

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: P776433

Luminaire Tested: HCDJBL3040CSD-HCD6TSQMW-4000lm-4000K

Issue Date: 2/7/2024

Test Information

Test Method: LM-79-2019
Report Number: P776433
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: HCDJBS3040CSD-HCD6TSQMW-4000lm-4000K
Description: 6 INCH SQUARE MEDIUM MATTE WHITE TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 4000K CCT
Ballast/Driver: -

Summary

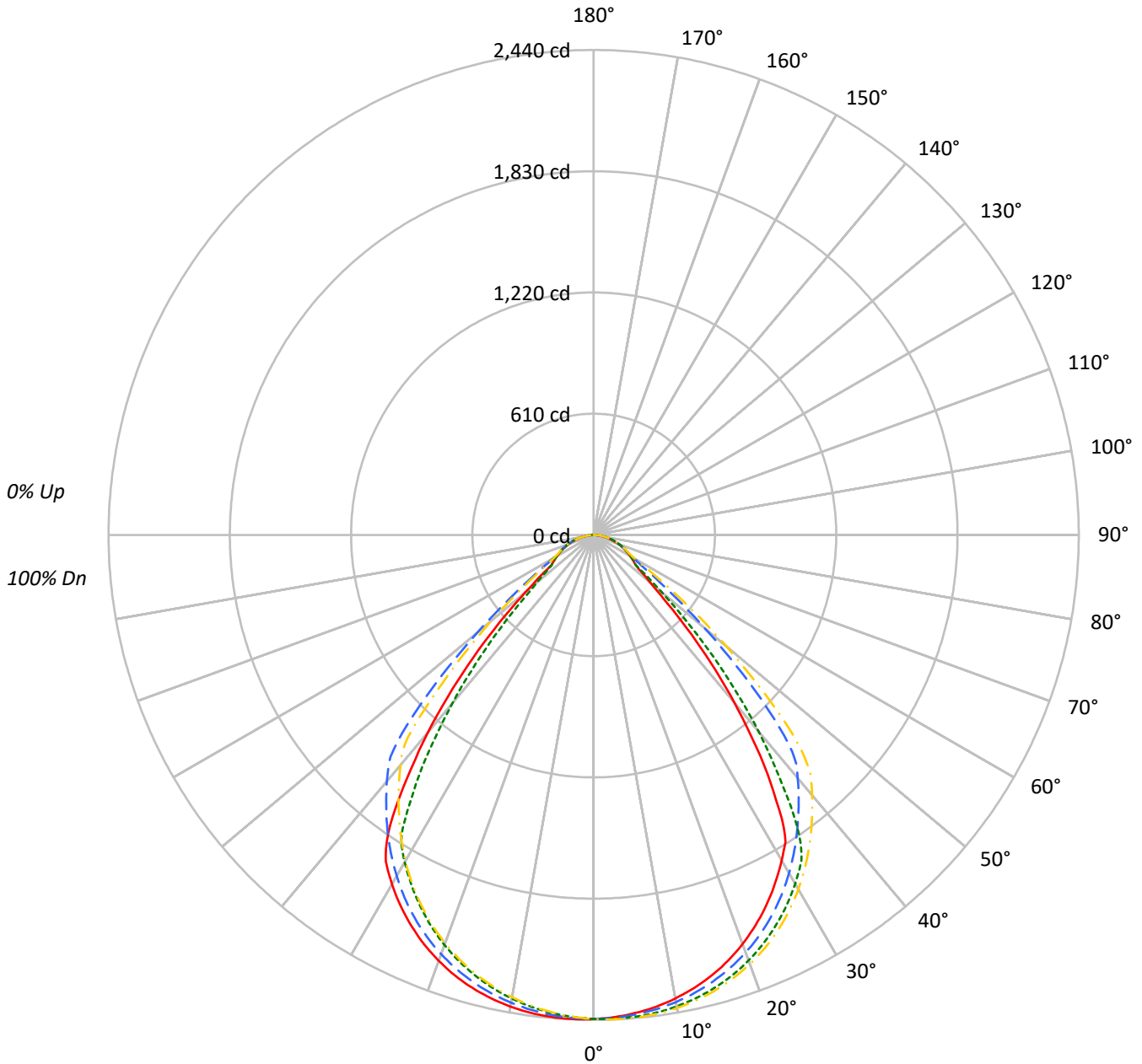
Lumens per Lamp: N/A
Luminaire Lumens: 4272.7 lumens
Efficiency: N/A
Efficacy: 111.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.2 / 1.27
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
CIE Type: Direct

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



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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	102	100	100	100	100	100		
	1	111	108	105	102	109	106	103	100	101	99	97	98	96	94	94	93	91	91	89	89	89	89	89		
	2	104	97	92	88	101	96	91	87	92	88	85	89	86	83	86	83	81	81	79	79	79	79	79		
	3	97	88	82	77	94	87	81	76	84	79	75	81	77	73	79	75	72	72	70	70	70	70	70		
	4	90	80	73	68	88	79	72	67	77	71	66	75	70	66	73	68	65	65	63	63	63	63	63		
	5	84	73	66	60	82	72	65	60	70	64	59	68	63	59	67	62	58	58	57	57	57	57	57		
	6	78	67	60	54	77	66	59	54	65	58	54	63	58	53	62	57	53	53	51	51	51	51	51		
	7	73	62	54	49	72	61	54	49	60	53	49	58	53	48	57	52	48	48	46	46	46	46	46		
	8	69	57	50	45	67	57	49	45	55	49	44	54	48	44	53	48	44	44	42	42	42	42	42		
	9	65	53	46	41	63	52	46	41	51	45	41	50	45	40	49	44	40	40	39	39	39	39	39		
	10	61	49	42	38	60	49	42	38	48	42	37	47	41	37	46	41	37	37	36	36	36	36	36		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	104849	104849	104849	104849
5°	104346	105163	105232	104364
10°	103524	105286	105356	103559
15°	102263	105102	105156	102370
20°	100357	104398	104453	100577
25°	97621	103018	103094	97963
30°	94029	100800	100880	94511
35°	82910	93501	93796	83210
40°	61781	72465	72898	61983
45°	40212	49656	49972	40431
50°	24777	29580	29901	24938
55°	19112	19172	19172	19112
60°	18350	18281	18281	18350
65°	17482	17656	17482	17737
70°	16592	17095	16693	17196
75°	15355	16552	15754	16486
80°	13191	15893	14282	15274
85°	7361	14326	10769	12350

