

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: P585031

Luminaire Tested: **HC855D010-HM82555935-81WWBB**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P585031
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2109-368-17)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 10/21/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HC855D010-HM82555935-81WWBB
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, WHITE BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4367.3 lumens
Efficiency: N/A
Efficacy: 84.0 lumens/watt
Spacing Criteria (0/90/45): 1.15 / 1.07 / 1.16
Luminous Opening: Circular (Dia: 0.67' x H: 0')
CIE Type: Direct

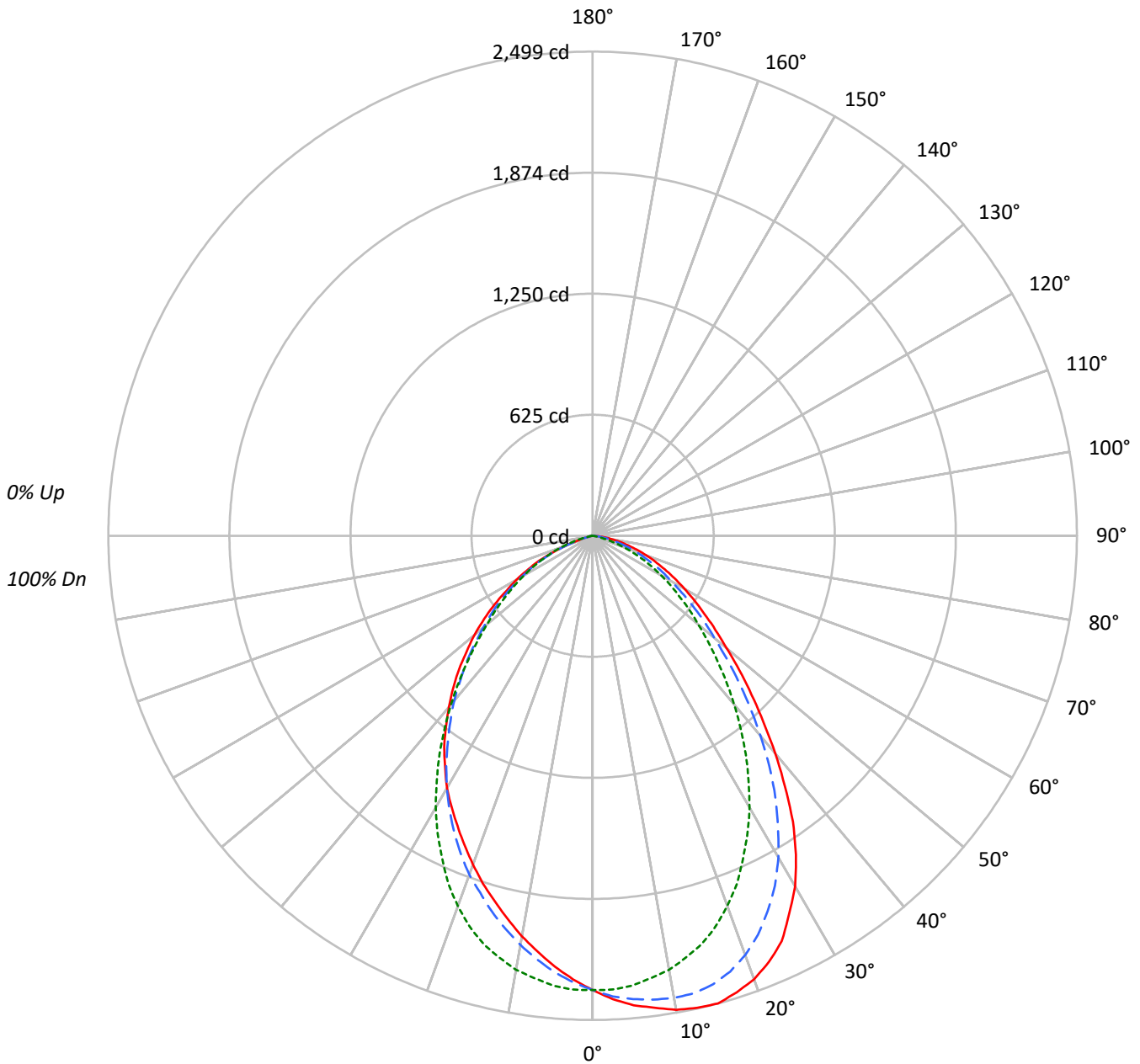
Input Watts (W): 52
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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									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	86	100	94	89	85	91	86	83	88	84	81	85	82	79	77																			
3	95	86	79	74	93	85	78	73	82	76	72	79	74	71	77	73	69	67																			
4	88	78	70	64	86	76	69	64	74	68	63	72	66	62	70	65	61	59																			
5	82	70	63	57	80	69	62	56	67	61	56	65	60	55	64	59	55	53																			
6	76	64	56	51	74	63	56	50	62	55	50	60	54	50	58	53	49	47																			
7	71	59	51	45	69	58	51	45	57	50	45	55	49	45	54	49	44	43																			
8	66	54	46	41	65	53	46	41	52	46	41	51	45	41	50	44	40	39																			
9	62	50	43	37	61	50	42	37	48	42	37	47	41	37	46	41	37	35																			
10	59	47	39	34	57	46	39	34	45	39	34	44	38	34	43	38	34	32																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	72299	72299	72299
5°	75290	72142	69102
10°	77804	71219	65733
15°	79772	69591	62319
20°	79932	66704	59228
25°	78579	62482	56160
30°	74372	57651	53531
35°	67812	51847	50266
40°	58972	45712	46413
45°	50587	39584	42488
50°	43209	34128	38167
55°	37875	29391	33160
60°	33716	25076	27888
65°	29923	20452	22254
70°	26543	15165	12640
75°	22137	7935	3753
80°	17421	2504	622
85°	12383	1238	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	220.9	5.1
10°-20°	619.2	14.2
20°-30°	876.4	20.1
30°-40°	916.9	21.0
40°-50°	764.8	17.5
50°-60°	542.3	12.4
60°-70°	312.4	7.2
70°-80°	100.5	2.3
