

Scaled data based on original data using

LM-41-14 Approved Method for Photometric Testing Of Indoor Fluorescent Luminaires

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: HALO COMMERCIAL

Report Number: P584650

Luminaire Tested: **HC845D010-HM82555827-81RWWC**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P584650
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2109-368-14)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 10/21/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HC845D010-HM82555827-81RWWC
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, SPECULAR TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4689.6 lumens
Efficiency: N/A
Efficacy: 106.6 lumens/watt
Spacing Criteria (0/90/45): 1.15 / 1.08 / 1.17
Luminous Opening: Circular (Dia: 0.67' x H: 0')
CIE Type: Direct

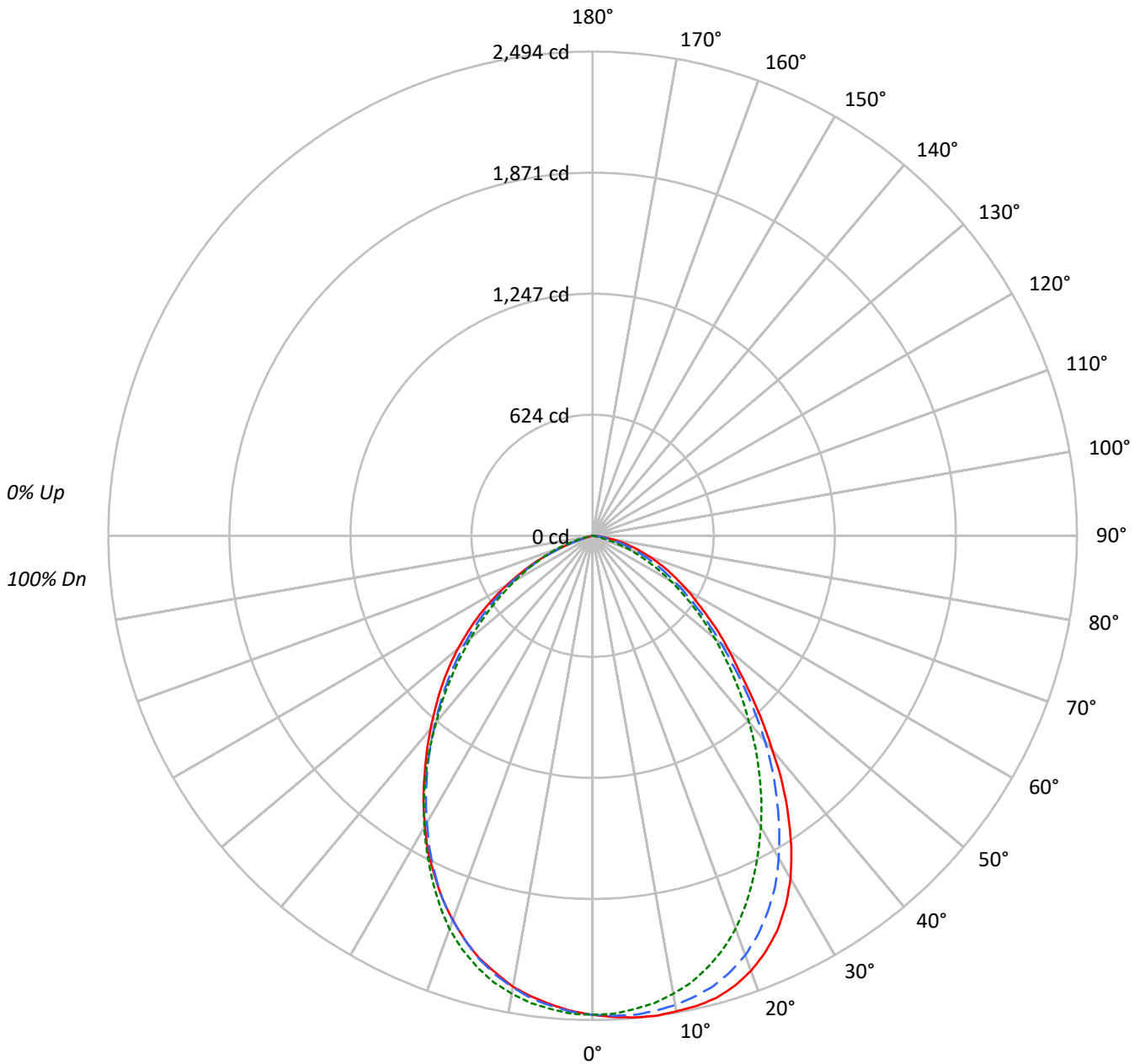
Input Watts (W): 44
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P584650

