

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: P585058

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

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P585058
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: HC860D010-HM86080827-81RWWC
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: 4964.9 lumens
Efficiency: N/A
Efficacy: 88.7 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

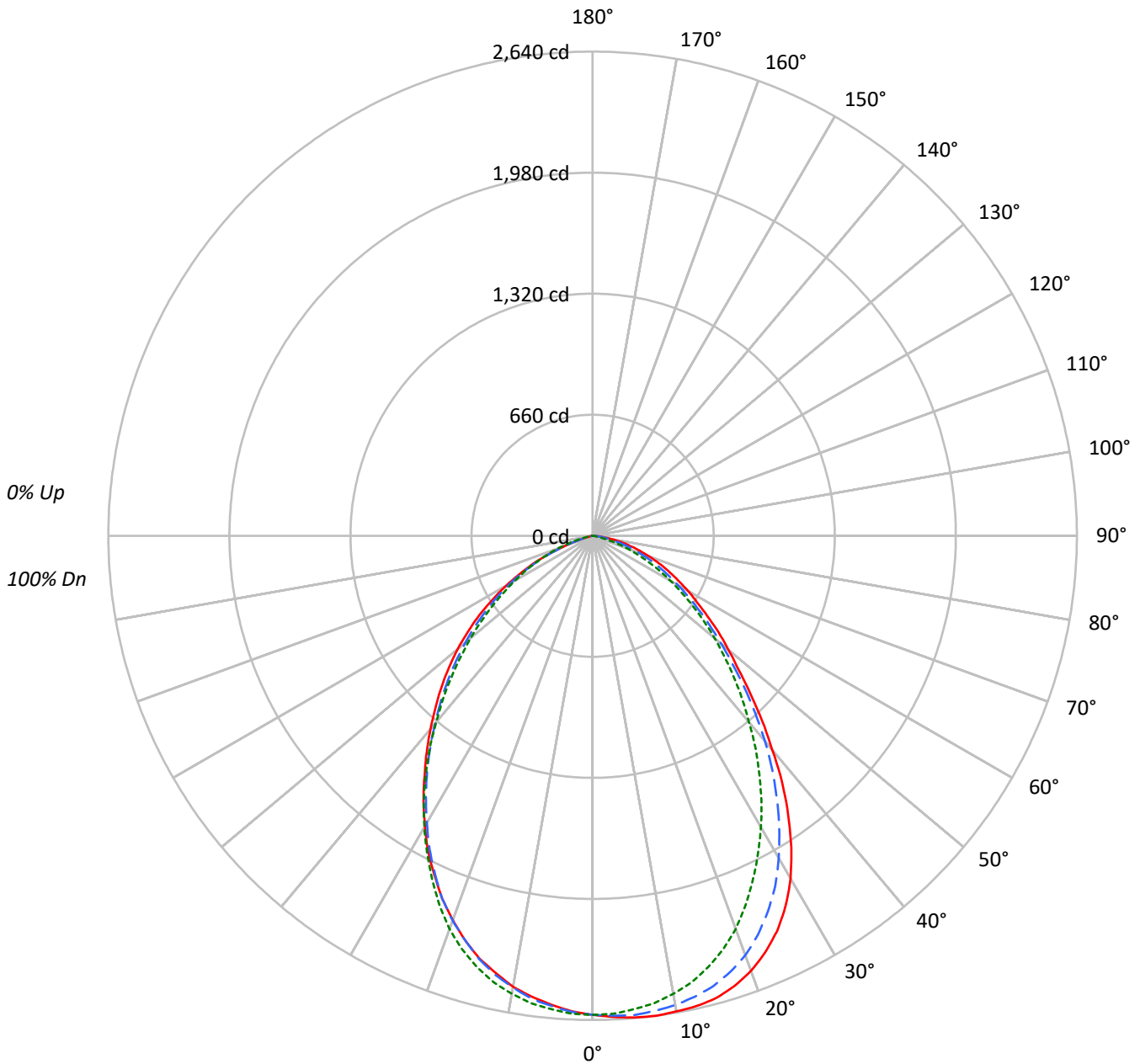
Input Watts (W): 56
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P585058