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 135°
 Vertical Angle: 45°
 Luminance: 85818 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	230.3	5.4
10°-20°	656.2	15.4
20°-30°	974.4	22.8
30°-40°	1077.3	25.2
40°-50°	730.1	17.1
50°-60°	297.6	7.0
60°-70°	175.6	4.1
70°-80°	103.9	2.4
80°-90°	27.3	0.6
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°	1860.9	43.6
0°-40°	2938.2	68.8
0°-60°	3965.9	92.8
0°-90°	4272.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4272.7	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2435	2435	2435	2435	2435	
5°	2414	2433	2435	2415	2414	229
15°	2294	2358	2359	2297	2294	646
25°	2055	2168	2170	2062	2055	945
35°	1577	1779	1784	1583	1577	966
45°	660	816	821	664	660	522
55°	255	255	255	255	255	239
65°	172	173	172	174	172	170
75°	92	100	95	99	92	97
85°	15	29	22	25	15	21
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°	2435.2	2435.2	2435.2	2435.2	2435.2	2435.2	2435.2	2435.2	2435.2	2435.2	2435.2
0.5°	2435.2	2434.4	2434.4	2435.2	2435.6	2436.0	2436.8	2437.2	2437.2	2435.6	2434.4
1°	2433.6	2433.6	2433.6	2435.2	2436.4	2436.8	2438.0	2438.0	2437.6	2435.6	2434.4
1.5°	2432.0	2432.4	2433.2	2434.8	2436.8	2437.6	2438.9	2438.9	2438.0	2436.0	2433.6
2°	2430.4	2431.2	2432.4	2434.4	2436.8	2437.6	2439.3	2439.3	2438.4	2435.6	2433.2
2.5°	2428.4	2429.2	2431.2	2434.0	2436.8	2438.0	2439.7	2439.7	2438.4	2435.2	2432.0
3°	2426.0	2427.2	2429.6	2433.2	2436.4	2438.0	2439.7	2439.7	2438.0	2434.8	2430.8
3.5°	2423.5	2425.2	2428.0	2432.0	2436.0	2437.6	2439.7	2439.3	2437.6	2434.0	2429.6
4°	2420.7	2422.7	2426.4	2430.8	2435.2	2437.2	2439.3	2438.9	2436.8	2432.8	2428.0
4.5°	2417.5	2420.3	2424.3	2429.2	2434.4	2436.8	2438.4	2438.4	2436.0	2431.6	2426.4
5°	2414.3	2417.5	2421.9	2427.2	2433.2	2436.0	2437.6	2437.6	2434.8	2430.0	2424.3
5.5°	2411.1	2414.7	2419.5	2425.6	2431.6	2434.8	2436.8	2436.4	2433.6	2428.4	2421.9
6°	2407.0	2411.1	2416.7	2423.1	2430.0	2433.6	2435.6	2435.2	2432.0	2426.4	2419.5
6.5°	2403.4	2407.8	2413.5	2420.7	2428.4	2432.0	2434.0	2433.6	2430.0	2423.9	2416.7
7°	2399.0	2403.8	2410.2	2417.9	2426.4	2430.4	2432.4	2431.6	2428.0	2421.1	2413.5
7.5°	2394.5	2400.2	2407.0	2415.1	2423.5	2428.4	2430.4	2429.6	2425.6	2418.3	2410.2
8°	2389.7	2395.7	2403.4	2411.9	2421.1	2426.0	2428.4	2427.2	2422.7	2415.5	2407.0
8.5°	2384.5	2391.3	2399.4	2408.6	2418.3	2423.1	2426.0	2424.7	2419.9	2412.3	2403.0
9°	2379.2	2386.1	2394.9	2404.6	2415.1	2420.7	2423.1	2421.5	2416.7	2408.6	2399.0
9.5°	2374.0	2381.2	2390.5	2401.0	2411.9	2417.5	2420.3	2418.7	2413.5	2405.0	2394.5
10°	2367.9	2376.0	2386.1	2396.5	2408.2	2414.3	2417.1	2415.1	2409.8	2401.4	2390.1
10.5°	2361.9	2370.4	2380.8	2392.1	2404.6	2410.6	2413.5	2411.9	2405.8	2396.9	2385.3
11°	2355.4	2364.3	2376.0	2387.7	2400.2	2407.0	2409.8	2407.8	2401.8	2392.1	2380.4
11.5°	2348.6	2358.3	2370.4	2382.8	2395.7	2402.6	2405.8	2403.8	2397.4	2387.3	2375.2
12°	2341.7	2351.8	2364.7	2377.6	2391.3	2398.6	2401.8	2399.4	2392.9	2382.4	2369.6
12.5°	2334.5	2345.4	2358.7	2372.4	2386.5	2393.7	2396.9	2394.9	2387.7	2377.2	2363.9
13°	2327.2	2338.5	2352.2	2366.3	2381.2	2388.9	2392.1	2389.7	2382.8	2371.6	2357.9
13.5°	2319.6	2331.3	2345.8	2360.3	2375.6	2384.1	2387.3	2384.5	2377.2	2365.9	2351.4
14°	2311.5	2323.6	2339.3	2354.2	2370.0	2378.4	2382.0	2379.2	2371.6	2359.5	2345.0
14.5°	2303.1	2316.0	2332.1	2347.8	2363.9	2372.8	2376.4	2373.6	2365.5	2353.4	2337.7
15°	2294.2	2307.9	2324.8	2340.9	2357.9	2367.1	2370.8	2367.5	2359.1	2346.6	2330.9
15.5°	2285.3	2299.4	2316.8	2333.7	2351.4	2360.7	2364.7	2361.1	2352.6	2339.7	2323.6
16°	2276.1	2290.6	2309.1	2326.4	2344.6	2353.8	2358.3	2354.6	2345.4	2332.5	2315.6
16.5°	2266.4	2281.7	2301.1	2319.2	2337.3	2347.4	2351.8	2348.2	2338.5	2325.2	2307.9
17°	2256.3	2272.4	2293.0	2311.1	2329.7	2340.1	2345.0	2340.9	2330.9	2317.2	2299.4
17.5°	2246.3	2262.8	2284.1	2302.7	2322.4	2332.9	2337.7	2333.3	2323.2	2309.1	2291.0
18°	2235.4	2252.7	2274.9	2294.2	2313.9	2325.2	2330.5	2325.6	2315.2	2300.7	2282.1
18.5°	2224.9	2242.6	2265.2	2285.3	2305.9	2317.6	2322.4	2317.6	2306.7	2292.2	2273.3
19°	2213.6	2232.2	2255.9	2276.5	2297.0	2309.1	2314.4	2309.1	2297.8	2282.9	2263.2
19.5°	2201.9	2221.3	2245.9	2266.8	2287.8	2300.7	2306.3	2300.7	2289.0	2274.1	2253.9
20°	2190.3	2210.4	2235.8	2257.1	2278.5	2291.4	2297.4	2291.8	2279.7	2264.4	2244.2
20.5°	2178.2	2198.3	2225.3	2246.7	2269.2	2282.1	2288.6	2282.5	2270.0	2254.7	2233.8
21°	2165.7	2186.6	2214.4	2236.2	2258.7	2272.4	2279.3	2272.9	2260.4	2244.2	2223.3