CATALOG NUMBER: HC845D010-HM82555827-81RWWC

Luminous Intensity Polar Plot





TEST NUMBER: P584650

CATALOG NUMBER: HC845D010-HM82555827-81RWWC

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	0					
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100								
1	111	107	104	101	108	105	102	99	101	98	96	97	95	93	93	92	90	88								
2	103	96	90	85	100	94	89	84	91	86	82	87	84	81	84	82	79	77								
3	95	86	79	73	93	84	78	73	82	76	72	79	74	70	76	73	69	67								
4	88	77	70	64	86	76	69	64	74	68	63	72	66	62	69	65	61	59								
5	81	70	62	56	80	69	62	56	67	61	56	65	59	55	63	58	54	52								
6	76	64	56	50	74	63	55	50	61	55	50	60	54	49	58	53	49	47								
7	71	59	51	45	69	58	50	45	56	50	45	55	49	44	54	48	44	42								
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38								
9	62	50	42	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35								
10	58	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32								

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	76086	76086	76086
5°	77091	75766	75051
10°	77879	74992	73859
15°	78664	73406	71935
20°	78268	70697	69080
25°	76445	66466	65571
30°	72606	61703	61464
35°	66099	56301	56798
40°	57950	50390	52246
45°	49994	44821	47983
50°	43775	39352	43459
55°	38789	33827	38251
60°	34950	28443	31694
65°	31484	22838	24283
70°	27625	16634	13371
75°	23554	8638	3539
80°	18149	2326	586
85°	11676	0	0



TEST NUMBER: P584650

CATALOG NUMBER: HC845D010-HM82555827-81RWWC

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	232.8	5.0
10°-20°	654.5	14.0
20°-30°	928.9	19.8
30°-40°	977.8	20.9
40°-50°	831.8	17.7
50°-60°	601.1	12.8
60°-70°	341.9	7.3
70°-80°	107.7	2.3
80°-90°	13.1	0.3
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°	1816.2	38.7
0°-40°	2794.0	59.6
0°-60°	4226.9	90.1
0°-90°	4689.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4689.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2467	2467	2467	2467	2467	
5°	2490	2477	2448	2431	2425	238
15°	2464	2402	2299	2257	2253	694
25°	2247	2135	1954	1921	1927	1029
35°	1756	1654	1496	1486	1509	1093
45°	1146	1104	1028	1054	1100	891
55°	722	669	629	665	712	651
65°	432	372	313	310	333	428
75°	198	152	72	33	30	213
85°	33	20	0	0	0	43
90°	0	0	0	0	0	



