

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: P585067

Luminaire Tested: **HC860D010-HM86080827-81WWWB**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P585067
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2109-368-18)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 10/21/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HC860D010-HM86080827-81WWWB
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, BLACK BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4937.0 lumens
Efficiency: N/A
Efficacy: 88.2 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 1.09 / 1.18
Luminous Opening: Circular (Dia: 0.67' x H: 0')
CIE Type: Direct

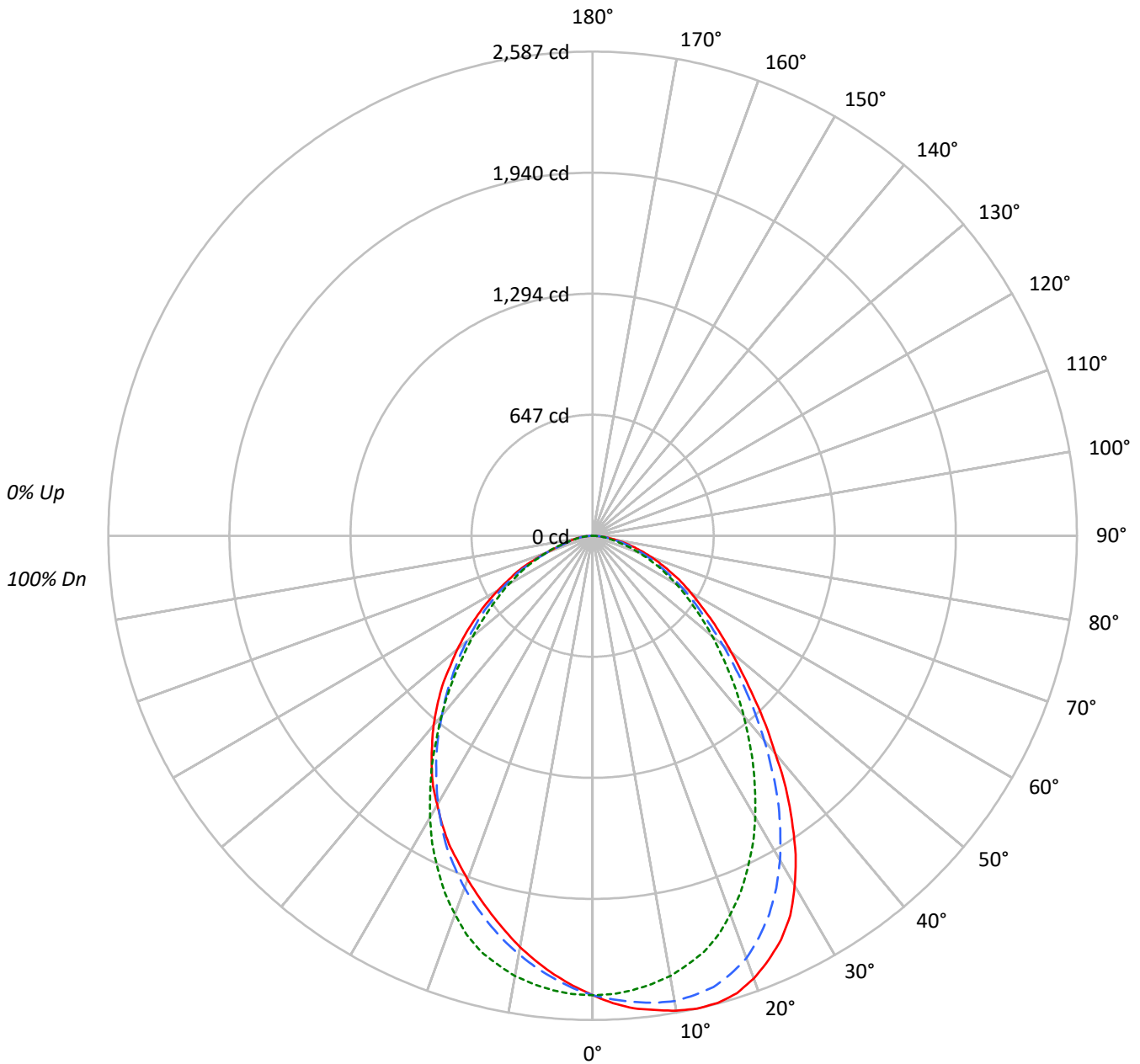
Input Watts (W): 56
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P585067