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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°	2126.2	2149.2	2179.8	2203.5	2227.3	2242.2	2249.5	2242.6	2228.9	2212.8	2189.8
23°	2112.5	2136.3	2167.7	2191.9	2216.0	2231.3	2239.0	2232.2	2217.7	2200.7	2177.8
23.5°	2098.8	2123.0	2155.2	2179.8	2204.8	2220.5	2228.5	2221.3	2206.4	2189.0	2165.7
24°	2084.7	2109.7	2142.7	2167.7	2192.7	2209.2	2217.2	2210.0	2194.3	2177.4	2153.2
24.5°	2069.8	2095.6	2129.4	2155.2	2180.6	2197.5	2205.6	2198.3	2182.2	2165.3	2140.7
25°	2054.9	2081.5	2116.1	2142.3	2168.5	2185.4	2193.9	2186.2	2170.1	2152.8	2127.4
25.5°	2039.6	2066.6	2102.4	2129.0	2155.6	2173.3	2182.2	2174.1	2157.2	2139.9	2114.5
26°	2024.3	2052.1	2088.3	2115.7	2142.3	2160.4	2169.7	2161.2	2144.3	2126.6	2101.2
26.5°	2008.5	2037.1	2073.8	2102.0	2129.0	2147.5	2156.8	2148.3	2130.6	2113.3	2087.1
27°	1992.4	2021.8	2059.3	2088.3	2115.3	2134.2	2143.5	2135.1	2117.3	2099.6	2072.6
27.5°	1975.9	2005.3	2044.4	2074.2	2101.6	2121.0	2130.6	2121.8	2103.6	2085.9	2058.9
28°	1959.4	1989.6	2029.1	2059.7	2086.7	2106.8	2116.5	2107.7	2089.1	2071.0	2043.6
28.5°	1942.9	1973.5	2013.4	2044.4	2072.6	2092.7	2102.4	2094.0	2074.2	2056.9	2028.7
29°	1925.9	1957.4	1998.5	2029.5	2057.7	2078.2	2087.9	2079.0	2059.7	2041.6	2013.0
29.5°	1908.6	1940.4	1981.9	2014.2	2042.8	2063.7	2073.8	2064.5	2044.8	2027.5	1997.3
30°	1891.3	1924.3	1965.4	1998.5	2027.5	2048.4	2058.5	2049.6	2029.1	2011.0	1981.5
30.5°	1873.6	1907.0	1948.9	1982.8	2011.4	2033.5	2043.2	2034.7	2013.0	1995.6	1965.4
31°	1855.8	1889.7	1932.0	1966.6	1994.8	2018.2	2027.9	2018.6	1996.9	1979.1	1948.9
31.5°	1838.1	1871.9	1914.7	1950.1	1978.7	2002.5	2012.2	2002.9	1980.7	1963.0	1932.0
32°	1820.8	1854.2	1897.3	1933.6	1961.0	1986.0	1995.6	1987.2	1963.4	1946.9	1915.1
32.5°	1789.8	1836.1	1879.6	1916.7	1944.1	1969.9	1979.9	1970.7	1946.1	1930.0	1898.1
33°	1757.5	1818.0	1862.3	1899.3	1919.5	1952.9	1963.0	1953.7	1919.5	1912.6	1880.4
33.5°	1714.8	1800.2	1843.7	1881.6	1890.9	1936.0	1946.1	1936.8	1892.1	1896.1	1862.7
34°	1668.9	1782.9	1825.6	1863.1	1858.2	1917.9	1928.4	1919.5	1860.3	1877.6	1844.6
34.5°	1622.1	1753.1	1807.1	1845.4	1821.2	1900.2	1911.4	1900.2	1824.0	1858.2	1826.8
35°	1577.4	1720.9	1788.5	1819.2	1778.9	1880.0	1894.1	1879.2	1784.5	1833.7	1808.3
35.5°	1533.1	1681.0	1769.6	1791.0	1734.2	1849.4	1876.4	1849.4	1739.8	1805.9	1789.8
36°	1488.4	1636.2	1751.1	1759.9	1684.2	1822.0	1858.2	1822.8	1690.6	1776.5	1771.2
36.5°	1442.0	1592.3	1731.7	1723.7	1634.2	1786.5	1840.5	1788.9	1641.5	1741.4	1752.7
37°	1392.5	1548.4	1712.8	1684.2	1580.6	1747.0	1822.4	1751.5	1590.3	1702.7	1732.9
37.5°	1342.5	1504.5	1693.5	1641.5	1530.3	1704.3	1803.5	1711.2	1538.7	1662.0	1714.0
38°	1292.2	1460.2	1674.1	1594.7	1480.3	1658.8	1784.9	1666.9	1489.6	1616.5	1695.1
38.5°	1242.6	1415.8	1655.2	1546.4	1433.2	1610.9	1766.0	1620.1	1441.2	1569.4	1676.1
39°	1193.8	1369.9	1635.4	1498.8	1385.2	1561.3	1747.9	1571.4	1393.3	1521.0	1656.4
39.5°	1146.3	1322.4	1616.5	1450.9	1338.1	1510.1	1728.5	1522.6	1345.7	1472.7	1637.0
40°	1099.2	1272.4	1596.4	1402.6	1289.3	1461.4	1710.0	1473.9	1297.0	1424.7	1617.7
40.5°	1054.0	1223.7	1576.6	1357.0	1240.2	1414.2	1690.2	1426.7	1247.8	1378.0	1598.4
41°	1007.7	1176.5	1556.9	1311.9	1189.4	1368.3	1670.9	1379.6	1196.7	1332.4	1578.2
41.5°	962.2	1129.4	1538.3	1266.8	1139.4	1322.0	1650.3	1333.7	1146.7	1287.7	1557.7
42°	915.8	1083.4	1509.3	1222.4	1090.3	1275.6	1629.8	1287.7	1097.1	1242.6	1536.7
42.5°	870.7	1040.3	1478.7	1176.9	1042.7	1228.9	1610.1	1241.4	1048.8	1196.3	1512.5
43°	825.2	995.2	1436.8	1129.4	996.4	1180.9	1574.2	1193.4	1002.1	1149.5	1471.0
43.5°	782.9	950.9	1390.9	1083.8	950.1	1133.0	1538.7	1144.7	956.1	1102.0	1435.2



