

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: P776505

Luminaire Tested: HCDJBL3040CSD-HCD8TRMW-4000lm-2700K

Issue Date: 2/7/2024

Test Information

Test Method: LM-79-2019
Report Number: P776505
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-HCD8TRMW-4000lm-2700K
Description: 8 INCH ROUND MEDIUM MATTE WHITE TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 2700K CCT
Ballast/Driver: -

Summary

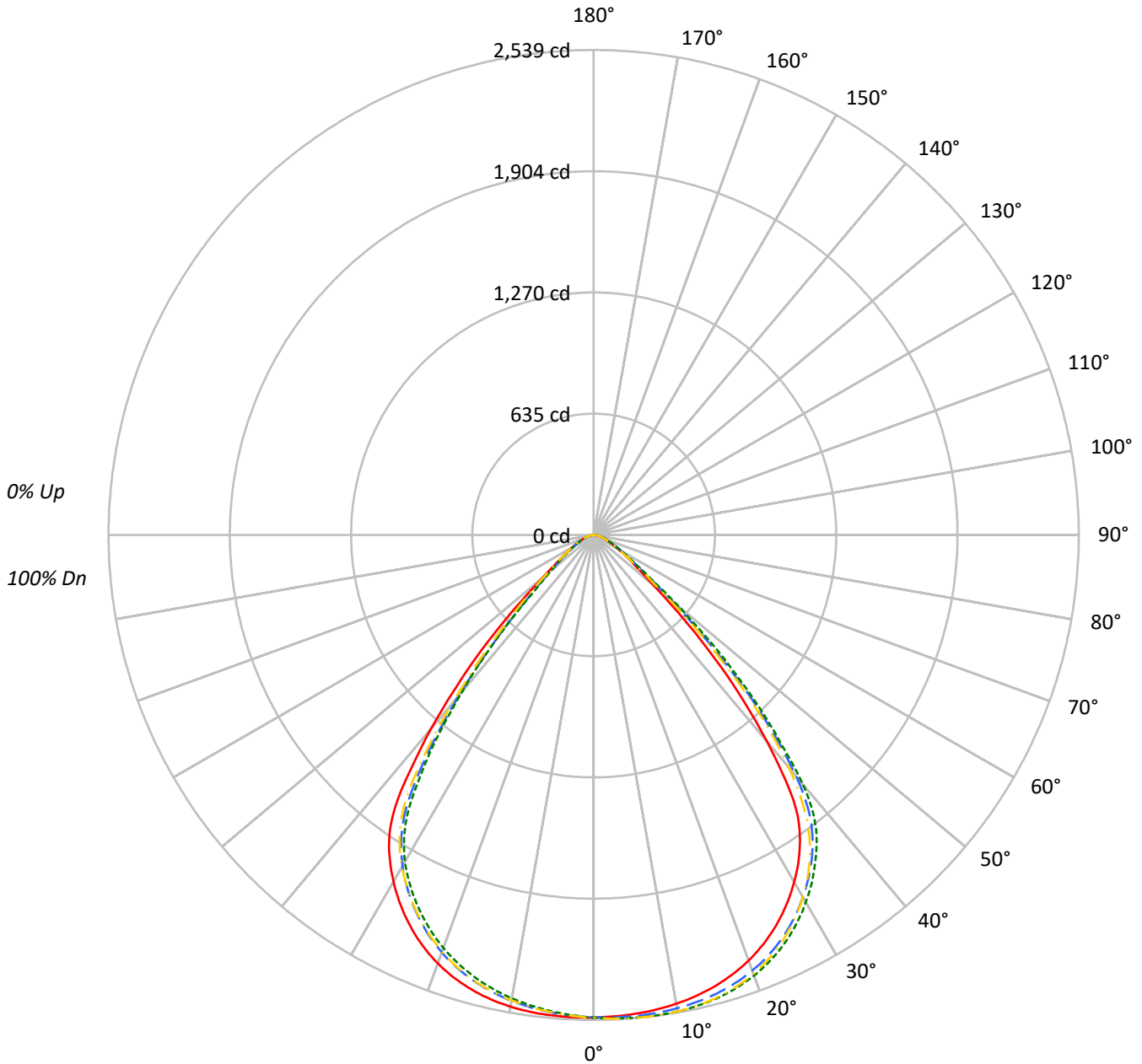
Lumens per Lamp: N/A
Luminaire Lumens: 4093.3 lumens
Efficiency: N/A
Efficacy: 106.3 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.22 / 1.18
Luminous Opening: Circular (Dia: 0.67' x H: 0')
CIE Type: Direct

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										
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	100	100	100	100		
	1	112	109	106	103	110	107	104	102	103	100	98	99	97	95	95	94	93	91	91	91	91	91	91		
	2	105	99	94	90	103	97	93	89	94	90	87	91	88	85	88	86	84	82	82	82	82	82	82		
	3	98	91	85	80	96	89	84	79	86	82	78	84	80	77	81	78	75	74	74	74	74	74	74		
	4	92	83	76	71	90	82	75	71	79	74	70	77	73	69	75	71	68	66	66	66	66	66	66		
	5	86	76	69	64	84	75	68	64	73	67	63	71	66	62	70	65	62	60	60	60	60	60	60		
	6	81	70	63	58	79	69	62	58	68	62	57	66	61	57	65	60	56	55	55	55	55	55	55		
	7	76	65	58	53	74	64	57	52	63	56	52	61	56	52	60	55	51	50	50	50	50	50	50		
	8	71	60	53	48	70	59	53	48	58	52	48	57	51	47	56	51	47	46	46	46	46	46	46		
	9	67	56	49	44	66	55	48	44	54	48	44	53	48	44	52	47	43	42	42	42	42	42	42		
	10	63	52	45	41	62	51	45	41	51	45	40	50	44	40	49	44	40	39	39	39	39	39	39		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	77153	77153	77153	77153
5°	77117	77751	77386	76740
10°	77258	78532	77748	76368
15°	77340	79315	77909	75797
20°	77043	79772	77540	74759
25°	76040	79530	76310	72820
30°	74004	78291	73880	69618
35°	69983	75693	68999	60844
40°	56191	67876	52751	42732
45°	36471	47835	32624	23760
50°	19322	27178	16804	13746
55°	12604	14441	10725	9602
60°	9043	10051	7755	7217
65°	7015	7766	6047	5736
70°	5650	6409	4865	4624
75°	4659	5473	3893	3669
80°	3710	4782	2901	2708
85°	2697	4449	1611	1331