80°-90°	13.8	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°	1716.6	39.3
0°-40°	2633.5	60.3
0°-60°	3940.6	90.2
0°-90°	4367.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4367.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2345	2345	2345	2345	2345	
5°	2432	2401	2331	2261	2232	233
15°	2499	2397	2180	2008	1952	703
25°	2310	2138	1836	1689	1651	1054
35°	1801	1644	1377	1304	1335	1117
45°	1160	1066	908	918	974	899
55°	704	631	547	575	617	636
65°	410	344	280	280	305	410
75°	186	137	67	32	32	201
85°	35	18	4	0	0	44
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	2344.6	2344.6	2344.6	2344.6	2344.6	2344.6	2344.6	2344.6	2344.6	2344.6	2344.6
2.5°	2393.7	2390.2	2386.7	2390.2	2386.7	2390.2	2386.7	2386.7	2383.1	2379.6	2379.6
5°	2432.3	2428.7	2428.7	2428.7	2425.2	2421.7	2421.7	2418.2	2411.2	2407.6	2400.7
7.5°	2456.7	2460.3	2460.3	2460.3	2453.2	2453.2	2446.2	2439.3	2432.3	2425.2	2414.7
10°	2484.8	2484.8	2481.2	2477.8	2470.8	2467.3	2463.8	2456.7	2446.2	2432.3	2421.7
12.5°	2495.3	2495.3	2491.8	2484.8	2481.2	2477.8	2474.3	2463.8	2449.7	2432.3	2418.2
15°	2498.8	2491.8	2488.3	2484.8	2477.8	2467.3	2467.3	2453.2	2435.8	2414.7	2397.2
17.5°	2470.8	2474.3	2467.3	2460.3	2449.7	2442.8	2432.3	2421.7	2400.7	2376.1	2358.6
20°	2435.8	2432.3	2428.7	2418.2	2404.2	2400.7	2390.2	2372.6	2355.1	2327.1	2302.5
22.5°	2379.6	2376.1	2369.2	2362.2	2348.1	2341.1	2330.6	2309.5	2285.0	2257.0	2228.9
25°	2309.5	2302.5	2292.1	2278.0	2267.5	2260.6	2246.5	2225.5	2197.4	2165.9	2137.8
27.5°	2197.4	2207.9	2200.9	2179.9	2169.4	2155.3	2151.9	2123.8	2099.3	2067.8	2036.2
30°	2088.7	2088.7	2078.3	2067.8	2050.2	2039.7	2025.7	2004.7	1980.1	1941.5	1917.0
32.5°	1952.1	1948.6	1934.6	1931.1	1917.0	1896.1	1892.5	1864.4	1839.9	1811.9	1780.4
35°	1801.4	1794.3	1780.4	1769.8	1762.8	1752.4	1741.8	1717.3	1692.7	1664.7	1643.7
37.5°	1629.7	1629.7	1626.1	1608.7	1601.7	1594.6	1584.1	1559.6	1545.5	1517.5	1496.5
40°	1465.0	1461.5	1450.9	1447.4	1440.4	1429.8	1422.9	1408.9	1387.9	1366.8	1345.8
42.5°	1303.7	1307.2	1293.2	1296.7	1282.8	1275.7	1272.2	1251.1	1240.7	1219.6	1202.1
45°	1160.0	1156.5	1149.5	1146.0	1139.1	1132.0	1125.0	1114.5	1097.0	1075.9	1065.5
47.5°	1026.9	1016.4	1016.4	1012.8	1009.3	995.4	991.9	981.3	970.8	949.8	935.7