CATALOG NUMBER: HC860D010-HM86080827-81RWWC

Luminous Intensity Polar Plot





TEST NUMBER: P585058

CATALOG NUMBER: HC860D010-HM86080827-81RWWC

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				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				100
1	111	107	104	101	108	105	102	99	101	98	96	97	95	93	93	92	90	88				88
2	103	96	90	85	100	94	89	84	91	86	82	87	84	81	85	82	79	77				77
3	95	86	79	73	93	84	78	73	82	76	72	79	74	70	76	73	69	67				67
4	88	77	70	64	86	76	69	64	74	68	63	72	66	62	69	65	61	59				59
5	81	70	62	56	80	69	62	56	67	61	56	65	59	55	63	58	54	52				52
6	76	64	56	50	74	63	55	50	61	55	50	60	54	49	58	53	49	47				47
7	71	59	51	45	69	58	50	45	56	50	45	55	49	44	54	48	44	42				42
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38				38
9	62	50	42	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35				35
10	58	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32				32

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	80554	80554	80554
5°	81620	80211	79459
10°	82451	79395	78192
15°	83287	77719	76158
20°	82862	74852	73136
25°	80933	70372	69423
30°	76871	65324	65075
35°	69977	59606	60129
40°	61351	53353	55317
45°	52928	47455	50800
50°	46347	41660	46015
55°	41063	35816	40504
60°	36997	30109	33556
65°	33338	24181	25698
70°	29239	17608	14155
75°	24925	9138	3741
80°	19196	2486	622
85°	12312	0	0



TEST NUMBER: P585058

CATALOG NUMBER: HC860D010-HM86080827-81RWWC

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	246.5	5.0
10°-20°	692.9	14.0
20°-30°	983.4	19.8
30°-40°	1035.2	20.9
40°-50°	880.6	17.7
50°-60°	636.4	12.8
60°-70°	362.0	7.3
70°-80°	114.0	2.3
80°-90°	13.9	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°	1922.8	38.7
0°-40°	2958.0	59.6
0°-60°	4475.0	90.1
0°-90°	4964.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4964.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2612	2612	2612	2612	2612	
5°	2637	2623	2591	2574	2567	252
15°	2609	2543	2434	2389	2386	735
25°	2379	2260	2068	2033	2040	1089
35°	1859	1751	1583	1573	1597	1157
45°	1214	1168	1088	1116	1165	943
55°	764	708	666	704	753	689
65°	457	394	331	328	352	453
75°	209	160	77	35	31	225
85°	35	21	0	0	0	45
90°	0	0	0	0	0	