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°

Vertical Angle: 45°

Luminance: 48828 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	240.0	5.9
10°-20°	692.7	16.9
20°-30°	1039.0	25.4
30°-40°	1124.6	27.5
40°-50°	640.5	15.6
50°-60°	212.6	5.2
60°-70°	93.8	2.3
70°-80°	40.9	1.0
80°-90°	9.1	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°	1971.7	48.2
0°-40°	3096.3	75.6
0°-60°	3949.4	96.5
0°-90°	4093.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4093.3	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2527	2527	2527	2527	2527	
5°	2516	2537	2525	2504	2516	239
15°	2447	2509	2465	2398	2447	690
25°	2257	2361	2265	2162	2257	1037
35°	1878	2031	1851	1632	1878	1143
45°	845	1108	756	550	845	657
55°	237	271	202	180	237	221
65°	97	108	84	79	97	99
75°	40	46	33	31	40	43
85°	8	13	5	4	8	9
90°	0	2	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°	2527.1	2527.1	2527.1	2527.1	2527.1	2527.1	2527.1	2527.1	2527.1	2527.1	2527.1
0.5°	2525.9	2526.7	2526.7	2527.1	2528.6	2529.8	2530.9	2529.4	2527.1	2525.9	2524.8
1°	2525.5	2526.7	2527.1	2527.8	2530.1	2531.3	2532.1	2530.1	2527.5	2525.5	2523.6
1.5°	2524.8	2526.3	2527.8	2529.0	2531.3	2532.8	2533.2	2530.9	2527.5	2525.1	2522.5
2°	2524.0	2526.3	2528.2	2530.1	2532.4	2534.4	2534.4	2531.7	2527.5	2524.4	2520.9
2.5°	2523.2	2525.9	2528.6	2530.9	2533.6	2535.1	2535.1	2532.1	2527.5	2523.6	2519.4
3°	2522.1	2525.5	2528.6	2531.7	2534.7	2536.7	2535.9	2532.4	2527.5	2522.5	2517.9
3.5°	2520.5	2525.1	2528.6	2532.4	2535.5	2537.4	2537.0	2532.4	2526.7	2521.7	2515.9
4°	2519.4	2524.4	2528.6	2532.8	2536.3	2538.2	2537.4	2532.8	2526.3	2520.5	2514.0
4.5°	2518.2	2523.2	2528.2	2533.2	2536.7	2539.0	2537.8	2532.8	2525.9	2519.0	2512.1
5°	2516.3	2522.1	2527.8	2533.2	2537.0	2539.3	2538.2	2532.4	2525.1	2517.5	2509.8
5.5°	2514.8	2521.3	2527.5	2533.6	2537.0	2539.7	2538.2	2532.1	2524.4	2515.9	2507.5
6°	2512.9	2519.8	2526.7	2533.6	2537.4	2540.1	2538.6	2531.7	2523.2	2514.0	2504.8
6.5°	2511.0	2518.6	2525.9	2533.2	2537.4	2540.1	2538.6	2530.9	2522.1	2512.1	2502.1
7°	2509.0	2516.7	2525.1	2532.8	2537.4	2540.1	2538.2	2530.1	2520.5	2509.8	2499.1
7.5°	2506.7	2515.2	2524.0	2532.4	2537.0	2540.1	2537.8	2529.4	2519.0	2507.5	2496.0
8°	2504.0	2513.3	2522.8	2531.7	2536.7	2539.7	2537.0	2528.2	2517.1	2505.2	2492.5
8.5°	2501.4	2511.3	2521.3	2530.9	2535.9	2539.3	2536.3	2526.7	2515.2	2502.1	2489.1
9°	2498.7	2509.0	2519.8	2529.8	2535.1	2539.0	2535.5	2525.1	2512.9	2499.4	2485.2
9.5°	2495.6	2506.3	2518.2	2529.0	2534.4	2537.8	2534.4	2523.2	2510.6	2496.0	2481.0
10°	2492.1	2503.7	2515.9	2527.5	2533.2	2537.0	2532.8	2521.3	2507.9	2492.5	2476.4
10.5°	2488.7	2501.0	2514.0	2526.3	2531.7	2535.5	2531.3	2519.0	2504.8	2488.7	2472.2
11°	2485.2	2497.9	2511.7	2524.4	2530.1	2534.0	2529.4	2516.7	2501.4	2484.5	2467.6
11.5°	2481.0	2494.4	2509.4	2522.8	2528.6	2532.4	2527.5	2514.0	2497.9	2480.6	2462.6
12°	2476.8	2491.0	2506.7	2520.9	2526.7	2530.5	2525.1	2511.0	2494.1	2476.0	2456.8
12.5°	2472.6	2487.5	2503.7	2518.6	2524.4	2528.6	2522.5	2507.5	2489.8	2471.0	2451.5
13°	2467.6	2483.3	2500.6	2515.9	2522.1	2526.3	2519.8	2503.7	2485.6	2465.7	2445.3
13.5°	2463.0	2479.1	2497.1	2513.6	2519.0	2523.6	2516.3	2499.8	2481.0	2460.3	2439.2
14°	2458.0	2474.5	2493.7	2510.6	2516.3	2520.5	2512.9	2495.6	2476.0	2454.5	2432.3
14.5°	2452.6	2469.9	2489.8	2507.5	2512.9	2517.5	2509.4	2491.0	2470.7	2448.4	2425.8
15°	2446.9	2465.3	2486.0	2504.0	2509.4	2514.0	2505.6	2486.0	2464.9	2441.5	2418.5
15.5°	2440.7	2459.9	2481.4	2500.2	2505.2	2510.2	2501.4	2481.0	2458.8	2434.6	2410.8
16°	2434.2	2454.5	2476.8	2496.0	2501.4	2506.0	2496.8	2475.3	2452.2	2427.3	2402.7
16.5°	2427.7	2448.8	2471.8	2491.8	2496.8	2501.7	2491.4	2469.1	2445.3	2419.6	2394.7
17°	2420.4	2442.6	2466.8	2487.2	2491.8	2497.1	2486.0	2462.6	2438.4	2411.6	2385.5
17.5°	2413.5	2436.1	2461.1	2482.2	2486.8	2492.1	2480.2	2455.7	2430.7	2403.5	2376.6
18°	2405.8	2429.6	2455.3	2476.4	2481.4	2486.8	2474.1	2448.4	2422.7	2394.3	2367.0
18.5°	2397.7	2422.3	2448.8	2471.0	2475.3	2480.6	2467.2	2441.1	2414.2	2385.1	2357.4
19°	2388.9	2415.0	2442.3	2464.9	2468.7	2474.1	2460.3	2433.0	2405.8	2375.5	2347.1
19.5°	2380.1	2407.3	2435.3	2458.4	2462.2	2468.0	2453.4	2424.6	2396.2	2365.5	2336.0
20°	2371.3	2398.9	2427.3	2451.5	2455.3	2460.7	2445.7	2415.4	2386.6	2354.8	2324.8
20.5°	2361.7	2390.4	2420.0	2444.2	2447.6	2453.0	2437.3	2406.2	2376.6	2344.0	2313.7
21°	2351.7	2381.6	2411.9	2436.9	2440.0	2444.9	2428.4	2396.2	2365.9	2332.5	2301.0