CATALOG NUMBER: HC860D010-HM86080827-81WWWB

Luminous Intensity Polar Plot





TEST NUMBER: P585067

CATALOG NUMBER: HC860D010-HM86080827-81WWWB

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	110	106	103	99	108	104	101	98	100	97	95	96	94	92	92	91	89	87								
2	102	94	88	83	99	93	87	82	89	85	81	86	82	79	83	80	77	75								
3	94	84	77	71	91	83	76	71	80	74	69	77	72	68	75	71	67	65								
4	87	76	68	62	84	75	67	61	72	66	61	70	64	60	68	63	59	57								
5	80	69	60	54	78	67	60	54	65	59	54	64	58	53	62	57	52	50								
6	75	62	54	48	73	61	54	48	60	53	48	58	52	47	57	51	47	45								
7	70	57	49	43	68	56	49	43	55	48	43	53	47	43	52	47	42	40								
8	65	52	45	39	64	52	44	39	51	44	39	49	43	39	48	43	38	37								
9	61	48	41	36	60	48	41	36	47	40	35	46	40	35	45	39	35	33								
10	57	45	38	33	56	44	37	33	44	37	32	43	37	32	42	36	32	30								

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	75694	75694	75694
5°	78466	75441	72854
10°	80682	74789	69876
15°	82482	73467	66785
20°	82609	70596	64075
25°	81025	66674	61808
30°	76854	61827	59096
35°	69830	56308	56440
40°	61053	50527	53196
45°	52915	45009	49571
50°	46337	39976	45162
55°	41240	35434	40864
60°	37201	31823	35906
65°	33578	27982	31287
70°	30176	23577	23261
75°	26593	18693	17454
80°	22286	15485	16710
85°	17266	13586	14825



TEST NUMBER: P585067

CATALOG NUMBER: HC860D010-HM86080827-81WWWB

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	231.6	4.7
10°-20°	652.2	13.2
20°-30°	932.1	18.9
30°-40°	990.4	20.1
40°-50°	852.8	17.3
50°-60°	637.6	12.9
60°-70°	406.7	8.2
70°-80°	185.1	3.7
80°-90°	48.6	1.0
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°	1816.0	36.8
0°-40°	2806.4	56.8
0°-60°	4296.7	87.0
0°-90°	4937.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4937.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2455	2455	2455	2455	2455	
5°	2535	2500	2437	2374	2354	243
15°	2584	2496	2301	2144	2092	728
25°	2381	2232	1960	1841	1817	1090
35°	1855	1726	1496	1457	1499	1155
45°	1213	1147	1032	1060	1137	943
55°	767	704	659	715	760	690
65°	460	408	384	401	429	459
75°	223	192	157	143	146	237
85°	49	42	38	42	42	59
90°	0	0	0	0	0	



