	283.8	317.9	333.9	344.5	344.9	341.0	329.6	313.2	300.3	276.0	267.4
56°	269.3	299.5	313.6	324.1	324.9	322.2	312.4	297.5	285.0	263.1	254.8
56.5°	256.4	282.6	295.6	305.3	305.0	303.4	295.2	281.9	272.1	250.9	243.9
57°	245.5	267.8	279.1	288.1	285.4	284.6	278.3	268.9	259.9	241.1	234.1
57.5°	234.9	254.8	264.2	272.5	270.9	270.5	264.6	256.4	248.6	231.0	224.3
58°	224.7	243.9	252.1	258.8	257.6	257.2	252.5	245.8	238.8	221.2	214.5
58.5°	214.5	233.3	241.5	247.4	247.0	246.6	242.3	236.1	228.6	211.4	204.3
59°	204.0	223.1	231.4	237.2	236.4	236.4	232.1	225.9	218.8	201.6	195.0
59.5°	194.2	212.6	220.8	227.1	226.3	226.3	222.4	215.7	208.7	192.2	185.9
60°	184.4	202.4	210.2	216.5	216.1	215.7	211.8	206.3	199.3	183.2	177.3
60.5°	174.6	192.2	200.0	206.3	205.5	205.5	202.0	196.5	190.3	174.6	168.7
61°	165.6	182.8	190.3	196.1	195.7	195.7	192.6	187.5	181.3	166.4	160.5
61.5°	157.0	173.4	180.9	186.3	185.6	186.3	183.2	178.5	172.2	158.5	153.1
62°	148.8	164.8	171.5	176.9	176.6	176.9	174.6	169.9	163.6	150.7	145.6
62.5°	140.5	156.6	162.9	167.9	167.6	168.3	166.0	161.7	155.4	143.3	138.6
63°	133.5	148.4	154.6	159.3	159.3	159.7	157.8	153.8	147.6	135.8	131.5
63.5°	126.8	139.8	146.8	151.5	151.1	151.9	149.9	146.4	139.8	128.8	125.3
64°	119.8	133.1	140.1	143.7	143.7	144.1	142.5	139.4	132.3	122.1	119.0
64.5°	113.1	126.4	133.1	137.0	136.6	137.0	135.4	131.9	125.3	115.9	113.1
65°	106.5	119.8	126.4	130.4	129.6	130.4	128.8	125.3	118.6	110.0	107.3
65.5°	100.2	113.1	119.8	123.7	122.9	123.7	122.1	119.0	112.4	104.1	102.2
66°	94.7	106.9	113.1	117.4	116.7	117.4	116.3	112.7	106.1	98.3	96.7