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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°	2319.5	2352.1	2384.7	2411.2	2413.5	2418.8	2399.7	2364.4	2331.7	2296.0	2262.7
23°	2307.9	2341.7	2375.1	2402.0	2404.3	2408.9	2389.3	2352.5	2319.5	2282.6	2248.5
23.5°	2295.7	2331.0	2364.7	2392.4	2394.3	2399.3	2377.8	2340.6	2306.0	2268.8	2234.3
24°	2283.4	2319.5	2353.6	2382.0	2383.5	2388.5	2366.7	2327.9	2293.0	2254.6	2219.7
24.5°	2270.3	2307.9	2343.2	2371.3	2372.4	2377.4	2354.8	2314.8	2279.5	2240.4	2204.3
25°	2257.3	2295.3	2331.3	2360.1	2360.9	2365.9	2342.5	2301.4	2265.3	2225.0	2188.6
25.5°	2243.5	2282.6	2319.5	2348.6	2349.0	2354.0	2329.4	2287.2	2250.4	2208.9	2172.5
26°	2228.9	2269.6	2306.4	2336.7	2337.1	2341.7	2316.0	2272.6	2234.6	2192.8	2155.6
26.5°	2214.3	2255.7	2294.1	2324.1	2323.7	2328.7	2301.8	2257.3	2219.3	2177.1	2139.1
27°	2199.3	2241.9	2280.7	2311.4	2310.6	2314.8	2287.6	2241.9	2203.2	2159.8	2121.0
27.5°	2184.0	2227.0	2266.5	2298.0	2296.8	2301.0	2272.6	2225.8	2186.7	2142.5	2103.0
28°	2168.3	2212.4	2252.7	2284.1	2282.6	2286.4	2257.3	2209.7	2169.4	2125.3	2084.2
28.5°	2151.4	2196.6	2237.3	2269.6	2267.6	2271.9	2241.2	2192.4	2151.7	2106.5	2065.4
29°	2134.5	2180.9	2222.4	2255.0	2252.7	2256.1	2224.3	2174.8	2133.7	2087.7	2045.1
29.5°	2116.8	2164.0	2206.2	2240.0	2236.9	2240.0	2207.4	2156.4	2114.9	2068.1	2023.6
30°	2099.2	2147.5	2190.5	2223.9	2220.8	2223.5	2189.7	2137.9	2095.7	2048.5	2001.3
30.5°	2080.0	2130.3	2173.2	2208.2	2203.9	2206.6	2172.1	2119.1	2075.4	2027.0	1977.9
31°	2061.2	2112.2	2156.4	2191.3	2186.7	2189.4	2153.3	2098.8	2055.8	2005.2	1954.1
31.5°	2042.0	2092.7	2138.7	2174.0	2168.6	2170.9	2134.1	2077.7	2033.9	1982.9	1928.8
32°	2022.0	2074.6	2120.3	2156.0	2151.7	2152.9	2113.8	2055.8	2012.1	1959.9	1902.3
32.5°	2000.9	2054.7	2101.5	2138.3	2132.6	2133.7	2092.3	2033.2	1989.4	1934.5	1873.9
33°	1979.1	2034.3	2082.7	2119.9	2113.4	2113.8	2070.0	2010.1	1966.0	1907.7	1843.2
33.5°	1955.3	2013.6	2063.1	2100.7	2093.4	2093.4	2047.8	1985.2	1940.3	1878.5	1809.1
34°	1931.5	1991.3	2042.4	2081.5	2073.5	2071.9	2023.2	1959.5	1913.4	1847.4	1770.7
34.5°	1905.4	1967.2	2020.1	2061.2	2052.4	2049.3	1999.0	1932.2	1884.3	1809.1	1728.5
35°	1877.7	1942.6	1997.9	2040.5	2030.9	2026.3	1972.9	1903.1	1851.3	1768.8	1682.0
35.5°	1846.7	1915.7	1973.3	2018.6	2008.6	2002.5	1945.7	1869.7	1813.3	1725.0	1631.0
36°	1814.8	1887.3	1948.4	1995.9	1986.0	1977.9	1915.4	1832.8	1772.6	1675.1	1576.9
36.5°	1778.3	1857.4	1921.1	1972.9	1961.0	1950.7	1883.1	1794.1	1726.2	1621.0	1521.2
37°	1736.1	1822.5	1892.7	1947.6	1934.9	1921.1	1848.6	1753.8	1672.8	1564.2	1464.4
37.5°	1686.2	1783.7	1861.2	1919.6	1905.0	1888.5	1810.6	1708.1	1613.7	1504.7	1404.6
38°	1632.5	1740.0	1825.2	1888.5	1872.8	1854.3	1770.7	1661.7	1552.7	1442.6	1343.5
38.5°	1576.5	1690.5	1785.3	1854.3	1836.7	1816.3	1730.0	1611.4	1491.3	1379.6	1281.4
39°	1520.5	1636.4	1743.0	1816.0	1797.9	1776.8	1685.5	1560.8	1434.5	1316.7	1219.6
39.5°	1465.2	1581.9	1697.0	1776.0	1753.4	1731.5	1639.0	1504.3	1379.2	1255.7	1157.8
40°	1409.9	1528.9	1647.5	1730.8	1703.1	1685.9	1588.4	1448.3	1323.6	1196.2	1095.6
40.5°	1352.0	1477.9	1593.8	1682.0	1642.9	1635.2	1537.7	1388.4	1265.6	1136.3	1034.6
41°	1294.4	1424.1	1537.3	1629.5	1581.1	1584.9	1485.2	1329.0	1205.4	1074.9	974.4
41.5°	1236.5	1369.3	1479.8	1573.4	1517.8	1530.4	1431.8	1269.1	1145.9	1013.9	916.4
42°	1178.5	1311.7	1421.8	1513.2	1458.3	1472.9	1376.6	1211.9	1086.8	957.1	857.3
42.5°	1121.0	1251.1	1362.4	1450.6	1403.4	1413.0	1317.1	1151.7	1029.2	900.3	800.5
43°	1065.3	1190.8	1300.6	1385.8	1347.8	1353.9	1254.9	1092.6	974.0	846.6	748.0
43.5°	1010.1	1131.3	1240.3	1322.8	1289.4	1293.7	1193.5	1033.1	919.9	794.8	696.1