TEST NUMBER: P585067

CATALOG NUMBER: HC860D010-HM86080827-81WWWB

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	2454.7	2454.7	2454.7	2454.7	2454.7	2454.7	2454.7	2454.7	2454.7	2454.7	2454.7
2.5°	2500.0	2493.1	2496.5	2493.1	2496.5	2496.5	2489.6	2489.6	2489.6	2489.6	2479.1
5°	2534.9	2531.4	2531.4	2527.9	2524.4	2527.9	2524.4	2521.0	2514.0	2510.5	2500.0
7.5°	2555.8	2555.8	2555.8	2555.8	2552.4	2548.8	2545.3	2538.4	2531.4	2524.4	2517.4
10°	2576.7	2580.3	2576.7	2573.2	2569.8	2562.7	2559.3	2552.4	2541.9	2531.4	2524.4
12.5°	2587.2	2587.2	2583.7	2583.7	2576.7	2573.2	2562.7	2552.4	2541.9	2531.4	2514.0
15°	2583.7	2583.7	2580.3	2576.7	2566.3	2562.7	2555.8	2545.3	2527.9	2514.0	2496.5
17.5°	2562.7	2559.3	2552.4	2552.4	2538.4	2534.9	2527.9	2514.0	2496.5	2475.7	2454.7
20°	2517.4	2517.4	2514.0	2510.5	2496.5	2486.0	2479.1	2461.7	2447.7	2423.3	2402.4
22.5°	2454.7	2461.7	2454.7	2447.7	2430.3	2426.8	2416.4	2395.4	2374.5	2346.6	2322.3
25°	2381.4	2378.0	2374.5	2367.5	2353.6	2346.6	2332.6	2311.8	2290.8	2259.4	2231.6
27.5°	2287.3	2273.4	2273.4	2259.4	2249.0	2238.5	2231.6	2210.6	2182.7	2158.4	2123.4
30°	2158.4	2161.8	2144.4	2140.9	2123.4	2116.5	2102.5	2081.7	2057.2	2029.3	2001.4
32.5°	2018.8	2008.4	2008.4	1994.5	1980.5	1970.0	1966.5	1942.1	1921.2	1893.3	1865.4
35°	1855.0	1855.0	1844.5	1841.1	1827.1	1820.1	1809.7	1795.7	1771.3	1746.8	1725.9
37.5°	1694.6	1687.7	1684.1	1677.2	1666.7	1656.2	1656.2	1631.8	1628.4	1600.5	1572.5
40°	1516.7	1523.8	1516.7	1506.3	1502.8	1495.8	1492.4	1478.4	1467.9	1443.5	1426.1
42.5°	1366.8	1359.9	1359.9	1356.4	1342.4	1342.4	1335.4	1328.5	1311.1	1304.0	1283.2
45°	1213.4	1220.4	1209.9	1213.4	1199.4	1199.4	1199.4	1185.5	1171.5	1161.1	1147.2
47.5°	1080.9	1084.4	1084.4	1073.9	1070.5	1070.5	1063.4	1056.5	1046.0	1032.1	1021.7
50°	965.9	969.3	962.4	958.8	951.9	948.4	948.4	934.5	927.4	913.5	906.6
52.5°	861.2	861.2	857.8	857.8	847.3	847.3	840.4	829.9	822.8	815.9	798.5
55°	767.1	767.1	763.6	760.1	760.1	749.7	746.1	735.8	728.7	714.8	704.4
57.5°	676.5	679.9	676.5	672.9	669.4	666.0	659.1	648.6	641.5	631.1	624.1
60°	603.2	603.2	599.8	596.2	589.3	585.8	582.2	575.3	564.8	557.9	547.4
62.5°	533.4	530.0	526.5	523.1	516.0	516.0	509.1	502.1	491.6	484.7	477.7
65°	460.2	460.2	456.7	456.7	453.3	446.4	442.8	439.3	425.4	421.9	408.0
67.5°	394.0	397.5	390.5	390.5	383.5	383.5	380.0	369.5	366.1	359.2	352.1
70°	334.7	334.7	334.7	331.3	324.2	320.8	317.3	310.4	306.8	299.9	292.8
72.5°	275.4	275.4	272.0	272.0	268.5	265.1	261.5	254.6	254.6	247.5	240.6
75°	223.2	223.2	219.7	216.1	212.7	212.7	209.2	205.8	198.7	195.3	191.8
77.5°	170.8	170.8	170.8	167.4	163.9	163.9	163.9	156.9	149.9	149.9	146.5
80°	125.5	125.5	122.0	122.0	118.6	118.6	118.6	115.1	111.5	108.1	104.6
82.5°	83.7	83.7	83.7	83.7	80.2	80.2	80.2	76.7	73.2	73.2	73.2
85°	48.8	48.8	48.8	48.8	45.3	45.3	45.3	45.3	45.3	41.9	41.9
87.5°	20.9	17.4	20.9	17.4	20.9	17.4	20.9	17.4	17.4	17.4	17.4
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: P585067