TEST NUMBER: P776406

CATALOG NUMBER: HCDJBL3040CSD-HCD6TRMW-4000lm-3000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	79.5	90.4	96.3	99.4	99.4	100.2	99.4	95.9	89.6	83.4	82.6
68°	75.2	85.7	91.2	94.3	94.3	95.1	94.3	90.8	84.6	78.7	78.3
68.5°	70.5	80.6	86.1	89.3	89.3	90.0	89.3	86.1	79.9	74.4	74.0
69°	66.6	76.3	81.8	84.6	84.6	85.3	84.9	81.4	75.6	70.1	70.1
69.5°	62.6	72.0	77.1	79.9	80.3	80.6	80.3	76.7	71.2	66.2	66.2
70°	59.1	67.7	73.2	75.9	75.9	76.7	75.9	72.8	66.9	62.6	62.6
70.5°	55.6	64.2	68.9	71.6	71.6	72.4	72.0	68.5	63.0	58.7	59.1
71°	52.1	60.3	65.4	67.7	68.1	68.5	68.1	65.0	59.5	55.6	56.0
71.5°	48.9	56.8	61.9	64.2	64.2	65.0	64.6	61.1	56.0	52.1	52.8
72°	45.8	53.6	58.3	60.7	60.7	61.5	61.1	57.5	52.8	48.9	49.7
72.5°	43.1	50.5	54.8	57.2	57.2	57.9	57.5	54.4	49.7	46.2	47.0
73°	40.3	47.4	51.7	54.0	54.0	54.8	54.4	50.9	46.6	43.5	44.2
73.5°	38.0	44.2	48.9	50.9	51.3	51.7	51.3	48.2	43.8	40.7	41.5
74°	35.6	41.5	45.8	48.2	48.2	48.9	48.2	45.0	41.1	38.0	39.1
74.5°	33.3	39.1	43.1	45.4	45.4	45.8	45.4	42.3	38.4	35.6	36.4
75°	30.9	36.8	40.7	42.7	42.7	43.5	42.7	39.9	36.0	33.7	34.1
75.5°	29.0	34.4	38.0	39.9	40.3	40.7	40.3	37.2	33.7	31.3	32.1
76°	27.0	32.1	35.6	37.6	38.0	38.4	37.6	34.8	31.7	29.4	30.1
76.5°	25.1	29.8	33.7	35.2	35.6	36.0	35.2	32.9	29.8	27.0	28.2
77°	23.1	27.8	31.3	33.3	33.3	33.7	33.3	30.9	27.4	25.1	26.2
77.5°	21.5	25.8	29.4	30.9	31.3	31.7	31.3	28.6	25.4	23.1	24.3
78°	20.0	23.9	27.4	29.0	29.4	29.8	29.4	26.6	23.5	21.5	22.3
78.5°	18.4	22.3	25.4	27.0	27.4	27.8	27.0	24.7	21.9	20.0	20.7
79°	16.8	20.7	23.5	25.4	25.4	25.8	25.1	22.7	20.4	18.4	19.2
79.5°	15.3	19.2	21.9	23.5	23.5	23.9	23.5	21.1	18.8	16.8	17.6
80°	14.1	17.6	20.4	21.9	21.9	22.3	21.5	19.2	17.2	15.3	16.1
80.5°	12.9	16.1	18.8	20.4	20.4	20.7	20.0	17.6	15.7	14.1	14.9
81°	11.7	14.5	17.2	18.8	18.8	19.2	18.4	16.4	14.5	12.5	13.3
81.5°	10.2	13.3	15.7	17.2	17.2	17.6	17.2	14.9	12.9	11.4	12.1
82°	9.4	12.1	14.5	16.1	16.1	16.1	15.7	13.3	11.7	10.2	11.0
82.5°	8.2	10.6	13.3	14.5	14.5	14.9	14.5	12.1	10.6	9.0	9.8
83°	7.0	9.4	12.1	13.3	13.3	13.7	12.9	11.0	9.4	7.8	8.6
83.5°	6.3	8.2	11.0	12.1	12.1	12.5	11.7	9.8	8.2	6.7	7.4
84°	5.1	7.4	9.4	11.0	11.0	11.4	10.6	8.6	7.0	5.5	6.7
84.5°	4.3	6.3	8.6	9.8	9.8	10.2	9.4	7.4	6.3	4.7	5.9
85°	3.1	5.1	7.4	8.6	8.6	9.0	8.2	6.3	5.1	3.5	4.7
85.5°	2.3	4.3	6.7	7.8	7.8	7.8	7.4	5.5	4.3	3.1	3.9
86°	2.0	3.5	5.5	6.7	6.7	7.0	6.3	4.7	3.1	2.3	3.1
86.5°	1.6	2.7	4.7	5.9	5.9	5.9	5.5	3.9	2.7	2.0	2.3
87°	1.2	2.3	3.9	4.7	4.7	5.1	4.7	3.1	2.0	1.6	1.6
87.5°	0.8	2.0	3.1	3.9	3.9	3.9	3.9	2.7	1.6	1.2	1.2
88°	0.4	1.2	2.3	3.1	3.1	3.1	2.7	2.0	1.2	0.4	0.4
88.5°	0.0	0.8	1.6	2.3	2.3	2.3	2.0	1.6	0.8	0.0	0.0