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	844.7	956.7	1055.0	1130.9	1107.9	1117.1	1005.5	860.8	755.6	649.3	561.4
45.5°	791.7	899.2	992.4	1071.5	1049.2	1058.8	941.8	804.7	703.8	602.9	521.5
46°	739.5	842.0	929.5	1009.7	992.8	999.7	885.0	749.9	653.5	560.3	486.2
46.5°	689.2	785.9	870.0	952.5	937.1	940.6	824.7	696.1	606.3	517.3	452.8
47°	640.1	731.4	810.9	895.7	881.5	882.7	769.4	645.5	562.2	479.3	422.5
47.5°	591.0	677.7	757.9	841.6	825.1	825.1	716.1	596.0	518.8	444.4	394.5
48°	547.6	627.8	705.7	789.0	769.4	769.8	665.8	549.5	478.2	412.5	369.6
48.5°	506.2	580.2	655.8	739.5	716.1	715.7	614.8	505.0	440.2	382.6	350.4
49°	468.6	535.3	610.2	689.2	665.4	662.0	568.4	464.7	405.6	361.1	330.8
49.5°	434.4	496.2	567.2	642.0	617.9	610.9	525.0	428.3	374.9	339.6	311.2
50°	406.8	459.0	527.7	595.6	572.2	561.1	484.7	395.7	353.8	318.1	291.7
50.5°	381.8	426.7	489.7	551.1	528.1	516.2	445.2	366.9	332.7	296.6	272.1
51°	359.2	398.0	455.5	510.0	483.9	473.6	411.0	345.0	311.6	275.5	259.8
51.5°	338.5	373.8	424.1	472.0	446.3	437.1	379.5	322.7	290.5	262.5	248.3
52°	320.4	351.1	395.3	436.7	410.2	402.9	357.3	300.5	269.8	251.0	237.2
52.5°	303.2	331.6	369.9	404.9	378.0	372.6	335.0	278.6	257.5	239.9	225.7
53°	286.7	313.1	345.8	376.5	356.5	349.6	313.1	264.4	246.0	228.3	214.9
53.5°	271.7	296.3	324.3	350.8	335.4	327.0	290.9	252.5	234.5	217.2	204.5
54°	260.2	280.1	303.9	326.6	313.9	303.9	269.0	241.0	223.3	206.5	195.0
54.5°	248.7	267.1	286.3	305.9	292.4	281.3	256.4	229.1	212.2	196.5	185.7
55°	236.8	254.8	270.9	286.7	271.3	267.1	244.5	217.6	201.5	186.9	176.9
55.5°	225.7	243.3	258.7	270.9	258.3	255.2	232.6	206.8	191.5	178.1	169.2
56°	214.9	231.8	246.4	258.3	246.8	242.9	220.7	196.1	182.7	170.0	161.6
56.5°	204.5	220.7	235.2	246.4	234.5	231.0	209.5	186.5	174.2	162.3	154.7
57°	194.6	209.9	223.3	234.5	222.6	219.5	199.2	177.7	165.8	155.4	148.1
57.5°	185.7	199.6	212.6	223.0	211.5	208.0	189.2	169.6	158.5	148.9	142.0
58°	176.9	190.0	201.9	211.5	200.7	197.6	180.0	161.6	151.6	142.4	136.2
58.5°	169.2	181.1	192.3	201.1	190.7	188.0	171.5	154.3	145.1	136.6	130.5
59°	161.6	173.1	183.1	191.1	181.5	178.8	163.5	147.4	138.9	130.9	125.1
59.5°	155.0	165.4	174.6	181.9	172.7	170.4	155.8	141.2	132.8	125.5	120.1
60°	148.1	158.1	166.6	173.5	164.6	162.3	148.9	135.5	127.0	120.5	115.5
60.5°	141.6	151.2	159.3	165.4	157.3	155.0	142.8	129.7	122.0	115.5	110.9
61°	136.2	145.1	152.4	157.7	150.4	148.1	136.6	124.3	116.7	110.9	106.7
61.5°	130.9	138.5	145.8	150.8	143.9	142.0	130.9	119.3	111.7	106.7	102.5
62°	125.5	133.5	139.7	144.3	137.8	135.5	125.5	114.4	107.1	102.1	98.6
62.5°	120.1	128.2	134.7	137.8	132.0	130.1	120.1	109.8	102.8	98.2	94.8
63°	114.7	123.2	129.3	132.8	126.3	124.3	115.5	105.5	98.6	94.4	91.0
63.5°	110.1	117.8	124.3	127.4	121.3	119.3	110.9	101.3	94.8	90.6	87.5
64°	105.5	112.8	119.0	122.4	116.3	114.7	106.3	97.1	90.6	86.7	84.0
64.5°	101.3	108.2	113.6	117.4	111.7	110.1	102.5	93.3	87.1	83.7	80.6
65°	97.1	103.6	109.4	112.4	107.5	105.9	98.2	89.4	83.7	79.8	77.5
65.5°	92.9	99.8	104.8	108.2	102.8	101.7	94.4	86.0	80.2	76.8	74.4
66°	89.4	95.6	100.9	104.0	99.0	97.9	90.6	82.5	76.8	73.7	71.4