TEST NUMBER: P584650

CATALOG NUMBER: HC845D010-HM82555827-81RWWC

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	2467.4	2467.4	2467.4	2467.4	2467.4	2467.4	2467.4	2467.4	2467.4	2467.4	2467.4
2.5°	2480.7	2483.9	2477.4	2477.4	2483.9	2477.4	2480.7	2480.7	2477.4	2477.4	2474.1
5°	2490.5	2487.2	2487.2	2487.2	2490.5	2483.9	2480.7	2483.9	2477.4	2477.4	2477.4
7.5°	2493.8	2493.8	2490.5	2487.2	2487.2	2487.2	2483.9	2480.7	2477.4	2470.8	2467.4
10°	2487.2	2487.2	2490.5	2483.9	2483.9	2477.4	2477.4	2470.8	2470.8	2464.1	2454.3
12.5°	2480.7	2477.4	2477.4	2470.8	2470.8	2464.1	2464.1	2454.3	2451.0	2441.1	2431.2
15°	2464.1	2460.8	2454.3	2451.0	2447.7	2444.4	2437.8	2434.6	2424.6	2411.5	2401.6
17.5°	2431.2	2427.9	2424.6	2418.0	2411.5	2408.2	2404.9	2395.0	2381.8	2371.9	2355.5
20°	2385.1	2381.8	2381.8	2371.9	2368.6	2358.8	2355.5	2342.2	2332.4	2312.6	2299.4
22.5°	2322.5	2325.8	2319.3	2312.6	2306.0	2296.1	2289.6	2276.4	2259.9	2240.2	2223.7
25°	2246.8	2250.0	2243.5	2236.8	2226.9	2220.4	2213.8	2194.0	2177.6	2154.4	2134.7
27.5°	2151.2	2151.2	2151.2	2144.6	2128.2	2124.9	2118.2	2098.5	2075.4	2055.7	2035.9
30°	2039.1	2035.9	2035.9	2026.0	2019.4	2006.3	1996.3	1979.9	1963.4	1940.4	1917.3
32.5°	1904.1	1907.4	1897.6	1891.0	1881.0	1881.0	1867.9	1854.7	1834.9	1811.9	1788.8
35°	1755.9	1759.1	1752.6	1749.3	1732.9	1729.5	1726.2	1709.8	1696.6	1680.1	1653.8
37.5°	1604.3	1601.0	1597.7	1597.7	1587.9	1581.3	1574.6	1564.8	1545.1	1531.8	1518.7
40°	1439.6	1439.6	1439.6	1436.3	1433.1	1426.5	1423.2	1416.5	1403.4	1390.2	1380.3
42.5°	1291.4	1291.4	1288.1	1284.8	1278.2	1281.5	1274.9	1268.4	1255.1	1245.3	1238.7
45°	1146.4	1146.4	1146.4	1149.8	1143.1	1133.2	1133.2	1126.7	1120.1	1113.5	1103.6
47.5°	1017.9	1027.8	1021.2	1017.9	1021.2	1008.1	1008.1	1001.5	994.9	988.3	975.1
50°	912.5	912.5	912.5	905.9	902.6	902.6	892.8	886.2	882.9	876.3	863.1
52.5°	817.0	810.4	810.4	807.1	803.9	797.2	797.2	790.6	777.5	770.9	761.0
55°	721.5	721.5	718.1	714.8	711.5	708.3	705.0	695.1	688.6	678.6	668.7
57.5°	635.8	642.5	639.1	632.5	625.9	625.9	619.3	612.8	602.8	593.0	583.1
60°	566.7	563.3	563.3	560.0	553.4	550.1	546.9	537.0	527.1	517.2	507.3
62.5°	494.2	494.2	494.2	487.6	480.9	477.6	474.4	467.8	454.7	444.7	438.1
65°	431.5	428.3	425.0	421.7	418.4	411.8	408.4	401.9	392.0	382.2	372.3
67.5°	368.9	365.6	365.6	362.3	352.5	349.2	349.2	339.3	329.4	319.5	309.7
70°	306.4	306.4	306.4	299.8	296.5	293.2	289.8	283.3	273.4	263.6	253.7
72.5°	253.7	250.3	250.3	247.0	237.2	233.9	230.6	224.0	214.2	207.5	200.9
75°	197.7	197.7	194.4	191.1	187.8	184.5	181.2	174.5	164.7	154.8	151.6
77.5°	151.6	148.3	148.3	145.0	138.4	135.0	135.0	128.4	118.6	112.0	105.5
80°	102.2	105.5	102.2	98.9	95.5	92.2	88.9	85.6	79.1	72.5	65.9
82.5°	62.6	65.9	62.6	62.6	59.4	56.0	56.0	49.4	46.1	42.8	39.5
85°	33.0	33.0	33.0	33.0	29.7	29.7	29.7	26.4	23.1	19.8	19.8
87.5°	9.9	13.1	9.9	9.9	9.9	9.9	9.9	9.9	6.6	6.6	6.6
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: P584650