50°	900.7	900.7	900.7	897.2	886.7	883.2	876.2	865.6	855.1	841.1	820.0
52.5°	799.1	799.1	799.1	795.6	781.5	778.1	774.6	760.5	746.4	736.0	722.0
55°	704.5	707.9	704.5	697.5	686.9	686.9	676.4	669.4	655.4	644.8	630.9
57.5°	623.9	623.9	616.8	613.3	606.3	602.8	595.8	588.8	571.2	560.8	543.2
60°	546.7	543.2	543.2	536.2	529.2	522.2	518.7	508.2	501.1	483.7	469.6
62.5°	476.7	476.7	469.6	469.6	455.6	455.6	452.2	441.6	431.1	413.6	406.6
65°	410.1	410.1	406.6	403.1	392.5	389.0	385.5	375.0	364.5	353.9	343.5
67.5°	350.4	350.4	343.5	340.0	333.0	329.4	322.4	315.4	305.0	294.4	283.9
70°	294.4	290.9	287.4	283.9	276.8	273.3	266.4	259.4	248.8	241.8	231.4
72.5°	238.3	238.3	234.9	227.8	224.3	220.8	217.3	210.3	199.7	189.3	182.2
75°	185.8	185.8	185.8	178.7	171.7	168.2	168.2	161.3	154.2	143.7	136.7
77.5°	143.7	140.2	136.7	136.7	129.6	126.2	122.7	119.2	108.6	105.1	98.1
80°	98.1	101.6	98.1	94.6	91.1	87.7	87.7	80.6	77.1	70.1	63.1
82.5°	66.6	63.1	63.1	59.5	59.5	56.0	56.0	49.1	45.6	42.1	38.6
85°	35.0	35.0	31.5	31.5	31.5	28.0	28.0	24.5	24.5	21.0	17.6
87.5°	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	7.0	7.0	7.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	2344.6	2344.6	2344.6	2344.6	2344.6	2344.6	2344.6	2344.6	2344.6	2344.6	2344.6
2.5°	2376.1	2369.2	2365.7	2365.7	2362.2	2358.6	2355.1	2351.6	2344.6	2344.6	2337.6
5°	2393.7	2386.7	2383.1	2372.6	2365.7	2365.7	2351.6	2348.1	2337.6	2330.6	2323.6
7.5°	2407.6	2393.7	2383.1	2372.6	2365.7	2358.6	2344.6	2330.6	2316.6	2302.5	2295.6
10°	2407.6	2393.7	2376.1	2358.6	2351.6	2344.6	2327.1	2306.0	2288.6	2274.5	2257.0
12.5°	2400.7	2379.6	2358.6	2344.6	2330.6	2320.1	2299.0	2278.0	2257.0	2228.9	2215.0
15°	2379.6	2351.6	2330.6	2306.0	2295.6	2278.0	2260.6	2228.9	2204.4	2179.9	2162.3
17.5°	2337.6	2302.5	2278.0	2253.5	2235.9	2225.5	2197.4	2169.4	2141.4	2113.4	2092.3
20°	2274.5	2243.0	2215.0	2183.4	2169.4	2155.3	2120.3	2092.3	2064.2	2032.7	2011.6
22.5°	2197.4	2165.9	2127.3	2102.8	2081.7	2064.2	2032.7	2001.2	1973.1	1945.1	1917.0
25°	2102.8	2071.3	2036.2	1997.7	1983.6	1966.1	1931.1	1899.6	1867.9	1836.4	1811.9
27.5°	2001.2	1959.1	1931.1	1889.0	1875.0	1857.5	1818.9	1783.9	1755.8	1731.3	1703.3