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	660.4	817.9	1237.8	948.1	815.5	992.0	1409.4	1003.3	820.7	965.0	1281.7
45.5°	621.7	775.2	1186.2	905.8	770.4	947.3	1358.2	956.9	777.2	921.1	1227.7
46°	584.6	733.3	1131.8	863.4	727.3	902.9	1303.0	912.6	733.7	878.4	1172.9
46.5°	549.6	693.8	1077.4	821.1	685.8	858.2	1246.6	868.7	691.8	836.5	1118.1
47°	515.3	653.5	1023.0	779.6	645.5	814.7	1189.0	824.8	651.9	794.6	1063.7
47.5°	483.9	616.1	968.6	738.5	606.8	772.0	1130.6	781.7	613.2	753.5	1010.1
48°	455.3	579.4	915.8	698.3	570.5	730.1	1075.0	740.2	576.6	714.0	956.9
48.5°	430.3	543.9	866.3	659.6	535.5	689.0	1019.8	697.9	541.1	674.1	905.4
49°	408.2	509.7	818.7	622.1	502.4	647.9	968.2	657.6	507.7	636.6	855.4
49.5°	388.4	478.7	772.0	586.2	471.0	609.6	917.8	618.9	476.2	599.1	807.0
50°	369.9	448.8	726.5	550.0	441.6	572.1	868.7	581.4	446.4	563.7	760.7
50.5°	354.6	422.3	684.2	516.1	414.2	536.7	820.7	544.7	418.2	529.0	716.4
51°	339.7	398.1	643.1	484.3	388.8	503.2	774.0	510.9	392.8	497.2	672.5
51.5°	325.6	377.9	603.6	454.5	369.1	471.0	727.7	478.7	372.3	466.2	632.2
52°	311.1	359.4	565.3	425.9	348.9	441.2	684.2	447.6	351.3	437.6	593.1
52.5°	297.4	343.3	529.8	398.9	329.2	412.6	639.8	418.6	330.8	409.4	555.6
53°	283.7	328.0	496.0	373.9	309.0	387.2	597.9	391.2	309.8	383.2	520.6
53.5°	272.8	313.9	464.2	350.5	289.3	366.7	558.0	369.9	289.3	361.8	486.7
54°	264.3	300.2	434.7	329.6	273.6	345.7	522.6	348.5	273.6	340.5	455.7
54.5°	259.1	286.9	406.9	310.2	261.9	324.8	486.3	327.2	261.5	319.1	426.7
55°	254.6	272.8	381.6	292.1	255.4	303.8	453.7	305.8	255.4	297.8	400.1
55.5°	250.2	261.5	357.8	275.2	250.6	283.3	422.3	284.5	250.2	280.0	375.1
56°	245.8	252.2	336.8	259.9	246.2	266.7	394.1	267.5	245.8	264.3	355.4
56.5°	241.7	247.0	317.1	248.6	241.7	253.0	371.5	253.4	241.3	252.2	335.6
57°	237.7	242.6	299.4	242.6	237.3	244.6	348.5	244.2	237.3	245.4	315.9
57.5°	233.3	238.1	283.3	238.1	233.3	239.3	326.0	238.9	232.9	240.5	296.1
58°	229.3	234.1	270.0	233.7	228.9	234.9	303.0	234.5	228.9	236.1	280.4
58.5°	225.2	229.7	257.9	229.3	224.8	230.9	280.4	230.5	224.4	232.1	267.1
59°	221.2	225.6	247.0	225.2	220.8	226.4	264.7	226.4	220.4	227.6	255.4
59.5°	217.2	221.6	237.7	220.8	216.8	222.4	251.4	222.0	216.4	223.6	245.0
60°	213.1	217.6	229.7	216.8	212.3	218.4	240.1	218.0	212.3	219.6	235.7
60.5°	208.7	213.5	222.0	212.7	208.3	213.9	230.9	213.9	208.3	215.2	227.6
61°	204.7	209.5	215.2	208.3	204.7	209.9	222.0	209.9	203.9	211.1	220.4
61.5°	200.7	205.5	209.1	204.7	200.7	205.9	214.8	205.9	199.8	207.1	213.5
62°	196.6	201.5	203.5	200.7	196.6	202.3	207.9	201.9	195.8	203.1	207.5
62.5°	192.2	197.4	198.2	196.2	192.6	198.2	201.9	197.8	191.8	199.0	202.3
63°	188.2	193.4	193.8	192.2	188.6	194.2	196.6	193.4	187.4	194.6	197.0
63.5°	184.1	189.0	189.4	188.2	184.9	190.2	191.4	189.4	183.7	190.6	192.6
64°	180.1	184.9	184.9	184.1	180.9	186.1	187.4	185.3	179.7	186.6	188.6
64.5°	175.7	180.9	180.9	180.1	177.3	182.1	182.9	181.3	175.7	182.5	184.1
65°	171.6	176.9	176.9	176.5	173.3	178.5	178.9	177.3	171.6	178.5	180.1
65.5°	167.6	172.4	172.4	172.4	169.6	174.5	174.9	173.3	167.6	174.5	176.1
66°	163.6	168.4	168.4	168.4	165.6	170.4	170.4	169.2	163.6	170.4	171.6