TEST NUMBER: P776406
CATALOG NUMBER: HCDJBL3040CSD-HCD6TRMW-4000lm-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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P776406

CATALOG NUMBER: HCDJBL3040CSD-HCD6TRMW-4000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2533.2	2533.2	2533.2	2533.2	2533.2	2533.2
0.5°	2532.8	2534.0	2534.4	2532.0	2530.9	2532.0
1°	2531.3	2532.4	2533.2	2531.7	2530.9	2532.8
1.5°	2529.3	2530.5	2532.0	2530.9	2530.5	2532.8
2°	2527.0	2528.9	2530.1	2529.7	2529.7	2532.4
2.5°	2524.6	2526.6	2528.5	2528.5	2528.9	2532.0
3°	2521.9	2524.2	2526.6	2527.0	2528.1	2531.7
3.5°	2519.1	2521.9	2524.2	2525.4	2527.0	2531.3
4°	2516.4	2518.7	2521.9	2523.4	2525.8	2530.5
4.5°	2512.9	2516.0	2519.1	2521.1	2524.2	2529.3
5°	2509.3	2512.9	2516.0	2518.7	2522.3	2528.1
5.5°	2505.4	2508.9	2512.9	2516.4	2520.3	2527.0
6°	2501.5	2505.4	2509.3	2513.3	2517.9	2525.0
6.5°	2497.6	2501.5	2505.8	2510.5	2515.6	2523.0
7°	2492.5	2496.8	2501.9	2507.0	2512.5	2521.1
7.5°	2488.2	2492.5	2498.0	2503.5	2509.7	2518.7
8°	2483.1	2487.4	2493.7	2499.5	2506.6	2516.0
8.5°	2478.0	2482.7	2489.0	2495.6	2503.5	2513.3
9°	2472.5	2477.2	2483.9	2491.3	2499.5	2509.7
9.5°	2466.7	2471.8	2478.8	2486.6	2495.6	2506.6
10°	2460.8	2465.9	2473.3	2481.9	2491.3	2503.1
10.5°	2454.5	2460.0	2467.8	2476.5	2487.0	2499.2
11°	2447.5	2453.4	2461.6	2471.0	2482.3	2494.9
11.5°	2440.8	2446.7	2455.3	2465.1	2477.2	2490.5
12°	2433.4	2439.7	2448.3	2459.2	2471.8	2485.5
12.5°	2426.3	2432.2	2441.6	2453.0	2466.3	2480.4
13°	2418.1	2424.8	2434.2	2446.3	2460.4	2475.3
13.5°	2409.9	2416.9	2426.7	2439.3	2454.1	2469.8
14°	2401.3	2408.7	2418.9	2431.8	2447.5	2463.9
14.5°	2392.7	2399.7	2410.7	2424.4	2440.8	2457.7
15°	2383.7	2391.1	2402.5	2416.6	2433.8	2451.0
15.5°	2374.3	2382.1	2393.5	2408.3	2426.0	2444.4
16°	2364.5	2372.3	2384.1	2399.7	2418.5	2436.9
16.5°	2354.7	2362.9	2374.7	2391.1	2410.3	2429.5
17°	2344.1	2352.7	2365.3	2381.7	2401.7	2421.3
17.5°	2334.0	2342.2	2355.1	2372.3	2392.7	2413.4
18°	2322.2	2331.6	2344.9	2362.9	2383.7	2404.8
18.5°	2311.3	2320.6	2334.3	2352.4	2373.9	2395.8
19°	2299.5	2309.3	2323.4	2341.8	2364.1	2386.8
19.5°	2287.4	2297.9	2312.0	2331.2	2354.3	2377.4
20°	2274.8	2286.2	2300.7	2320.3	2343.7	2367.6
20.5°	2262.3	2274.1	2288.9	2308.9	2332.8	2357.4
21°	2249.4	2261.5	2276.4	2296.8	2321.4	2346.5