CATALOG NUMBER: HC845D010-HM82555827-81RWWC

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	2467.4	2467.4	2467.4	2467.4	2467.4	2467.4	2467.4	2467.4	2467.4	2467.4	2467.4
2.5°	2477.4	2474.1	2470.8	2470.8	2470.8	2470.8	2470.8	2467.4	2464.1	2464.1	2464.1
5°	2470.8	2470.8	2470.8	2467.4	2464.1	2464.1	2457.6	2454.3	2451.0	2447.7	2444.4
7.5°	2464.1	2457.6	2454.3	2451.0	2447.7	2447.7	2441.1	2434.6	2434.6	2427.9	2421.3
10°	2444.4	2441.1	2434.6	2427.9	2424.6	2421.3	2414.7	2404.9	2401.6	2395.0	2388.3
12.5°	2421.3	2414.7	2408.2	2395.0	2391.6	2388.3	2375.2	2365.4	2358.8	2355.5	2339.0
15°	2391.6	2378.5	2368.6	2352.1	2348.8	2342.2	2332.4	2322.5	2309.3	2299.4	2292.9
17.5°	2339.0	2325.8	2309.3	2292.9	2286.3	2286.3	2269.8	2256.6	2240.2	2233.5	2220.4
20°	2276.4	2259.9	2246.8	2226.9	2217.1	2207.2	2197.3	2177.6	2164.4	2154.4	2138.0
22.5°	2203.9	2180.8	2164.4	2144.6	2128.2	2118.2	2101.8	2085.4	2068.8	2059.0	2045.8
25°	2111.6	2091.9	2065.5	2045.8	2035.9	2022.7	2002.9	1986.5	1970.1	1953.5	1946.9
27.5°	2009.6	1983.2	1960.1	1937.1	1927.2	1917.3	1894.3	1874.5	1861.3	1844.8	1838.2
30°	1897.6	1871.2	1844.8	1825.1	1815.2	1798.7	1785.5	1762.4	1746.0	1732.9	1716.3
32.5°	1769.0	1749.3	1726.2	1696.6	1689.9	1676.8	1657.1	1647.1	1627.4	1617.6	1604.3
35°	1630.7	1617.6	1594.5	1571.4	1561.5	1554.9	1538.5	1518.7	1505.5	1495.6	1489.0
37.5°	1499.0	1482.4	1459.4	1442.9	1436.3	1426.5	1406.7	1396.8	1383.7	1377.0	1363.8
40°	1357.3	1340.7	1324.3	1314.5	1304.6	1297.9	1284.8	1274.9	1261.7	1251.8	1248.5
42.5°	1218.9	1209.0	1195.9	1182.6	1179.3	1169.5	1162.9	1153.1	1143.1	1139.8	1130.0
45°	1093.7	1083.9	1070.7	1057.5	1054.2	1047.6	1044.3	1034.5	1027.8	1027.8	1027.8
47.5°	968.5	958.7	945.4	938.9	942.2	929.0	929.0	925.7	919.2	919.2	922.4
50°	856.5	843.4	840.1	833.4	826.8	820.3	823.6	813.7	813.7	820.3	817.0
52.5°	751.1	737.9	734.6	728.1	724.8	724.8	721.5	721.5	718.1	721.5	721.5
55°	655.6	645.7	639.1	632.5	629.2	629.2	629.2	625.9	622.6	629.2	632.5
57.5°	570.0	566.7	560.0	550.1	546.9	543.6	540.3	540.3	540.3	540.3	543.6
60°	494.2	487.6	480.9	471.1	471.1	467.8	464.5	461.2	461.2	461.2	461.2
62.5°	428.3	418.4	408.4	401.9	398.6	395.3	392.0	385.4	385.4	385.4	385.4
65°	362.3	352.5	345.9	339.3	332.8	332.8	326.1	322.8	316.2	313.0	306.4
67.5°	299.8	293.2	286.6	276.7	273.4	270.1	263.6	260.3	250.3	247.0	243.7
70°	243.7	233.9	227.3	220.8	217.5	210.8	204.2	197.7	191.1	184.5	177.9
72.5°	191.1	181.2	174.5	168.0	161.4	161.4	151.6	145.0	135.0	128.4	118.6
75°	141.7	131.7	125.2	115.3	112.0	108.7	98.9	92.2	82.3	72.5	65.9
77.5°	95.5	88.9	82.3	72.5	65.9	65.9	56.0	49.4	42.8	33.0	29.7
80°	59.4	52.7	46.1	39.5	39.5	33.0	29.7	23.1	16.4	13.1	9.9
82.5°	33.0	29.7	26.4	19.8	19.8	16.4	13.1	9.9	6.6	3.3	3.3
85°	16.4	13.1	9.9	9.9	6.6	6.6	6.6	3.3	3.3	0.0	0.0
87.5°	6.6	3.3	3.3	3.3	3.3	3.3	0.0	0.0	0.0	0.0	0.0
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: P584650