CATALOG NUMBER: HC860D010-HM86080827-81WWWB

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	2454.7	2454.7	2454.7	2454.7	2454.7	2454.7	2454.7	2454.7	2454.7	2454.7	2454.7
2.5°	2482.6	2479.1	2475.7	2472.1	2472.1	2468.6	2461.7	2458.1	2454.7	2451.2	2451.2
5°	2496.5	2493.1	2486.0	2479.1	2475.7	2468.6	2461.7	2454.7	2447.7	2437.2	2433.8
7.5°	2507.0	2496.5	2489.6	2475.7	2472.1	2465.2	2454.7	2444.3	2430.3	2416.4	2405.9
10°	2507.0	2493.1	2482.6	2465.2	2458.1	2451.2	2437.2	2419.8	2402.4	2388.5	2371.0
12.5°	2500.0	2482.6	2465.2	2447.7	2437.2	2426.8	2405.9	2388.5	2367.5	2346.6	2332.6
15°	2475.7	2454.7	2433.8	2412.8	2402.4	2388.5	2367.5	2343.1	2322.3	2301.3	2276.9
17.5°	2430.3	2409.3	2385.0	2360.5	2346.6	2336.1	2304.7	2287.3	2255.9	2235.1	2214.1
20°	2371.0	2346.6	2315.2	2290.8	2273.4	2263.0	2238.5	2207.1	2182.7	2151.3	2130.4
22.5°	2294.3	2263.0	2231.6	2207.1	2189.7	2175.8	2144.4	2113.0	2092.0	2064.1	2039.8
25°	2203.7	2172.3	2140.9	2106.0	2088.6	2074.6	2046.7	2018.8	1991.0	1959.6	1938.6
27.5°	2095.6	2060.7	2032.8	2001.4	1984.0	1963.1	1931.7	1903.8	1875.9	1855.0	1827.1
30°	1977.0	1938.6	1910.7	1879.3	1861.9	1844.5	1813.1	1785.2	1760.8	1736.4	1722.5
32.5°	1834.0	1806.1	1778.3	1746.8	1733.0	1722.5	1691.1	1663.2	1635.3	1614.4	1603.9
35°	1698.0	1666.7	1642.3	1614.4	1597.0	1586.5	1558.6	1534.1	1520.2	1495.8	1481.9
37.5°	1555.1	1530.7	1502.8	1474.9	1464.5	1454.0	1433.1	1408.6	1387.8	1370.4	1363.3
40°	1405.2	1384.3	1359.9	1342.4	1331.9	1321.5	1304.0	1286.6	1272.7	1255.2	1248.3
42.5°	1262.2	1248.3	1227.3	1206.5	1196.0	1192.5	1171.5	1157.7	1150.6	1143.7	1136.7
45°	1133.2	1112.3	1098.4	1084.4	1073.9	1067.0	1056.5	1046.0	1039.1	1032.1	1025.1
47.5°	1007.7	990.2	976.4	965.9	955.4	951.9	944.9	934.5	927.4	927.4	927.4
50°	892.6	878.7	864.7	857.8	854.2	847.3	840.4	836.8	833.3	833.3	833.3
52.5°	791.5	777.5	767.1	760.1	760.1	753.2	746.1	742.7	742.7	742.7	742.7
55°	697.3	686.8	679.9	672.9	666.0	662.5	662.5	662.5	659.1	659.1	662.5
57.5°	613.7	606.7	596.2	589.3	585.8	585.8	582.2	578.8	582.2	585.8	589.3
60°	536.9	530.0	526.5	516.0	516.0	516.0	512.6	512.6	512.6	516.0	519.5
62.5°	467.2	463.8	456.7	453.3	449.8	449.8	446.4	446.4	446.4	446.4	449.8
65°	404.5	397.5	390.5	390.5	390.5	387.1	387.1	380.0	383.5	383.5	380.0
67.5°	345.2	338.2	334.7	331.3	327.8	327.8	324.2	320.8	317.3	317.3	317.3
70°	289.4	282.5	282.5	275.4	275.4	272.0	268.5	268.5	265.1	261.5	258.0
72.5°	233.6	230.1	226.6	223.2	223.2	223.2	219.7	216.1	212.7	209.2	202.2
75°	184.8	184.8	177.9	174.4	174.4	170.8	167.4	163.9	160.4	156.9	153.4
77.5°	142.9	139.4	132.5	129.1	129.1	129.1	125.5	122.0	118.6	115.1	111.5
80°	104.6	101.2	97.6	94.1	94.1	94.1	90.7	90.7	87.2	87.2	87.2
82.5°	69.8	69.8	66.2	66.2	66.2	66.2	62.7	62.7	62.7	62.7	62.7
85°	41.9	41.9	38.4	38.4	38.4	38.4	38.4	38.4	38.4	38.4	38.4
87.5°	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4
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: P585067