TEST NUMBER: P776406

CATALOG NUMBER: HCDJBL3040CSD-HCD6TRMW-4000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	2208.3	2222.0	2237.7	2259.2	2285.4	2312.4
23°	2193.8	2207.9	2224.0	2245.9	2272.1	2299.9
23.5°	2178.9	2193.0	2210.3	2232.2	2258.8	2287.0
24°	2164.1	2178.5	2195.4	2217.7	2245.1	2274.1
24.5°	2148.8	2163.7	2180.9	2203.2	2231.0	2260.8
25°	2133.1	2148.4	2165.6	2188.3	2216.5	2247.0
25.5°	2116.7	2132.3	2150.4	2173.1	2201.6	2232.6
26°	2098.7	2115.9	2133.1	2156.6	2186.4	2218.1
26.5°	2080.3	2097.9	2115.5	2139.0	2170.7	2202.8
27°	2060.3	2079.5	2096.3	2121.0	2154.3	2187.5
27.5°	2039.2	2058.8	2076.8	2102.2	2136.7	2170.3
28°	2017.3	2038.0	2056.0	2081.5	2119.0	2154.3
28.5°	1994.6	2014.5	2034.1	2061.1	2099.9	2135.9
29°	1970.3	1991.0	2011.4	2040.0	2080.3	2118.3
29.5°	1945.6	1965.6	1987.5	2017.6	2059.9	2099.1
30°	1919.0	1939.7	1962.4	1993.8	2038.4	2079.9
30.5°	1891.6	1910.4	1936.2	1970.7	2016.5	2058.4
31°	1863.0	1882.6	1908.0	1945.6	1992.6	2037.6
31.5°	1834.4	1852.1	1879.8	1920.6	1968.3	2014.5
32°	1803.5	1820.3	1850.5	1893.6	1943.3	1990.6
32.5°	1772.2	1787.1	1820.3	1867.7	1917.0	1965.2
33°	1739.7	1756.9	1789.4	1840.3	1889.2	1939.7
33.5°	1706.0	1724.4	1757.3	1811.3	1861.4	1911.6
34°	1672.8	1691.6	1725.6	1780.0	1832.5	1881.4
34.5°	1638.7	1657.5	1692.7	1749.5	1801.6	1849.3
35°	1603.5	1625.4	1660.2	1717.0	1769.5	1816.8
35.5°	1568.2	1592.5	1627.7	1683.3	1736.6	1782.8
36°	1531.8	1558.8	1593.3	1645.7	1701.3	1746.0
36.5°	1495.4	1523.2	1559.2	1610.5	1664.5	1708.0
37°	1457.5	1486.8	1523.2	1572.2	1624.6	1669.6
37.5°	1418.7	1449.6	1485.2	1533.0	1584.7	1629.7
38°	1378.8	1410.1	1446.1	1491.5	1540.4	1589.0
38.5°	1336.5	1368.2	1405.4	1448.4	1497.4	1547.5
39°	1293.4	1324.4	1363.5	1403.0	1449.2	1506.0
39.5°	1249.6	1278.9	1318.1	1356.8	1402.6	1463.3
40°	1205.0	1233.5	1273.1	1309.1	1353.7	1419.9
40.5°	1161.1	1188.9	1225.7	1261.3	1306.3	1376.0
41°	1116.5	1145.1	1179.1	1212.8	1258.6	1331.0
41.5°	1071.9	1102.4	1132.5	1165.0	1210.4	1285.2
42°	1028.4	1060.1	1086.3	1117.3	1161.9	1238.2
42.5°	984.9	1017.8	1040.1	1069.5	1115.7	1190.9
43°	941.9	976.3	995.5	1021.0	1068.7	1143.9
43.5°	898.8	932.5	950.9	974.8	1022.5	1098.1