TEST NUMBER: P776505

CATALOG NUMBER: HCDJBL3040CSD-HCD8TRMW-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	78.7	84.4	89.4	92.1	87.9	86.7	80.6	72.9	67.5	64.9	62.9
68°	75.2	81.0	86.0	88.6	84.4	83.3	77.5	69.8	64.9	62.2	60.3
68.5°	72.1	77.5	82.5	85.2	81.0	79.8	74.1	66.8	62.2	59.5	57.9
69°	69.1	74.4	79.1	81.7	77.9	76.8	71.4	64.1	59.5	56.8	55.3
69.5°	66.4	71.4	76.0	78.3	74.8	73.7	68.3	61.4	56.8	54.5	53.0
70°	63.3	68.3	72.9	75.2	71.8	70.6	65.6	58.7	54.5	51.8	50.7
70.5°	60.6	65.6	69.8	72.1	68.7	67.9	62.9	56.0	51.8	49.5	48.4
71°	57.9	62.6	67.2	69.5	66.0	65.2	60.3	53.7	49.5	47.2	46.1
71.5°	55.3	59.9	64.5	66.4	63.3	62.6	57.9	51.4	47.2	44.9	43.7
72°	53.0	57.6	61.8	63.7	60.6	59.9	55.3	49.1	44.9	42.6	41.8
72.5°	50.7	54.9	59.1	61.0	58.3	57.2	53.0	46.8	43.0	40.7	39.5
73°	48.4	52.6	56.4	58.7	55.6	54.9	50.7	44.5	40.7	38.8	37.6
73.5°	46.1	49.9	54.1	56.0	53.3	52.6	48.4	42.6	38.8	36.5	35.7
74°	43.7	47.6	51.8	53.7	51.0	50.3	46.1	40.3	36.8	34.5	33.8
74.5°	41.4	45.3	49.1	51.4	48.7	48.0	44.1	38.4	34.9	32.6	32.2
75°	39.5	43.4	47.2	49.1	46.4	45.7	41.8	36.5	33.0	31.1	30.3
75.5°	37.2	41.1	44.9	46.8	44.5	43.7	39.9	34.5	31.1	29.2	28.4
76°	35.3	38.8	42.6	44.9	42.2	41.8	38.0	32.6	29.2	27.2	26.9
76.5°	33.4	36.8	40.7	42.6	40.3	39.5	36.1	30.7	27.6	25.7	24.9
77°	31.5	34.9	38.4	40.7	38.4	37.6	34.2	29.2	25.7	23.8	23.4
77.5°	29.5	33.0	36.5	38.4	36.5	35.7	32.2	27.2	24.2	22.3	21.5
78°	28.0	31.1	34.5	36.5	34.5	33.8	30.3	25.3	22.3	20.7	20.0
78.5°	26.1	29.2	32.6	34.9	32.6	32.2	28.8	23.8	20.7	19.2	18.4
79°	24.6	27.6	31.1	33.0	30.7	30.3	26.9	22.3	19.2	17.7	17.3
79.5°	22.6	25.7	29.2	31.1	29.2	28.8	24.9	20.7	18.0	16.1	15.7
80°	21.1	24.2	27.2	29.2	27.2	26.9	23.4	19.2	16.5	14.6	14.2
80.5°	19.6	22.3	25.7	27.6	25.7	24.9	21.9	17.7	15.0	13.4	13.0
81°	18.0	20.7	23.8	25.7	24.2	23.8	20.3	16.1	13.8	11.9	11.5
81.5°	16.5	19.2	22.3	24.2	22.3	21.9	18.8	14.6	12.3	10.7	10.4
82°	15.4	17.7	20.7	22.6	20.7	20.3	17.7	13.4	11.1	9.6	9.2
82.5°	13.8	16.1	19.2	21.1	19.6	19.2	16.1	11.9	10.0	8.4	8.1
83°	12.7	15.0	17.7	19.6	18.0	17.7	14.6	10.7	8.8	7.3	6.9
83.5°	11.1	13.4	16.5	18.0	16.5	16.1	13.4	9.6	7.7	6.1	6.1
84°	10.0	12.3	15.0	16.9	15.4	15.0	12.3	8.4	6.5	5.0	5.0
84.5°	8.8	10.7	13.8	15.4	13.8	13.4	11.1	7.3	5.4	3.8	4.2
85°	7.7	9.6	12.3	14.2	12.7	12.3	9.6	6.1	4.6	3.1	3.1
85.5°	6.5	8.4	11.1	13.0	11.5	11.1	8.4	5.0	3.5	2.3	2.3
86°	5.4	7.3	9.6	11.5	10.4	10.0	7.7	4.2	2.7	1.9	1.5
86.5°	4.2	6.1	8.4	10.4	9.2	8.8	6.5	3.5	1.9	1.2	0.8
87°	3.5	5.0	7.7	9.2	8.1	7.7	5.4	2.7	1.5	0.8	0.0
87.5°	2.7	3.8	6.5	8.1	6.9	6.5	4.6	1.9	0.8	0.4	0.0
88°	1.9	3.1	5.4	6.9	5.8	5.8	3.8	1.5	0.4	0.0	0.0
88.5°	1.2	2.3	4.6	5.8	5.0	4.6	2.7	0.8	0.0	0.0	0.0