TEST NUMBER: P585058

CATALOG NUMBER: HC860D010-HM86080827-81RWWC

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	2612.3	2612.3	2612.3	2612.3	2612.3	2612.3	2612.3	2612.3	2612.3	2612.3	2612.3
2.5°	2626.3	2629.8	2622.8	2622.8	2629.8	2622.8	2626.3	2626.3	2622.8	2622.8	2619.3
5°	2636.8	2633.2	2633.2	2633.2	2636.8	2629.8	2626.3	2629.8	2622.8	2622.8	2622.8
7.5°	2640.2	2640.2	2636.8	2633.2	2633.2	2633.2	2629.8	2626.3	2622.8	2615.8	2612.3
10°	2633.2	2633.2	2636.8	2629.8	2629.8	2622.8	2622.8	2615.8	2615.8	2608.9	2598.4
12.5°	2626.3	2622.8	2622.8	2615.8	2615.8	2608.9	2608.9	2598.4	2594.9	2584.4	2573.9
15°	2608.9	2605.3	2598.4	2594.9	2591.3	2587.9	2581.0	2577.5	2567.0	2553.1	2542.6
17.5°	2573.9	2570.5	2567.0	2560.0	2553.1	2549.6	2546.0	2535.6	2521.7	2511.2	2493.8
20°	2525.1	2521.7	2521.7	2511.2	2507.7	2497.2	2493.8	2479.8	2469.3	2448.4	2434.5
22.5°	2458.8	2462.4	2455.4	2448.4	2441.4	2430.9	2424.0	2410.0	2392.6	2371.6	2354.2
25°	2378.7	2382.1	2375.2	2368.2	2357.7	2350.7	2343.8	2322.8	2305.4	2281.0	2260.1
27.5°	2277.5	2277.5	2277.5	2270.6	2253.1	2249.6	2242.7	2221.7	2197.2	2176.4	2155.5
30°	2158.9	2155.5	2155.5	2145.0	2137.9	2124.0	2113.6	2096.2	2078.7	2054.3	2029.9
32.5°	2015.9	2019.4	2009.0	2002.0	1991.5	1991.5	1977.5	1963.5	1942.7	1918.2	1893.9
35°	1858.9	1862.5	1855.5	1852.0	1834.6	1831.0	1827.6	1810.1	1796.2	1778.8	1750.9
37.5°	1698.5	1695.0	1691.6	1691.6	1681.1	1674.2	1667.1	1656.6	1635.8	1621.8	1607.8
40°	1524.1	1524.1	1524.1	1520.6	1517.2	1510.1	1506.7	1499.8	1485.8	1471.9	1461.4
42.5°	1367.2	1367.2	1363.7	1360.2	1353.3	1356.7	1349.7	1342.8	1328.8	1318.3	1311.4
45°	1213.7	1213.7	1213.7	1217.2	1210.3	1199.8	1199.8	1192.8	1185.8	1178.9	1168.4
47.5°	1077.7	1088.2	1081.2	1077.7	1081.2	1067.2	1067.2	1060.3	1053.3	1046.4	1032.4
50°	966.1	966.1	966.1	959.2	955.6	955.6	945.2	938.2	934.7	927.8	913.8
52.5°	864.9	858.0	858.0	854.6	851.0	844.1	844.1	837.0	823.1	816.1	805.6
55°	763.8	763.8	760.3	756.9	753.4	749.8	746.4	735.9	728.9	718.5	708.0
57.5°	673.1	680.2	676.6	669.7	662.6	662.6	655.7	648.7	638.3	627.8	617.3
60°	599.9	596.4	596.4	593.0	585.9	582.5	579.0	568.5	558.0	547.6	537.1
62.5°	523.2	523.2	523.2	516.1	509.2	505.8	502.2	495.3	481.3	470.8	463.9
65°	456.9	453.4	449.9	446.5	442.9	436.0	432.5	425.5	415.0	404.6	394.1
67.5°	390.7	387.2	387.2	383.6	373.2	369.7	369.7	359.3	348.8	338.3	327.8
70°	324.3	324.3	324.3	317.4	313.8	310.4	306.9	300.0	289.5	279.0	268.5
72.5°	268.5	265.1	265.1	261.6	251.1	247.6	244.2	237.1	226.8	219.7	212.8
75°	209.2	209.2	205.8	202.3	198.8	195.3	191.8	184.9	174.4	163.9	160.4
77.5°	160.4	157.0	157.0	153.5	146.5	143.0	143.0	136.0	125.6	118.6	111.6
80°	108.1	111.6	108.1	104.6	101.2	97.7	94.1	90.7	83.7	76.7	69.8
82.5°	66.3	69.8	66.3	66.3	62.7	59.3	59.3	52.4	48.8	45.3	41.9
85°	34.8	34.8	34.8	34.8	31.4	31.4	31.4	27.9	24.5	20.9	20.9
87.5°	10.5	14.0	10.5	10.5	10.5	10.5	10.5	10.5	6.9	6.9	6.9
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: P585058