30°	1878.5	1847.0	1808.4	1769.8	1755.8	1738.3	1706.8	1675.3	1647.1	1619.1	1591.1
32.5°	1745.3	1713.8	1675.3	1647.1	1626.1	1612.1	1580.6	1552.5	1524.5	1496.5	1471.9
35°	1605.2	1570.1	1542.0	1514.0	1496.5	1478.9	1447.4	1422.9	1401.8	1377.3	1352.8
37.5°	1461.5	1436.9	1408.9	1377.3	1359.8	1345.8	1321.3	1293.2	1275.7	1254.6	1237.2
40°	1321.3	1293.2	1268.7	1240.7	1226.6	1216.1	1191.6	1170.6	1153.0	1135.6	1125.0
42.5°	1177.5	1153.0	1128.5	1110.9	1100.5	1090.0	1072.4	1047.9	1037.3	1019.9	1009.3
45°	1044.4	1023.4	1005.8	981.3	974.3	967.3	946.3	928.7	918.3	907.7	900.7
47.5°	918.3	904.2	883.2	869.2	858.6	851.6	837.6	823.6	813.1	806.1	799.1
50°	809.6	792.0	778.1	764.0	757.0	746.4	732.5	725.5	718.4	711.4	711.4
52.5°	707.9	690.4	676.4	665.9	658.9	651.9	641.3	637.8	630.9	630.9	627.4
55°	613.3	602.8	588.8	574.7	571.2	567.7	560.8	553.8	550.3	546.7	550.3
57.5°	532.7	522.2	508.2	497.6	494.1	490.6	487.2	480.2	476.7	476.7	476.7
60°	459.1	448.6	438.1	427.5	427.5	420.5	417.0	413.6	410.1	406.6	406.6
62.5°	392.5	382.0	371.5	364.5	361.0	357.5	350.4	346.9	343.5	343.5	340.0
65°	333.0	318.9	315.4	305.0	301.4	297.9	294.4	287.4	283.9	280.3	276.8
67.5°	273.3	266.4	255.8	248.8	245.3	241.8	238.3	231.4	227.8	224.3	217.3
70°	220.8	213.8	206.7	199.7	196.3	192.8	185.8	178.7	175.2	168.2	157.8
72.5°	171.7	164.7	157.8	150.7	147.2	143.7	136.7	129.6	122.7	115.7	108.6
75°	129.6	122.7	112.2	105.1	101.6	101.6	91.1	84.1	77.1	66.6	59.5
77.5°	91.1	80.6	77.1	70.1	66.6	59.5	52.6	45.6	38.6	35.0	28.0
80°	59.5	52.6	45.6	42.1	38.6	35.0	31.5	24.5	17.6	14.1	10.5
82.5°	35.0	31.5	28.0	24.5	21.0	17.6	14.1	14.1	10.5	7.0	3.5
85°	17.6	14.1	10.5	10.5	7.0	7.0	7.0	3.5	3.5	3.5	3.5
87.5°	7.0	3.5	3.5	3.5	3.5	3.5	3.5	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



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CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	2344.6	2344.6	2344.6	2344.6	2344.6	2344.6	2344.6	2344.6	2344.6	2344.6	2344.6
2.5°	2334.2	2330.6	2327.1	2323.6	2323.6	2316.6	2316.6	2313.1	2306.0	2302.5	2302.5
5°	2313.1	2302.5	2295.6	2292.1	2288.6	2278.0	2274.5	2267.5	2260.6	2253.5	2250.0
7.5°	2281.5	2264.0	2257.0	2253.5	2243.0	2232.4	2225.5	2215.0	2204.4	2193.9	2190.4
10°	2243.0	2225.5	2207.9	2200.9	2190.4	2183.4	2169.4	2155.3	2144.9	2134.3	2123.8