TEST NUMBER: P776406

CATALOG NUMBER: HCDJBL3040CSD-HCD6TRMW-4000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	778.6	806.8	819.0	839.3	890.2	965.0
45.5°	741.1	765.7	776.7	797.0	849.5	922.3
46°	704.6	726.6	734.8	756.3	809.6	878.9
46.5°	667.5	688.2	694.1	717.6	770.0	835.4
47°	633.4	650.6	655.3	678.4	731.3	792.3
47.5°	600.9	613.0	618.5	642.8	693.3	751.6
48°	570.4	577.4	582.9	608.0	656.1	711.3
48.5°	539.1	543.4	549.6	574.7	621.3	671.8
49°	510.9	511.3	517.9	543.4	586.0	634.2
49.5°	483.9	480.7	488.2	513.6	552.8	598.6
50°	458.4	452.5	460.4	484.6	519.9	562.9
50.5°	433.4	425.9	434.1	457.2	489.7	529.3
51°	411.4	402.8	409.9	432.2	460.4	496.8
51.5°	389.9	382.1	388.3	408.7	433.4	465.9
52°	369.5	363.3	368.4	386.4	408.3	436.5
52.5°	352.7	346.1	349.6	365.2	384.4	408.7
53°	336.3	330.0	332.8	345.7	362.1	382.5
53.5°	319.8	314.7	316.3	327.3	341.0	359.0
54°	303.0	300.7	301.4	310.0	321.8	337.1
54.5°	286.6	286.9	287.3	294.0	304.2	317.9
55°	272.5	273.6	273.6	279.1	288.1	300.3
55.5°	259.9	261.1	261.1	265.0	272.9	283.8
56°	248.6	249.8	249.8	252.9	259.2	269.3
56.5°	238.4	240.0	239.6	242.3	247.8	256.4
57°	228.6	229.8	229.8	232.1	237.6	245.5
57.5°	218.8	220.0	219.6	222.0	227.4	234.9
58°	209.0	210.2	209.8	211.8	217.3	224.7
58.5°	199.3	200.4	199.7	202.0	206.7	214.5
59°	190.3	191.0	190.6	192.2	196.5	204.0
59.5°	181.3	182.4	181.6	182.8	187.1	194.2
60°	172.2	173.4	172.6	174.2	178.1	184.4
60.5°	164.4	165.2	164.4	165.6	169.1	174.6
61°	156.6	157.4	156.2	157.4	160.5	165.6
61.5°	148.8	149.5	148.8	149.9	152.7	157.0
62°	141.7	142.5	141.3	142.5	145.2	148.8
62.5°	134.7	136.2	134.7	135.8	138.2	140.5
63°	128.0	130.0	128.4	129.6	131.5	133.5
63.5°	121.7	123.3	122.1	122.9	124.9	126.8
64°	115.9	117.1	115.9	116.7	118.2	119.8
64.5°	110.0	110.4	109.6	110.0	111.6	113.1
65°	104.5	104.9	104.1	104.5	105.7	106.5
65.5°	99.0	99.4	98.7	99.0	99.8	100.2
66°	94.0	94.3	93.6	94.0	94.3	94.7