CATALOG NUMBER: HC845D010-HM82555827-81RWWC

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	2467.4	2467.4	2467.4	2467.4	2467.4	2467.4	2467.4	2467.4	2467.4	2467.4	2467.4
2.5°	2460.8	2460.8	2457.6	2457.6	2457.6	2454.3	2457.6	2454.3	2454.3	2454.3	2457.6
5°	2447.7	2441.1	2441.1	2437.8	2437.8	2434.6	2437.8	2434.6	2431.2	2427.9	2431.2
7.5°	2421.3	2414.7	2411.5	2408.2	2408.2	2408.2	2404.9	2401.6	2404.9	2395.0	2401.6
10°	2385.1	2381.8	2375.2	2371.9	2368.6	2371.9	2368.6	2362.1	2362.1	2362.1	2358.8
12.5°	2339.0	2332.4	2329.1	2325.8	2319.3	2319.3	2322.5	2316.0	2316.0	2309.3	2309.3
15°	2283.0	2276.4	2269.8	2269.8	2263.2	2263.2	2259.9	2259.9	2256.6	2253.3	2253.3
17.5°	2213.8	2203.9	2197.3	2200.7	2197.3	2194.0	2194.0	2187.4	2184.1	2187.4	2187.4
20°	2131.5	2124.9	2118.2	2121.6	2114.9	2111.6	2114.9	2105.1	2108.4	2108.4	2108.4
22.5°	2039.1	2035.9	2026.0	2026.0	2019.4	2016.2	2019.4	2019.4	2022.7	2019.4	2019.4
25°	1937.1	1930.5	1923.8	1923.8	1920.6	1917.3	1920.6	1923.8	1920.6	1923.8	1923.8
27.5°	1828.4	1818.5	1818.5	1811.9	1811.9	1815.2	1811.9	1815.2	1818.5	1818.5	1825.1
30°	1709.8	1706.5	1703.2	1699.9	1699.9	1703.2	1703.2	1703.2	1706.5	1713.0	1713.0
32.5°	1597.7	1591.2	1584.6	1584.6	1591.2	1587.9	1591.2	1591.2	1597.7	1597.7	1604.3
35°	1475.9	1475.9	1469.3	1472.6	1472.6	1472.6	1472.6	1479.2	1485.7	1489.0	1495.6
37.5°	1363.8	1354.0	1357.3	1357.3	1360.6	1357.3	1367.1	1367.1	1373.7	1373.7	1380.3
40°	1242.0	1242.0	1245.3	1242.0	1245.3	1245.3	1251.8	1258.4	1261.7	1268.4	1271.6
42.5°	1126.7	1133.2	1126.7	1130.0	1133.2	1136.5	1139.8	1143.1	1156.3	1162.9	1172.8
45°	1021.2	1024.5	1027.8	1031.2	1027.8	1034.5	1037.8	1044.3	1054.2	1057.5	1060.7
47.5°	919.2	922.4	925.7	929.0	929.0	935.6	938.9	945.4	952.0	955.4	958.7
50°	820.3	826.8	830.1	830.1	833.4	840.1	846.7	846.7	853.2	863.1	866.4
52.5°	731.4	731.4	737.9	741.2	744.5	744.5	754.4	757.6	761.0	767.6	774.2
55°	632.5	642.5	645.7	645.7	652.3	658.9	662.2	665.4	665.4	678.6	678.6
57.5°	546.9	550.1	556.7	556.7	556.7	566.7	566.7	573.2	576.5	579.8	586.4
60°	461.2	467.8	467.8	471.1	467.8	474.4	477.6	484.2	487.6	490.9	494.2
62.5°	382.2	382.2	385.4	385.4	385.4	385.4	392.0	392.0	398.6	401.9	405.2
65°	306.4	306.4	306.4	306.4	306.4	306.4	306.4	306.4	309.7	309.7	316.2
67.5°	237.2	233.9	227.3	230.6	227.3	227.3	224.0	224.0	227.3	227.3	233.9
70°	171.3	168.0	161.4	161.4	158.1	154.8	151.6	148.3	145.0	145.0	145.0
72.5°	112.0	105.5	95.5	92.2	92.2	85.6	79.1	75.8	75.8	75.8	75.8
75°	56.0	49.4	42.8	39.5	39.5	33.0	36.2	33.0	33.0	33.0	33.0
77.5°	23.1	16.4	13.1	13.1	13.1	9.9	9.9	9.9	9.9	9.9	9.9
80°	6.6	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
82.5°	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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: P584650