12.5°	2193.9	2172.9	2155.3	2148.4	2137.8	2123.8	2102.8	2095.8	2078.3	2071.3	2057.2
15°	2137.8	2113.4	2095.8	2085.2	2074.8	2053.7	2039.7	2025.7	2008.2	2001.2	1987.1
17.5°	2067.8	2039.7	2022.2	2011.6	2004.7	1987.1	1966.1	1948.6	1931.1	1924.1	1913.5
20°	1983.6	1966.1	1941.5	1931.1	1924.1	1903.0	1882.0	1875.0	1861.0	1847.0	1836.4
22.5°	1889.0	1871.4	1847.0	1836.4	1832.9	1815.4	1797.8	1787.4	1776.9	1766.3	1755.8
25°	1790.9	1769.8	1748.9	1741.8	1734.8	1720.7	1706.8	1699.8	1689.2	1682.3	1675.3
27.5°	1685.7	1664.7	1647.1	1636.7	1629.7	1619.1	1612.1	1605.2	1598.1	1591.1	1587.6
30°	1573.6	1552.5	1538.5	1531.6	1524.5	1521.0	1510.5	1507.0	1503.4	1496.5	1500.0
32.5°	1461.5	1443.9	1429.8	1419.4	1419.4	1412.4	1408.9	1408.9	1405.3	1405.3	1405.3
35°	1338.8	1328.2	1317.8	1314.3	1310.8	1307.2	1303.7	1307.2	1303.7	1307.2	1310.8
37.5°	1226.6	1216.1	1209.2	1205.6	1202.1	1205.6	1202.1	1202.1	1205.6	1212.7	1216.1
40°	1110.9	1104.0	1097.0	1100.5	1097.0	1097.0	1097.0	1107.4	1110.9	1114.5	1118.0
42.5°	1002.3	995.4	991.9	991.9	995.4	991.9	998.8	1002.3	1009.3	1019.9	1026.9
45°	897.2	893.6	893.6	897.2	893.6	900.7	900.7	907.7	918.3	925.2	932.2
47.5°	799.1	799.1	799.1	802.6	802.6	806.1	813.1	816.5	823.6	830.6	837.6
50°	707.9	711.4	714.9	714.9	714.9	722.0	729.0	732.5	736.0	739.5	750.0
52.5°	627.4	630.9	630.9	634.3	637.8	641.3	644.8	651.9	655.4	662.4	665.9
55°	550.3	550.3	557.3	560.8	560.8	560.8	567.7	567.7	574.7	578.3	585.3
57.5°	476.7	480.2	480.2	483.7	483.7	487.2	490.6	494.1	497.6	501.1	504.7
60°	406.6	406.6	406.6	410.1	413.6	417.0	413.6	420.5	420.5	427.5	431.1
62.5°	340.0	343.5	343.5	343.5	343.5	343.5	343.5	346.9	350.4	353.9	357.5
65°	276.8	276.8	276.8	273.3	276.8	273.3	276.8	280.3	280.3	283.9	287.4
67.5°	213.8	213.8	206.7	206.7	210.3	210.3	210.3	210.3	206.7	213.8	213.8
70°	154.2	150.7	147.2	143.7	143.7	140.2	140.2	136.7	136.7	136.7	136.7
72.5°	101.6	94.6	87.7	84.1	80.6	80.6	73.6	70.1	73.6	73.6	73.6
75°	52.6	45.6	42.1	38.6	35.0	35.0	31.5	31.5	31.5	31.5	31.5
77.5°	21.0	17.6	14.1	14.1	10.5	10.5	10.5	10.5	10.5	10.5	10.5
80°	7.0	7.0	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
82.5°	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