TEST NUMBER: P776433

CATALOG NUMBER: HCDJBL3040CSD-HCD6TSQMW-4000lm-4000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	151.5	156.3	156.3	156.7	154.3	158.7	158.3	157.1	151.9	158.3	159.6
68°	147.5	152.3	152.3	152.7	150.7	155.1	154.3	153.1	147.9	153.9	155.5
68.5°	143.4	148.3	148.3	148.7	147.1	151.1	150.7	149.5	143.8	150.3	151.5
69°	139.4	144.2	144.2	146.7	143.4	147.5	146.7	145.5	140.2	146.3	147.5
69.5°	135.8	140.2	140.2	142.6	139.8	143.4	142.2	141.4	136.2	142.2	143.4
70°	131.8	136.2	136.2	138.6	135.8	139.8	138.6	137.4	132.6	138.2	139.4
70.5°	127.7	132.2	132.2	134.2	132.2	136.2	134.6	133.8	128.5	134.2	135.4
71°	124.1	128.5	128.1	130.1	128.5	132.2	130.5	129.7	124.9	130.1	131.4
71.5°	120.1	124.1	124.5	126.5	124.9	128.5	126.5	125.7	120.9	126.1	127.3
72°	116.0	120.5	120.5	122.5	121.3	124.5	122.5	122.1	117.2	122.5	123.3
72.5°	112.0	116.0	116.4	118.9	117.7	120.9	118.9	118.1	113.2	118.5	119.3
73°	108.0	112.4	112.4	114.8	114.0	117.2	114.8	114.0	109.6	114.4	115.2
73.5°	104.0	108.4	108.4	111.2	110.4	113.6	110.8	110.4	106.0	110.4	111.2
74°	99.9	104.4	104.4	107.2	106.8	109.6	107.2	106.4	101.9	106.8	107.2
74.5°	96.3	100.3	100.3	103.5	103.1	106.0	103.1	102.7	98.3	102.7	103.5
75°	92.3	96.3	96.7	99.9	99.5	102.3	99.5	98.7	94.7	98.7	99.5
75.5°	88.2	92.3	92.7	96.3	95.9	98.7	95.5	95.1	90.7	95.1	95.5
76°	84.6	88.2	88.6	92.3	92.3	95.1	91.5	91.1	87.0	91.1	91.5
76.5°	80.6	84.2	84.6	88.6	88.6	91.5	87.8	87.0	83.4	87.0	87.8
77°	76.6	80.2	80.6	85.0	85.4	87.8	84.2	83.4	79.8	83.4	83.8
77.5°	72.5	76.2	77.0	81.0	81.8	84.2	80.2	79.4	76.2	79.4	79.8
78°	68.9	72.1	72.9	77.4	78.2	80.2	76.6	75.7	72.5	75.3	76.2
78.5°	64.9	68.5	68.9	73.7	74.5	76.6	72.5	71.7	68.5	71.7	72.1
79°	60.8	64.5	65.3	69.7	70.9	72.9	68.9	68.1	64.9	67.7	68.1
79.5°	56.8	60.4	61.2	66.1	67.3	69.3	65.3	64.1	61.6	63.7	64.5
80°	53.2	56.4	57.2	62.0	64.1	65.7	61.2	60.4	57.6	60.0	60.4
80.5°	49.2	52.4	53.6	58.4	60.4	62.0	57.6	56.4	54.0	56.0	56.8
81°	45.5	48.3	49.6	54.8	56.8	58.0	54.0	52.8	50.4	52.4	52.8
81.5°	41.5	44.3	45.9	51.2	53.2	54.4	50.4	48.8	46.7	48.3	49.2
82°	37.9	40.7	41.9	47.5	50.0	50.8	46.7	45.1	43.1	44.3	45.1
82.5°	33.8	36.7	38.3	43.9	46.3	47.5	43.1	41.1	39.5	40.7	41.5
83°	30.2	32.6	34.7	40.3	43.1	43.9	39.9	37.5	35.9	36.7	37.9
83.5°	26.2	28.6	31.4	36.7	39.5	40.3	36.7	33.8	32.2	33.0	34.7
84°	22.6	24.6	27.8	33.0	35.9	36.7	33.4	29.8	28.6	29.0	31.4
84.5°	18.5	21.0	24.6	29.8	32.6	33.4	29.8	26.2	25.0	25.4	28.2
85°	14.9	16.9	21.8	26.2	29.0	29.8	26.6	22.6	21.8	21.4	25.0
85.5°	12.5	14.5	18.5	22.6	25.8	26.6	23.4	19.3	18.1	18.1	21.8
86°	10.1	12.1	15.7	19.3	22.2	23.0	20.5	16.5	14.5	14.9	18.5
86.5°	8.1	9.3	12.9	15.7	18.9	19.3	17.3	13.7	11.7	12.5	15.7
87°	5.6	6.8	9.7	12.5	15.3	16.1	14.5	11.3	9.7	10.1	12.5
87.5°	3.6	4.4	6.8	9.3	12.1	12.9	11.7	8.9	7.7	8.1	9.7
88°	1.6	2.4	4.0	6.0	8.9	9.7	8.9	6.8	6.0	6.0	6.8
88.5°	0.4	0.8	1.6	2.8	5.6	6.0	6.0	4.8	4.0	3.6	3.6