TEST NUMBER: P776505
CATALOG NUMBER: HCDJBL3040CSD-HCD8TRMW-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
90°	0.0	0.4	1.9	3.1	1.9	1.9	0.4	0.0	0.0	0.0	0.0



TEST NUMBER: P776505

CATALOG NUMBER: HCDJBL3040CSD-HCD8TRMW-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2527.1	2527.1	2527.1	2527.1	2527.1	2527.1
0.5°	2524.0	2525.9	2526.3	2527.8	2527.5	2525.9
1°	2522.5	2524.0	2524.4	2526.3	2526.3	2525.5
1.5°	2520.5	2521.7	2522.5	2524.4	2524.8	2524.8
2°	2518.6	2519.8	2520.2	2522.5	2523.6	2524.0
2.5°	2516.3	2517.5	2517.9	2520.5	2522.1	2523.2
3°	2514.4	2515.2	2515.6	2518.2	2520.2	2522.1
3.5°	2511.7	2512.5	2512.9	2516.3	2518.6	2520.5
4°	2509.4	2509.8	2510.6	2514.0	2517.1	2519.4
4.5°	2506.7	2507.1	2507.5	2511.7	2515.2	2518.2
5°	2503.7	2504.0	2504.4	2509.0	2513.3	2516.3
5.5°	2500.6	2501.0	2501.4	2506.7	2511.0	2514.8
6°	2497.1	2497.1	2497.9	2503.7	2508.6	2512.9
6.5°	2493.7	2494.1	2494.4	2500.6	2506.0	2511.0
7°	2489.8	2490.2	2491.0	2497.5	2503.7	2509.0
7.5°	2486.0	2486.4	2486.8	2494.4	2501.0	2506.7
8°	2482.2	2481.8	2482.9	2490.6	2497.9	2504.0
8.5°	2477.6	2477.6	2478.7	2487.2	2494.8	2501.4
9°	2473.3	2473.0	2474.1	2483.3	2491.8	2498.7
9.5°	2468.4	2468.7	2469.1	2478.7	2488.3	2495.6
10°	2463.4	2463.4	2464.5	2474.5	2484.5	2492.1
10.5°	2458.4	2458.0	2459.1	2469.9	2480.6	2488.7
11°	2452.6	2452.6	2453.8	2465.3	2476.4	2485.2
11.5°	2446.9	2446.9	2447.6	2460.3	2472.2	2481.0
12°	2440.7	2440.7	2441.9	2454.9	2467.6	2476.8
12.5°	2434.6	2434.2	2435.3	2449.2	2462.2	2472.6
13°	2428.1	2427.7	2428.4	2443.0	2457.2	2467.6
13.5°	2421.1	2420.8	2421.9	2436.9	2451.9	2463.0
14°	2413.9	2413.5	2414.6	2430.4	2446.1	2458.0
14.5°	2406.2	2406.2	2407.0	2423.5	2440.0	2452.6
15°	2398.5	2398.1	2399.3	2416.2	2433.4	2446.9
15.5°	2390.4	2389.7	2390.8	2408.1	2426.9	2440.7
16°	2381.6	2381.6	2382.0	2400.0	2419.6	2434.2
16.5°	2372.8	2372.8	2373.2	2391.6	2412.3	2427.7
17°	2363.2	2363.6	2364.0	2382.8	2404.3	2420.4
17.5°	2354.0	2354.0	2354.0	2373.9	2396.2	2413.5
18°	2343.6	2344.4	2344.0	2364.0	2387.4	2405.8
18.5°	2333.3	2333.7	2333.3	2354.0	2378.6	2397.7
19°	2322.5	2322.9	2322.5	2343.2	2369.0	2388.9
19.5°	2311.0	2312.5	2311.4	2332.9	2359.0	2380.1
20°	2299.5	2301.0	2299.1	2321.0	2348.6	2371.3
20.5°	2287.6	2288.8	2287.2	2309.9	2338.3	2361.7
21°	2274.9	2276.5	2274.6	2297.6	2327.5	2351.7