CATALOG NUMBER: HC860D010-HM86080827-81RWWC

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	2612.3	2612.3	2612.3	2612.3	2612.3	2612.3	2612.3	2612.3	2612.3	2612.3	2612.3
2.5°	2622.8	2619.3	2615.8	2615.8	2615.8	2615.8	2615.8	2612.3	2608.9	2608.9	2608.9
5°	2615.8	2615.8	2615.8	2612.3	2608.9	2608.9	2601.8	2598.4	2594.9	2591.3	2587.9
7.5°	2608.9	2601.8	2598.4	2594.9	2591.3	2591.3	2584.4	2577.5	2577.5	2570.5	2563.5
10°	2587.9	2584.4	2577.5	2570.5	2567.0	2563.5	2556.5	2546.0	2542.6	2535.6	2528.6
12.5°	2563.5	2556.5	2549.6	2535.6	2532.1	2528.6	2514.6	2504.3	2497.2	2493.8	2476.3
15°	2532.1	2518.1	2507.7	2490.3	2486.7	2479.8	2469.3	2458.8	2444.9	2434.5	2427.4
17.5°	2476.3	2462.4	2444.9	2427.4	2420.5	2420.5	2403.1	2389.2	2371.6	2364.7	2350.7
20°	2410.0	2392.6	2378.7	2357.7	2347.3	2336.8	2326.3	2305.4	2291.5	2281.0	2263.5
22.5°	2333.3	2308.9	2291.5	2270.6	2253.1	2242.7	2225.1	2207.7	2190.3	2179.8	2165.9
25°	2235.6	2214.8	2186.8	2165.9	2155.5	2141.5	2120.5	2103.1	2085.7	2068.3	2061.2
27.5°	2127.6	2099.6	2075.2	2050.7	2040.4	2029.9	2005.4	1984.5	1970.6	1953.2	1946.1
30°	2009.0	1981.1	1953.2	1932.2	1921.8	1904.3	1890.3	1866.0	1848.6	1834.6	1817.1
32.5°	1872.9	1852.0	1827.6	1796.2	1789.3	1775.3	1754.3	1743.8	1722.9	1712.5	1698.5
35°	1726.4	1712.5	1688.1	1663.7	1653.2	1646.2	1628.8	1607.8	1593.9	1583.4	1576.5
37.5°	1587.0	1569.4	1545.1	1527.7	1520.6	1510.1	1489.3	1478.8	1464.8	1457.9	1443.9
40°	1436.9	1419.5	1402.1	1391.6	1381.2	1374.2	1360.2	1349.7	1335.8	1325.4	1321.9
42.5°	1290.4	1280.0	1266.1	1252.1	1248.7	1238.2	1231.1	1220.8	1210.3	1206.8	1196.3
45°	1157.9	1147.5	1133.6	1119.6	1116.0	1109.1	1105.6	1095.2	1088.2	1088.2	1088.2
47.5°	1025.4	1015.0	1001.0	994.0	997.5	983.5	983.5	980.0	973.1	973.1	976.6
50°	906.8	892.8	889.4	882.4	875.4	868.4	872.0	861.5	861.5	868.4	864.9
52.5°	795.2	781.3	777.7	770.8	767.4	767.4	763.8	763.8	760.3	763.8	763.8
55°	694.1	683.6	676.6	669.7	666.2	666.2	666.2	662.6	659.2	666.2	669.7
57.5°	603.3	599.9	593.0	582.5	579.0	575.4	572.0	572.0	572.0	572.0	575.4
60°	523.2	516.1	509.2	498.7	498.7	495.3	491.8	488.2	488.2	488.2	488.2
62.5°	453.4	442.9	432.5	425.5	422.0	418.6	415.0	408.1	408.1	408.1	408.1
65°	383.6	373.2	366.2	359.3	352.2	352.2	345.3	341.8	334.8	331.4	324.3
67.5°	317.4	310.4	303.5	293.0	289.5	286.0	279.0	275.5	265.1	261.6	258.1
70°	258.1	247.6	240.6	233.7	230.2	223.2	216.3	209.2	202.3	195.3	188.4
72.5°	202.3	191.8	184.9	177.9	170.9	170.9	160.4	153.5	143.0	136.0	125.6
75°	149.9	139.6	132.5	122.0	118.6	115.1	104.6	97.7	87.2	76.7	69.8
77.5°	101.2	94.1	87.2	76.7	69.8	69.8	59.3	52.4	45.3	34.8	31.4
80°	62.7	55.8	48.8	41.9	41.9	34.8	31.4	24.5	17.4	14.0	10.5
82.5°	34.8	31.4	27.9	20.9	20.9	17.4	14.0	10.5	6.9	3.5	3.5
85°	17.4	14.0	10.5	10.5	6.9	6.9	6.9	3.5	3.5	0.0	0.0
87.5°	6.9	3.5	3.5	3.5	3.5	3.5	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: P585058