85°	3.5	0.0	0.0	3.5	0.0	3.5	3.5	3.5	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: P585031

CATALOG NUMBER: HC855D010-HM82555935-81WWBB

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	2344.6	2344.6	2344.6	2344.6	2344.6	2344.6	2344.6	2344.6
2.5°	2299.0	2299.0	2295.6	2299.0	2292.1	2295.6	2292.1	2292.1
5°	2246.5	2239.5	2239.5	2239.5	2235.9	2235.9	2232.4	2232.4
7.5°	2183.4	2179.9	2176.4	2172.9	2169.4	2165.9	2165.9	2165.9
10°	2120.3	2113.4	2113.4	2109.8	2102.8	2099.3	2099.3	2099.3
12.5°	2046.7	2043.3	2039.7	2039.7	2025.7	2029.2	2025.7	2025.7
15°	1976.6	1973.1	1973.1	1962.6	1955.6	1955.6	1955.6	1952.1
17.5°	1903.0	1899.6	1896.1	1889.0	1882.0	1882.0	1878.5	1882.0
20°	1826.0	1822.5	1815.4	1815.4	1811.9	1808.4	1801.4	1804.9
22.5°	1748.9	1741.8	1738.3	1738.3	1734.8	1734.8	1727.8	1727.8
25°	1668.2	1664.7	1661.2	1664.7	1657.7	1657.7	1650.6	1650.6
27.5°	1584.1	1580.6	1580.6	1580.6	1577.0	1580.6	1577.0	1577.0
30°	1500.0	1500.0	1496.5	1496.5	1500.0	1496.5	1500.0	1503.4
32.5°	1408.9	1408.9	1412.4	1412.4	1415.9	1415.9	1415.9	1415.9
35°	1314.3	1321.3	1321.3	1324.7	1328.2	1331.7	1331.7	1335.3
37.5°	1226.6	1230.1	1233.6	1237.2	1244.2	1244.2	1244.2	1244.2
40°	1132.0	1135.6	1142.5	1139.1	1153.0	1156.5	1153.0	1153.0
42.5°	1033.8	1040.9	1044.4	1051.4	1054.9	1061.9	1065.5	1065.5
45°	942.8	946.3	953.3	960.2	963.7	974.3	974.3	974.3
47.5°	848.2	855.1	858.6	865.6	869.2	879.7	883.2	879.7
50°	757.0	764.0	771.1	771.1	781.5	785.0	792.0	795.6
52.5°	669.4	672.8	679.9	683.4	690.4	697.5	701.0	704.5
55°	585.3	588.8	595.8	595.8	606.3	609.8	616.8	616.8
57.5°	508.2	511.7	518.7	515.2	522.2	529.2	529.2	525.6
60°	434.6	434.6	434.6	441.6	445.1	448.6	452.2	452.2
62.5°	357.5	364.5	368.0	368.0	371.5	375.0	375.0	371.5
65°	287.4	294.4	297.9	297.9	301.4	301.4	301.4	305.0
67.5°	217.3	217.3	217.3	220.8	217.3	217.3	217.3	217.3
70°	136.7	136.7	136.7	136.7	133.1	136.7	136.7	140.2
72.5°	73.6	73.6	73.6	73.6	73.6	73.6	73.6	73.6
75°	31.5	31.5	31.5	35.0	31.5	31.5	31.5	31.5
77.5°	14.1	10.5	14.1	14.1	10.5	10.5	10.5	10.5
80°	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
82.5°	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
85°	0.0	3.5	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)