TEST NUMBER: P776505

CATALOG NUMBER: HCDJBL3040CSD-HCD8TRMW-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	2235.0	2236.6	2234.3	2258.4	2291.8	2319.5
23°	2220.4	2222.7	2219.7	2245.0	2278.8	2307.9
23.5°	2205.5	2208.2	2205.5	2230.4	2265.7	2295.7
24°	2190.1	2193.2	2190.1	2215.8	2251.9	2283.4
24.5°	2174.8	2177.8	2174.4	2201.3	2238.1	2270.3
25°	2158.3	2161.7	2158.3	2185.1	2223.5	2257.3
25.5°	2141.8	2145.6	2141.8	2169.4	2208.9	2243.5
26°	2124.1	2128.7	2125.3	2152.9	2193.6	2228.9
26.5°	2107.2	2111.8	2107.6	2136.4	2178.2	2214.3
27°	2088.8	2093.8	2089.6	2119.1	2161.7	2199.3
27.5°	2070.4	2075.4	2071.5	2101.5	2145.2	2184.0
28°	2051.2	2056.6	2052.4	2083.1	2128.3	2168.3
28.5°	2030.9	2037.8	2033.6	2064.6	2111.1	2151.4
29°	2008.6	2017.4	2013.6	2045.8	2093.0	2134.5
29.5°	1985.6	1996.7	1992.9	2026.6	2074.2	2116.8
30°	1962.2	1974.8	1970.6	2007.1	2055.8	2099.2
30.5°	1937.2	1951.0	1947.2	1986.3	2036.6	2080.0
31°	1911.1	1926.5	1921.9	1964.1	2017.0	2061.2
31.5°	1883.5	1899.6	1896.5	1941.1	1996.7	2042.0
32°	1853.6	1871.2	1869.7	1916.1	1974.5	2022.0
32.5°	1822.1	1840.9	1841.7	1890.4	1951.8	2000.9
33°	1787.9	1807.9	1811.7	1862.8	1927.6	1979.1
33.5°	1748.0	1773.0	1778.3	1834.0	1902.3	1955.3
34°	1702.7	1732.3	1741.1	1802.5	1875.8	1931.5
34.5°	1652.1	1685.5	1695.5	1767.6	1847.0	1905.4
35°	1599.5	1632.5	1643.3	1727.3	1816.7	1877.7
35.5°	1545.0	1577.6	1587.2	1681.6	1783.0	1846.7
36°	1489.0	1525.1	1527.8	1632.1	1743.4	1814.8
36.5°	1435.3	1474.4	1467.5	1578.4	1698.9	1778.3
37°	1381.5	1421.5	1408.4	1523.1	1649.0	1736.1
37.5°	1327.0	1363.1	1351.6	1463.3	1594.1	1686.2
38°	1271.0	1302.5	1296.3	1401.5	1537.3	1632.5
38.5°	1210.4	1241.1	1237.6	1340.5	1479.0	1576.5
39°	1150.5	1182.4	1179.7	1279.1	1420.3	1520.5
39.5°	1089.1	1126.7	1121.0	1218.4	1358.9	1465.2
40°	1030.0	1072.2	1063.8	1155.1	1299.0	1409.9
40.5°	969.8	1018.5	1006.6	1093.3	1238.8	1352.0
41°	911.4	962.5	952.5	1032.7	1180.1	1294.4
41.5°	854.6	906.1	898.8	977.4	1123.3	1236.5
42°	797.8	850.0	844.7	921.0	1065.7	1178.5
42.5°	741.4	796.7	792.9	867.7	1005.5	1121.0
43°	687.3	746.0	743.0	816.3	949.0	1065.3
43.5°	637.8	695.0	693.8	767.1	894.2	1010.1

TEST NUMBER: P776505

CATALOG NUMBER: HCDJBL3040CSD-HCD8TRMW-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	509.3	550.3	563.4	633.6	739.1	844.7
45.5°	473.2	506.9	525.0	594.1	692.3	791.7
46°	440.2	468.2	489.3	556.8	647.4	739.5
46.5°	411.4	435.2	456.3	521.9	606.3	689.2
47°	386.1	406.8	426.0	488.9	566.0	640.1
47.5°	362.7	381.8	398.7	457.4	529.2	591.0
48°	344.6	360.4	374.2	428.3	494.3	547.6
48.5°	327.0	341.2	352.3	401.8	462.8	506.2
49°	308.9	323.5	331.6	376.9	432.9	468.6
49.5°	290.9	305.9	312.8	353.8	404.9	434.4
50°	273.2	289.4	295.1	331.6	379.5	406.8
50.5°	261.3	274.8	279.4	311.6	356.1	381.8
51°	249.8	262.5	265.9	293.2	334.6	359.2
51.5°	238.7	251.4	254.4	276.7	314.3	338.5
52°	227.6	240.2	243.3	263.6	295.9	320.4
52.5°	216.8	229.1	232.2	252.5	279.8	303.2
53°	206.5	218.0	221.0	241.0	266.3	286.7
53.5°	196.5	208.0	210.3	229.5	254.8	271.7
54°	187.7	198.0	200.3	218.4	242.9	260.2
54.5°	179.2	188.8	191.5	208.0	231.4	248.7
55°	171.2	180.4	182.7	198.0	220.3	236.8
55.5°	163.9	172.3	174.6	189.2	209.9	225.7
56°	156.6	164.6	166.6	180.4	199.9	214.9
56.5°	150.1	157.7	159.6	172.3	190.7	204.5
57°	143.9	150.8	152.7	165.0	181.9	194.6
57.5°	138.2	144.7	146.2	157.7	173.8	185.7
58°	132.0	138.5	140.5	151.2	166.2	176.9
58.5°	127.0	133.2	135.5	144.7	158.9	169.2
59°	121.7	128.2	130.1	138.5	152.0	161.6
59.5°	117.0	123.2	125.1	133.5	145.8	155.0
60°	112.4	118.2	120.1	128.6	139.7	148.1
60.5°	107.8	113.6	114.7	123.6	134.7	141.6
61°	103.6	109.0	110.1	118.6	129.7	136.2
61.5°	99.8	104.8	105.9	113.6	124.3	130.9
62°	95.9	100.9	102.1	109.4	119.3	125.5
62.5°	92.1	96.7	97.9	105.2	114.4	120.1
63°	88.3	92.9	94.0	100.9	109.8	114.7
63.5°	84.8	89.4	90.6	96.7	105.5	110.1
64°	81.7	86.0	86.7	93.3	100.9	105.5
64.5°	78.3	82.5	83.7	89.4	97.1	101.3
65°	75.2	79.4	80.2	86.0	93.3	97.1
65.5°	72.1	76.0	77.1	82.5	89.4	92.9
66°	69.5	72.9	73.7	79.4	86.0	89.4