TEST NUMBER: P776433

CATALOG NUMBER: HCDJBL3040CSD-HCD6TSQMW-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	0.4	0.0	0.0	0.0	0.4	0.4	0.0	0.0	0.0



TEST NUMBER: P776433

CATALOG NUMBER: HCDJBL3040CSD-HCD6TSQMW-4000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2435.2	2435.2	2435.2	2435.2	2435.2	2435.2
0.5°	2434.4	2433.6	2433.6	2434.4	2434.4	2435.2
1°	2433.6	2432.4	2432.0	2432.8	2432.8	2433.6
1.5°	2432.4	2430.8	2430.0	2430.4	2431.2	2432.0
2°	2431.2	2428.8	2428.0	2428.4	2429.2	2430.4
2.5°	2430.0	2427.2	2426.0	2426.0	2426.8	2428.4
3°	2428.4	2425.2	2423.1	2423.1	2424.3	2426.0
3.5°	2426.4	2423.1	2420.7	2420.7	2421.5	2423.5
4°	2424.3	2420.3	2417.9	2417.5	2418.3	2420.7
4.5°	2421.9	2417.5	2414.7	2414.3	2415.1	2417.5
5°	2419.5	2414.7	2411.1	2410.6	2411.9	2414.3
5.5°	2416.7	2411.1	2407.8	2406.6	2408.2	2411.1
6°	2413.9	2407.0	2404.2	2403.0	2404.2	2407.0
6.5°	2410.6	2403.4	2399.8	2399.0	2399.8	2403.4
7°	2407.0	2399.4	2395.3	2394.1	2395.3	2399.0
7.5°	2403.0	2394.9	2390.9	2389.3	2390.9	2394.5
8°	2399.0	2390.1	2386.1	2384.5	2385.7	2389.7
8.5°	2394.9	2385.3	2380.8	2379.2	2380.8	2384.5
9°	2390.1	2380.0	2375.2	2373.6	2375.2	2379.2
9.5°	2385.3	2374.4	2369.6	2367.9	2369.1	2374.0
10°	2380.4	2368.7	2363.5	2361.9	2363.5	2367.9
10.5°	2374.8	2362.7	2357.9	2355.9	2357.5	2361.9
11°	2369.1	2356.7	2351.0	2349.4	2350.6	2355.4
11.5°	2363.5	2350.2	2344.2	2342.6	2344.2	2348.6
12°	2357.5	2343.4	2337.7	2335.3	2336.9	2341.7
12.5°	2351.0	2336.5	2330.5	2328.0	2329.7	2334.5
13°	2344.2	2328.9	2322.8	2320.4	2321.6	2327.2
13.5°	2337.3	2321.2	2315.2	2312.7	2313.9	2319.6
14°	2330.5	2313.1	2307.1	2304.7	2305.9	2311.5
14.5°	2322.8	2305.1	2298.6	2296.6	2297.4	2303.1
15°	2314.8	2296.6	2290.2	2287.8	2288.6	2294.2
15.5°	2306.7	2287.8	2281.3	2278.9	2279.7	2285.3
16°	2298.2	2278.5	2272.0	2269.6	2270.0	2276.1
16.5°	2289.4	2269.2	2262.4	2260.4	2260.4	2266.4
17°	2280.5	2259.6	2252.7	2250.3	2250.7	2256.3
17.5°	2271.2	2249.9	2242.6	2240.2	2240.6	2246.3
18°	2262.0	2239.4	2232.2	2229.7	2229.7	2235.4
18.5°	2251.9	2228.9	2221.7	2218.9	2218.9	2224.9
19°	2241.8	2217.7	2210.4	2208.0	2207.6	2213.6
19.5°	2231.3	2206.4	2199.1	2196.7	2196.3	2201.9
20°	2220.5	2195.1	2187.4	2185.8	2184.6	2190.3
20.5°	2209.6	2183.0	2175.3	2173.7	2172.5	2178.2
21°	2197.9	2171.3	2163.3	2161.6	2160.0	2165.7