CATALOG NUMBER: HC845D010-HM82555827-81RWWC

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	2467.4	2467.4	2467.4	2467.4	2467.4	2467.4	2467.4	2467.4
2.5°	2454.3	2454.3	2447.7	2451.0	2451.0	2451.0	2451.0	2451.0
5°	2424.6	2427.9	2424.6	2427.9	2427.9	2424.6	2424.6	2424.6
7.5°	2395.0	2398.3	2395.0	2398.3	2398.3	2398.3	2395.0	2395.0
10°	2358.8	2358.8	2358.8	2358.8	2358.8	2355.5	2358.8	2358.8
12.5°	2309.3	2309.3	2309.3	2312.6	2312.6	2309.3	2309.3	2306.0
15°	2256.6	2250.0	2253.3	2256.6	2253.3	2253.3	2253.3	2253.3
17.5°	2184.1	2187.4	2184.1	2184.1	2184.1	2184.1	2187.4	2184.1
20°	2108.4	2108.4	2111.6	2108.4	2108.4	2108.4	2108.4	2105.1
22.5°	2022.7	2019.4	2019.4	2022.7	2022.7	2019.4	2022.7	2022.7
25°	1927.2	1930.5	1927.2	1927.2	1930.5	1930.5	1930.5	1927.2
27.5°	1825.1	1828.4	1831.6	1828.4	1828.4	1828.4	1831.6	1834.9
30°	1719.6	1726.2	1719.6	1719.6	1726.2	1722.9	1726.2	1726.2
32.5°	1607.6	1617.6	1610.9	1617.6	1617.6	1620.9	1617.6	1620.9
35°	1495.6	1505.5	1505.5	1505.5	1508.8	1512.1	1512.1	1508.8
37.5°	1390.2	1393.5	1393.5	1400.1	1403.4	1406.7	1406.7	1403.4
40°	1281.5	1288.1	1291.4	1291.4	1291.4	1297.9	1304.6	1297.9
42.5°	1176.0	1179.3	1182.6	1182.6	1189.3	1192.6	1195.9	1195.9
45°	1074.0	1080.6	1083.9	1087.1	1090.4	1097.0	1093.7	1100.3
47.5°	968.5	978.4	981.7	985.0	991.5	994.9	998.2	1001.5
50°	872.9	879.6	879.6	886.2	896.1	896.1	902.6	905.9
52.5°	777.5	780.7	784.0	787.3	793.9	800.6	800.6	807.1
55°	685.3	688.6	688.6	691.8	695.1	708.3	711.5	711.5
57.5°	589.7	589.7	596.2	599.5	602.8	609.5	609.5	609.5
60°	497.5	500.8	500.8	504.0	507.3	513.9	517.2	513.9
62.5°	405.2	408.4	408.4	411.8	418.4	421.7	418.4	418.4
65°	319.5	322.8	322.8	326.1	332.8	332.8	329.4	332.8
67.5°	233.9	233.9	233.9	233.9	233.9	233.9	233.9	233.9
70°	148.3	145.0	141.7	145.0	145.0	145.0	141.7	148.3
72.5°	72.5	75.8	75.8	75.8	75.8	75.8	75.8	72.5
75°	33.0	33.0	29.7	29.7	29.7	33.0	33.0	29.7
77.5°	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9
80°	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



Report Generated By 670245859 / DESKTOP-HRDQ47P





— 0°-180° - - 45°-225° - - - - 90°-270°













(END OF REPORT)