CATALOG NUMBER: HC860D010-HM86080827-81WWWB

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	2454.7	2454.7	2454.7	2454.7	2454.7	2454.7	2454.7	2454.7	2454.7	2454.7	2454.7
2.5°	2444.3	2444.3	2437.2	2433.8	2430.3	2433.8	2426.8	2423.3	2419.8	2419.8	2416.4
5°	2423.3	2419.8	2405.9	2402.4	2399.0	2395.4	2388.5	2381.4	2374.5	2371.0	2367.5
7.5°	2395.4	2385.0	2371.0	2367.5	2364.0	2353.6	2343.1	2336.1	2325.7	2322.3	2315.2
10°	2357.1	2343.1	2332.6	2322.3	2315.2	2304.7	2294.3	2283.8	2269.9	2266.4	2255.9
12.5°	2311.8	2294.3	2273.4	2269.9	2259.4	2245.4	2231.6	2221.1	2210.6	2203.7	2193.2
15°	2255.9	2238.5	2217.6	2207.1	2196.7	2186.3	2168.7	2154.8	2144.4	2133.9	2123.4
17.5°	2189.7	2168.7	2151.3	2140.9	2133.9	2116.5	2102.5	2085.1	2074.6	2064.1	2053.7
20°	2109.5	2092.0	2067.7	2057.2	2053.7	2039.8	2022.4	2015.3	2001.4	1991.0	1984.0
22.5°	2018.8	2001.4	1980.5	1973.5	1959.6	1952.6	1935.2	1928.1	1921.2	1910.7	1907.3
25°	1917.8	1900.3	1882.8	1879.3	1869.0	1861.9	1851.4	1841.1	1841.1	1830.6	1830.6
27.5°	1813.1	1795.7	1781.8	1774.7	1771.3	1764.4	1753.9	1750.4	1746.8	1743.4	1743.4
30°	1701.5	1680.6	1673.7	1670.1	1666.7	1659.7	1656.2	1649.2	1652.7	1656.2	1652.7
32.5°	1583.0	1576.0	1562.0	1555.1	1558.6	1555.1	1548.1	1555.1	1551.7	1558.6	1562.0
35°	1467.9	1461.0	1454.0	1454.0	1447.1	1447.1	1447.1	1450.5	1457.4	1461.0	1467.9
37.5°	1356.4	1345.9	1342.4	1339.0	1342.4	1342.4	1342.4	1349.4	1356.4	1363.3	1373.8
40°	1237.8	1230.8	1230.8	1230.8	1230.8	1241.3	1237.8	1244.7	1251.8	1262.2	1272.7
42.5°	1126.2	1126.2	1129.8	1129.8	1129.8	1129.8	1136.7	1147.2	1157.7	1168.0	1178.5
45°	1021.7	1021.7	1021.7	1028.6	1028.6	1032.1	1046.0	1053.1	1060.0	1070.5	1080.9
47.5°	924.0	924.0	927.4	931.0	934.5	941.4	948.4	958.8	969.3	976.4	986.7
50°	833.3	836.8	843.8	850.7	850.7	854.2	864.7	871.7	878.7	889.2	892.6
52.5°	746.1	753.2	760.1	763.6	767.1	774.0	777.5	788.0	791.5	802.0	805.4
55°	666.0	669.4	679.9	683.4	683.4	690.4	697.3	704.4	714.8	714.8	721.8
57.5°	592.7	596.2	603.2	606.7	603.2	613.7	617.2	624.1	627.6	634.6	638.1
60°	519.5	526.5	530.0	530.0	533.4	536.9	543.9	543.9	550.9	557.9	557.9
62.5°	449.8	453.3	456.7	460.2	463.8	460.2	470.7	470.7	477.7	481.2	488.1
65°	383.5	387.1	387.1	390.5	390.5	394.0	394.0	397.5	401.0	408.0	411.4
67.5°	317.3	317.3	317.3	320.8	317.3	320.8	320.8	324.2	324.2	331.3	334.7
70°	258.0	254.6	251.1	251.1	251.1	251.1	247.5	251.1	251.1	254.6	254.6
72.5°	198.7	195.3	191.8	188.2	188.2	184.8	181.3	184.8	184.8	188.2	188.2
75°	149.9	142.9	142.9	142.9	139.4	139.4	139.4	142.9	142.9	142.9	146.5
77.5°	111.5	111.5	108.1	108.1	108.1	111.5	111.5	115.1	115.1	115.1	115.1
80°	83.7	87.2	87.2	87.2	87.2	90.7	90.7	90.7	90.7	94.1	94.1
82.5°	62.7	62.7	62.7	62.7	66.2	66.2	66.2	66.2	66.2	66.2	66.2
85°	38.4	41.9	41.9	38.4	41.9	41.9	41.9	41.9	41.9	41.9	41.9
87.5°	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4
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: P585067