TEST NUMBER: P776433

CATALOG NUMBER: HCDJBL3040CSD-HCD6TSQMW-4000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	2162.0	2133.0	2125.0	2123.4	2121.0	2126.2
23°	2149.6	2119.3	2111.7	2110.1	2107.3	2112.5
23.5°	2136.7	2105.6	2097.6	2096.4	2093.6	2098.8
24°	2123.4	2091.5	2083.9	2082.3	2079.0	2084.7
24.5°	2110.1	2077.0	2069.8	2067.8	2064.5	2069.8
25°	2096.4	2062.1	2055.7	2053.7	2050.0	2054.9
25.5°	2082.3	2047.2	2040.0	2038.8	2035.1	2039.6
26°	2067.8	2032.3	2025.5	2023.8	2019.8	2024.3
26.5°	2053.3	2017.0	2010.1	2008.5	2004.1	2008.5
27°	2038.0	2001.3	1994.4	1993.2	1988.4	1992.4
27.5°	2022.6	1984.8	1978.7	1977.1	1972.3	1975.9
28°	2007.3	1968.6	1962.2	1960.6	1956.2	1959.4
28.5°	1992.0	1951.7	1945.7	1944.1	1939.2	1942.9
29°	1975.5	1935.2	1929.2	1927.6	1922.7	1925.9
29.5°	1959.4	1918.3	1912.2	1910.6	1905.8	1908.6
30°	1942.5	1901.0	1895.3	1893.3	1888.5	1891.3
30.5°	1925.5	1882.8	1877.6	1875.6	1871.1	1873.6
31°	1908.2	1864.7	1860.3	1857.8	1853.4	1855.8
31.5°	1891.7	1845.8	1841.7	1839.7	1835.3	1838.1
32°	1874.0	1828.0	1823.6	1821.6	1817.6	1820.8
32.5°	1856.2	1797.8	1805.5	1803.0	1799.4	1789.8
33°	1838.1	1765.6	1786.9	1784.9	1780.9	1757.5
33.5°	1819.6	1721.3	1766.8	1766.0	1762.0	1714.8
34°	1800.2	1675.3	1749.1	1747.0	1744.6	1668.9
34.5°	1782.1	1629.0	1716.0	1727.7	1723.7	1622.1
35°	1753.5	1583.1	1684.6	1708.4	1688.2	1577.4
35.5°	1721.7	1538.3	1639.5	1689.0	1655.2	1533.1
36°	1680.6	1493.6	1598.4	1669.7	1612.9	1488.4
36.5°	1635.0	1446.9	1553.6	1650.3	1568.1	1442.0
37°	1591.9	1398.1	1510.5	1630.2	1524.6	1392.5
37.5°	1546.8	1348.2	1466.6	1610.5	1482.7	1342.5
38°	1502.5	1296.2	1423.9	1590.7	1440.4	1292.2
38.5°	1458.6	1245.8	1380.0	1571.0	1396.9	1242.6
39°	1415.4	1197.1	1334.5	1551.2	1353.8	1193.8
39.5°	1367.5	1149.1	1286.5	1531.1	1307.9	1146.3
40°	1319.6	1102.8	1239.4	1510.9	1261.1	1099.2
40.5°	1270.0	1057.7	1192.2	1490.8	1214.0	1054.0
41°	1222.9	1011.7	1144.7	1471.0	1166.8	1007.7
41.5°	1173.7	965.0	1098.3	1449.7	1121.7	962.2
42°	1127.0	918.6	1056.4	1418.7	1077.8	915.8
42.5°	1081.8	873.9	1013.7	1385.2	1035.5	870.7
43°	1038.7	828.4	969.8	1336.1	992.0	825.2
43.5°	992.8	786.1	927.5	1287.7	948.9	782.9

TEST NUMBER: P776433

CATALOG NUMBER: HCDJBL3040CSD-HCD6TSQMW-4000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	861.8	664.0	797.8	1124.9	819.9	660.4
45.5°	816.7	624.5	758.3	1074.6	779.6	621.7
46°	774.4	587.5	717.6	1025.8	739.4	584.6
46.5°	732.9	551.6	679.3	978.3	699.9	549.6
47°	693.0	517.7	640.6	930.7	661.6	515.3
47.5°	653.9	486.3	604.4	883.2	624.9	483.9
48°	616.1	457.3	568.1	836.1	587.9	455.3
48.5°	579.4	431.9	533.9	791.7	553.2	430.3
49°	543.9	409.4	502.0	748.6	520.2	408.2
49.5°	510.5	389.6	472.2	707.1	489.1	388.4
50°	478.3	372.3	443.2	666.4	458.5	369.9
50.5°	448.4	355.8	418.6	629.8	431.9	354.6
51°	421.9	340.9	395.7	594.3	407.8	339.7
51.5°	398.5	326.8	375.9	560.1	386.4	325.6
52°	377.9	313.1	358.2	527.8	367.1	311.1
52.5°	359.8	299.0	342.5	496.8	350.1	297.4
53°	344.9	285.3	328.0	467.4	334.4	283.7
53.5°	330.0	273.6	313.5	440.0	319.9	272.8
54°	315.1	264.7	299.8	413.8	305.8	264.3
54.5°	300.6	259.1	286.1	389.6	292.5	259.1
55°	286.9	254.6	272.8	367.5	278.8	254.6
55.5°	272.8	250.2	261.9	346.5	266.3	250.2
56°	261.1	246.2	253.4	327.6	256.3	245.8
56.5°	251.8	241.7	248.6	310.6	250.2	241.7
57°	246.2	237.7	244.2	294.5	245.4	237.7
57.5°	241.7	233.3	239.7	280.0	240.9	233.3
58°	237.7	229.3	235.7	267.1	236.9	229.3
58.5°	233.3	225.2	231.3	255.4	232.5	225.2
59°	229.3	221.2	227.2	245.8	228.5	221.2
59.5°	225.2	217.2	223.2	236.9	224.4	217.2
60°	221.2	213.1	219.2	228.9	220.0	213.1
60.5°	217.2	209.1	215.2	222.0	216.0	208.7
61°	213.1	205.1	211.1	215.6	211.9	204.7
61.5°	209.1	201.5	207.1	209.5	207.9	200.7
62°	205.1	197.4	203.1	204.3	203.5	196.6
62.5°	201.1	193.4	199.0	199.4	199.4	192.2
63°	197.0	189.8	195.0	195.4	195.4	188.2
63.5°	193.0	185.7	191.0	191.0	191.0	184.1
64°	189.0	181.7	187.0	187.0	187.0	180.1
64.5°	184.9	178.1	182.9	182.5	182.5	175.7
65°	181.3	174.1	178.9	178.5	178.5	171.6
65.5°	177.3	170.4	174.9	174.1	174.1	167.6
66°	173.3	166.4	170.8	170.0	170.0	163.6