TEST NUMBER: P776505

CATALOG NUMBER: HCDJBL3040CSD-HCD8TRMW-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	61.0	64.5	65.2	70.2	75.6	78.7
68°	58.7	61.8	62.6	67.2	72.5	75.2
68.5°	56.0	59.1	59.9	64.5	69.5	72.1
69°	53.7	56.8	57.6	61.8	66.4	69.1
69.5°	51.4	54.1	54.9	59.1	63.7	66.4
70°	49.1	51.8	52.6	56.8	61.0	63.3
70.5°	46.8	49.5	50.3	54.1	58.3	60.6
71°	44.5	47.2	48.0	51.8	55.6	57.9
71.5°	42.6	45.3	45.7	49.5	53.3	55.3
72°	40.7	43.0	43.4	47.2	50.7	53.0
72.5°	38.4	41.1	41.4	44.9	48.4	50.7
73°	36.5	38.8	39.5	43.0	46.1	48.4
73.5°	34.9	36.8	37.2	40.7	43.7	46.1
74°	32.6	34.9	35.3	38.8	41.8	43.7
74.5°	31.1	33.0	33.4	36.5	39.5	41.4
75°	29.2	31.1	31.9	34.5	37.6	39.5
75.5°	27.6	29.5	29.9	32.6	35.3	37.2
76°	25.7	27.6	28.0	31.1	33.8	35.3
76.5°	24.2	26.1	26.5	29.2	31.9	33.4
77°	22.6	24.2	24.6	27.2	29.9	31.5
77.5°	20.7	22.6	23.0	25.7	28.0	29.5
78°	19.6	21.1	21.5	23.8	26.1	28.0
78.5°	18.0	19.6	20.0	22.3	24.6	26.1
79°	16.5	18.0	18.4	20.7	22.6	24.6
79.5°	15.4	16.9	16.9	19.2	21.1	22.6
80°	13.8	15.4	15.7	17.7	19.6	21.1
80.5°	12.7	14.2	14.2	16.1	18.0	19.6
81°	11.1	12.7	13.0	15.0	16.5	18.0
81.5°	10.0	11.5	11.9	13.4	15.0	16.5
82°	8.8	10.4	10.7	12.3	13.8	15.4
82.5°	7.7	9.2	9.6	11.1	12.3	13.8
83°	6.5	8.1	8.1	9.6	11.1	12.7
83.5°	5.8	6.9	6.9	8.4	9.6	11.1
84°	4.6	5.8	6.1	7.3	8.4	10.0
84.5°	3.5	4.6	5.0	6.5	7.3	8.8
85°	2.7	3.8	3.8	5.4	6.1	7.7
85.5°	1.5	2.7	3.1	4.2	5.0	6.5
86°	0.8	1.9	1.9	3.5	4.2	5.4
86.5°	0.0	0.8	0.8	2.3	3.5	4.2
87°	0.0	0.0	0.0	1.5	2.7	3.5
87.5°	0.0	0.0	0.0	0.8	1.9	2.7
88°	0.0	0.0	0.0	0.0	1.2	1.9
88.5°	0.0	0.0	0.0	0.0	0.8	1.2



TEST NUMBER: P776505
CATALOG NUMBER: HCDJBL3040CSD-HCD8TRMW-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°	2341.3	2372.0	2403.1	2428.8	2431.5	2436.5	2419.2	2386.2	2354.8	2321.0	2288.8
22°	2330.2	2362.4	2393.9	2420.4	2422.7	2428.1	2409.6	2375.1	2343.6	2308.3	2276.1



44°	954.8	1072.6	1179.7	1258.0	1229.2	1235.3	1131.7	976.3	865.4	746.8	648.6
44.5°	898.8	1014.7	1118.3	1196.6	1167.8	1177.4	1068.4	917.6	810.5	696.1	603.7



66.5°	85.6	91.7	97.1	99.8	95.2	93.6	87.1	79.1	73.7	70.6	68.7
67°	82.1	87.9	92.9	95.9	91.3	90.2	83.7	76.0	70.6	67.5	65.6



89°	0.4	1.9	3.5	5.0	3.8	3.8	1.9	0.4	0.0	0.0	0.0
89.5°	0.0	1.2	2.7	3.8	3.1	2.7	1.2	0.0	0.0	0.0	0.0

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21.5°	2262.3	2263.4	2261.5	2284.5	2316.0	2341.3
22°	2248.5	2250.4	2248.1	2272.3	2303.7	2330.2



44°	592.5	645.5	647.8	719.6	839.7	954.8
44.5°	549.2	596.4	603.3	676.2	788.2	898.8

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66.5°	66.4	70.2	71.0	76.0	82.1	85.6
67°	63.7	67.2	67.9	73.3	79.1	82.1

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89°	0.0	0.0	0.0	0.0	0.0	0.4
89.5°	0.0	0.0	0.0	0.0	0.0	0.0

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Scaled Data Report



(END OF REPORT)