CATALOG NUMBER: HC860D010-HM86080827-81WWWB

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	2454.7	2454.7	2454.7	2454.7	2454.7	2454.7	2454.7	2454.7
2.5°	2412.8	2412.8	2412.8	2412.8	2409.3	2409.3	2409.3	2405.9
5°	2360.5	2360.5	2360.5	2353.6	2357.1	2357.1	2350.1	2353.6
7.5°	2308.3	2304.7	2301.3	2301.3	2297.8	2294.3	2290.8	2294.3
10°	2249.0	2238.5	2238.5	2235.1	2235.1	2228.0	2228.0	2231.6
12.5°	2182.7	2175.8	2175.8	2172.3	2168.7	2165.3	2161.8	2161.8
15°	2116.5	2109.5	2106.0	2102.5	2099.1	2092.0	2095.6	2092.0
17.5°	2050.3	2039.8	2039.8	2036.3	2032.8	2025.8	2025.8	2022.4
20°	1973.5	1970.0	1963.1	1966.5	1963.1	1956.1	1952.6	1952.6
22.5°	1896.8	1896.8	1893.3	1893.3	1889.8	1886.4	1882.8	1882.8
25°	1823.6	1820.1	1823.6	1823.6	1813.1	1813.1	1813.1	1816.6
27.5°	1739.9	1743.4	1739.9	1739.9	1739.9	1739.9	1743.4	1739.9
30°	1656.2	1656.2	1656.2	1659.7	1666.7	1663.2	1663.2	1659.7
32.5°	1565.5	1569.1	1569.1	1572.5	1576.0	1583.0	1583.0	1586.5
35°	1474.9	1481.9	1485.3	1481.9	1492.4	1492.4	1499.3	1499.3
37.5°	1380.7	1384.3	1391.2	1394.7	1401.7	1405.2	1408.6	1408.6
40°	1279.7	1293.7	1297.1	1300.6	1311.1	1311.1	1314.5	1321.5
42.5°	1185.5	1199.4	1203.0	1206.5	1213.4	1223.9	1220.4	1227.3
45°	1094.8	1105.3	1108.8	1112.3	1122.7	1126.2	1126.2	1136.7
47.5°	997.2	1004.2	1007.7	1014.6	1021.7	1028.6	1035.5	1032.1
50°	899.5	910.0	917.1	920.5	931.0	934.5	937.9	941.4
52.5°	812.5	819.4	822.8	826.4	836.8	840.4	843.8	850.7
55°	728.7	732.2	739.2	735.8	746.1	749.7	753.2	760.1
57.5°	645.1	648.6	652.0	652.0	659.1	666.0	669.4	672.9
60°	564.8	571.9	575.3	575.3	575.3	582.2	582.2	582.2
62.5°	491.6	491.6	495.2	495.2	502.1	502.1	502.1	502.1
65°	414.9	418.5	421.9	421.9	428.8	425.4	432.4	428.8
67.5°	334.7	334.7	341.8	341.8	338.2	341.8	341.8	341.8
70°	254.6	254.6	258.0	258.0	258.0	258.0	258.0	258.0
72.5°	188.2	188.2	188.2	191.8	188.2	188.2	191.8	188.2
75°	146.5	146.5	146.5	146.5	146.5	146.5	146.5	146.5
77.5°	115.1	115.1	118.6	118.6	118.6	118.6	118.6	118.6
80°	94.1	94.1	94.1	94.1	97.6	94.1	94.1	94.1
82.5°	69.8	66.2	69.8	66.2	69.8	69.8	69.8	69.8
85°	41.9	41.9	41.9	41.9	41.9	41.9	41.9	41.9
87.5°	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4
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)