TEST NUMBER: P776433

CATALOG NUMBER: HCDJBL3040CSD-HCD6TSQMW-4000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	161.6	155.1	159.2	157.9	157.5	151.5
68°	157.5	151.1	155.1	153.9	153.1	147.5
68.5°	153.5	147.5	151.1	149.5	149.1	143.4
69°	149.5	143.8	147.5	144.6	147.1	139.4
69.5°	145.9	140.2	143.4	141.0	142.6	135.8
70°	141.8	136.6	139.8	137.0	138.2	131.8
70.5°	137.8	132.6	135.8	133.4	133.4	127.7
71°	134.2	128.9	131.8	129.7	128.9	124.1
71.5°	130.1	125.3	128.1	125.3	124.9	120.1
72°	126.5	121.7	124.1	121.3	120.9	116.0
72.5°	122.5	117.7	120.5	117.2	116.8	112.0
73°	118.5	114.0	116.4	113.2	112.4	108.0
73.5°	114.8	110.0	112.4	109.2	108.4	104.0
74°	110.8	106.4	108.4	105.2	104.4	99.9
74.5°	107.2	102.7	104.8	101.1	100.3	96.3
75°	103.1	99.1	100.7	97.1	96.3	92.3
75.5°	99.5	95.1	96.7	93.1	92.3	88.2
76°	95.5	91.5	93.1	89.0	87.8	84.6
76.5°	91.9	87.8	89.0	85.0	83.8	80.6
77°	87.8	84.2	85.4	81.0	79.8	76.6
77.5°	84.2	80.2	81.4	77.0	75.7	72.5
78°	80.2	76.6	77.4	72.9	71.7	68.9
78.5°	76.6	72.9	73.7	68.9	67.7	64.9
79°	72.5	68.9	69.7	64.9	63.7	60.8
79.5°	68.5	65.3	65.7	60.8	59.6	56.8
80°	64.9	61.6	61.6	57.2	55.2	53.2
80.5°	60.8	58.0	58.0	53.2	51.2	49.2
81°	57.2	54.4	54.0	49.6	47.1	45.5
81.5°	53.2	50.8	50.4	45.5	43.1	41.5
82°	49.6	46.7	46.3	41.9	39.1	37.9
82.5°	45.9	43.1	42.7	38.3	35.1	33.8
83°	42.3	39.5	39.1	34.7	31.0	30.2
83.5°	38.7	35.9	35.1	31.0	27.0	26.2
84°	34.7	32.2	31.4	27.8	23.4	22.6
84.5°	31.0	28.6	27.8	24.2	20.1	18.5
85°	27.4	25.0	24.2	21.0	16.9	14.9
85.5°	23.8	21.4	20.1	17.7	14.1	12.5
86°	20.1	17.7	16.5	14.5	11.7	10.1
86.5°	16.5	14.1	13.3	11.3	9.3	8.1
87°	13.3	10.9	10.1	8.1	6.4	5.6
87.5°	9.7	7.7	6.8	5.2	4.0	3.6
88°	6.4	4.0	3.6	2.0	1.6	1.6
88.5°	2.8	0.8	0.4	0.4	0.4	0.4



TEST NUMBER: P776433

CATALOG NUMBER: HCDJBL3040CSD-HCD6TSQMW-4000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
90°	0.0	0.0	0.0	0.4	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°	2152.4	2174.5	2203.1	2225.7	2248.3	2262.8	2269.2	2262.8	2249.9	2233.8	2212.4
22°	2139.5	2162.0	2191.5	2214.8	2237.8	2252.7	2259.6	2253.1	2239.4	2223.3	2201.1



44°	740.2	905.4	1341.3	1037.5	904.1	1084.2	1501.7	1096.3	910.2	1055.2	1386.0
44.5°	699.9	861.8	1290.9	992.8	859.4	1037.5	1456.5	1049.2	865.5	1009.7	1334.5



66.5°	159.6	164.4	164.4	164.4	162.0	166.4	166.4	165.2	159.6	166.4	167.6
67°	155.5	160.4	160.4	160.8	158.3	162.8	162.4	161.2	155.5	162.4	163.6



89°	0.0	0.4	0.4	0.8	2.4	3.2	3.2	2.4	2.0	1.6	1.2
89.5°	0.0	0.0	0.4	0.4	0.4	0.8	1.2	0.8	0.4	0.4	0.4

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21.5°	2186.2	2158.8	2150.8	2149.2	2147.1	2152.4
22°	2174.5	2145.9	2137.9	2136.7	2134.6	2139.5



44°	948.5	743.0	883.6	1229.7	905.8	740.2
44.5°	904.5	703.5	840.9	1177.7	863.0	699.9

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66.5°	169.2	162.8	166.8	166.0	165.6	159.6
67°	165.2	158.7	163.2	162.0	161.6	155.5

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89°	0.8	0.0	0.4	0.4	0.4	0.0
89.5°	0.0	0.0	0.0	0.4	0.4	0.0

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Scaled Data Report



(END OF REPORT)