TEST NUMBER: P776406

CATALOG NUMBER: HCDJBL3040CSD-HCD6TRMW-4000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	80.3	80.6	79.9	79.9	79.9	79.5
68°	75.9	76.3	75.6	75.9	75.2	75.2
68.5°	72.0	72.4	71.6	71.6	71.2	70.5
69°	68.1	68.5	67.7	68.1	66.9	66.6
69.5°	64.6	65.0	64.2	64.2	63.4	62.6
70°	61.1	61.5	60.7	60.7	59.5	59.1
70.5°	57.5	57.9	57.2	57.2	56.0	55.6
71°	54.4	54.8	54.0	54.0	52.8	52.1
71.5°	51.3	51.7	50.9	50.9	49.7	48.9
72°	48.5	48.5	48.2	48.2	46.6	45.8
72.5°	45.8	45.8	45.4	45.4	43.8	43.1
73°	43.1	43.1	42.7	42.7	41.1	40.3
73.5°	40.3	40.7	39.9	39.9	38.4	38.0
74°	38.0	38.0	37.6	37.6	36.0	35.6
74.5°	35.6	35.6	35.2	35.2	33.7	33.3
75°	33.7	33.7	33.3	32.9	31.7	30.9
75.5°	31.7	31.3	30.9	30.9	29.4	29.0
76°	29.8	29.4	29.0	28.6	27.4	27.0
76.5°	27.8	27.4	27.0	27.0	25.4	25.1
77°	25.8	25.8	25.4	25.1	23.5	23.1
77.5°	23.9	23.9	23.5	23.1	21.9	21.5
78°	21.9	22.3	21.9	21.5	20.0	20.0
78.5°	20.4	20.7	20.4	20.0	18.4	18.4
79°	18.8	19.2	18.8	18.4	17.2	16.8
79.5°	17.6	17.6	17.2	16.8	15.7	15.3
80°	16.1	16.1	16.1	15.3	14.1	14.1
80.5°	14.5	14.9	14.5	14.1	12.9	12.9
81°	13.3	13.7	13.3	12.9	11.7	11.7
81.5°	12.1	12.5	12.1	11.7	10.2	10.2
82°	11.0	11.4	11.0	10.6	9.0	9.4
82.5°	9.8	9.8	9.8	9.4	7.8	8.2
83°	8.6	9.0	8.6	8.2	6.7	7.0
83.5°	7.8	7.8	7.4	7.0	5.9	6.3
84°	6.7	6.7	6.7	6.3	5.1	5.1
84.5°	5.9	5.9	5.5	5.5	3.9	4.3
85°	4.7	4.7	4.7	4.7	3.5	3.1
85.5°	3.9	3.9	3.9	3.5	2.7	2.3
86°	3.1	3.1	3.1	2.7	2.3	2.0
86.5°	2.3	2.3	2.0	2.0	1.6	1.6
87°	1.2	1.6	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: P776406

CATALOG NUMBER: HCDJBL3040CSD-HCD6TRMW-4000lm-3000K

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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Peachtree City, GA 30269

Scaled Data Report



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Scaled Data Report





21.5°	2335.5	2367.6	2381.3	2385.2	2372.3	2355.1	2329.7	2301.5	2278.0	2247.8	2237.7
22°	2324.2	2357.1	2371.5	2375.1	2362.1	2344.5	2318.3	2289.7	2265.8	2234.5	2224.0



44°	1053.1	1170.1	1222.6	1232.4	1197.9	1159.5	1117.7	1066.4	1009.6	906.6	862.8
44.5°	1008.8	1123.1	1174.0	1185.4	1150.5	1112.2	1068.7	1022.1	966.9	866.3	824.0



66.5°	89.3	101.4	106.9	110.8	110.4	111.2	110.4	106.9	100.2	93.2	92.0
67°	84.2	95.5	101.4	104.9	104.9	105.7	104.5	101.4	94.7	88.1	87.3



89°	0.0	0.4	0.8	1.6	1.6	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°	2236.1	2248.6	2263.9	2284.6	2309.7	2335.5
22°	2222.4	2235.3	2250.6	2272.1	2297.9	2324.2



44°	858.1	889.8	906.6	929.4	977.1	1053.1
44.5°	818.2	848.3	862.0	884.3	933.3	1008.8

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66.5°	89.3	89.6	88.9	89.3	89.3	89.3
67°	84.6	84.9	84.2	84.6	84.6	84.2

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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)