CATALOG NUMBER: HC860D010-HM86080827-81RWWC

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	2612.3	2612.3	2612.3	2612.3	2612.3	2612.3	2612.3	2612.3	2612.3	2612.3	2612.3
2.5°	2605.3	2605.3	2601.8	2601.8	2601.8	2598.4	2601.8	2598.4	2598.4	2598.4	2601.8
5°	2591.3	2584.4	2584.4	2581.0	2581.0	2577.5	2581.0	2577.5	2573.9	2570.5	2573.9
7.5°	2563.5	2556.5	2553.1	2549.6	2549.6	2549.6	2546.0	2542.6	2546.0	2535.6	2542.6
10°	2525.1	2521.7	2514.6	2511.2	2507.7	2511.2	2507.7	2500.7	2500.7	2500.7	2497.2
12.5°	2476.3	2469.3	2465.9	2462.4	2455.4	2455.4	2458.8	2451.9	2451.9	2444.9	2444.9
15°	2417.1	2410.0	2403.1	2403.1	2396.1	2396.1	2392.6	2392.6	2389.2	2385.6	2385.6
17.5°	2343.8	2333.3	2326.3	2329.9	2326.3	2322.8	2322.8	2315.9	2312.3	2315.9	2315.9
20°	2256.6	2249.6	2242.7	2246.1	2239.1	2235.6	2239.1	2228.7	2232.2	2232.2	2232.2
22.5°	2158.9	2155.5	2145.0	2145.0	2137.9	2134.5	2137.9	2137.9	2141.5	2137.9	2137.9
25°	2050.7	2043.8	2036.9	2036.9	2033.3	2029.9	2033.3	2036.9	2033.3	2036.9	2036.9
27.5°	1935.8	1925.3	1925.3	1918.2	1918.2	1921.8	1918.2	1921.8	1925.3	1925.3	1932.2
30°	1810.1	1806.7	1803.1	1799.7	1799.7	1803.1	1803.1	1803.1	1806.7	1813.6	1813.6
32.5°	1691.6	1684.5	1677.6	1677.6	1684.5	1681.1	1684.5	1684.5	1691.6	1691.6	1698.5
35°	1562.5	1562.5	1555.6	1559.1	1559.1	1559.1	1559.1	1566.0	1573.0	1576.5	1583.4
37.5°	1443.9	1433.4	1436.9	1436.9	1440.5	1436.9	1447.4	1447.4	1454.4	1454.4	1461.4
40°	1314.9	1314.9	1318.3	1314.9	1318.3	1318.3	1325.4	1332.3	1335.8	1342.8	1346.2
42.5°	1192.8	1199.8	1192.8	1196.3	1199.8	1203.2	1206.8	1210.3	1224.2	1231.1	1241.6
45°	1081.2	1084.7	1088.2	1091.7	1088.2	1095.2	1098.6	1105.6	1116.0	1119.6	1123.1
47.5°	973.1	976.6	980.0	983.5	983.5	990.5	994.0	1001.0	1008.0	1011.4	1015.0
50°	868.4	875.4	878.9	878.9	882.4	889.4	896.3	896.3	903.3	913.8	917.3
52.5°	774.3	774.3	781.3	784.8	788.2	788.2	798.7	802.2	805.6	812.7	819.6
55°	669.7	680.2	683.6	683.6	690.5	697.6	701.0	704.5	704.5	718.5	718.5
57.5°	579.0	582.5	589.4	589.4	589.4	599.9	599.9	606.9	610.4	613.8	620.9
60°	488.2	495.3	495.3	498.7	495.3	502.2	505.8	512.7	516.1	519.7	523.2
62.5°	404.6	404.6	408.1	408.1	408.1	408.1	415.0	415.0	422.0	425.5	428.9
65°	324.3	324.3	324.3	324.3	324.3	324.3	324.3	324.3	327.8	327.8	334.8
67.5°	251.1	247.6	240.6	244.2	240.6	240.6	237.1	237.1	240.6	240.6	247.6
70°	181.3	177.9	170.9	170.9	167.4	163.9	160.4	157.0	153.5	153.5	153.5
72.5°	118.6	111.6	101.2	97.7	97.7	90.7	83.7	80.2	80.2	80.2	80.2
75°	59.3	52.4	45.3	41.9	41.9	34.8	38.4	34.8	34.8	34.8	34.8
77.5°	24.5	17.4	14.0	14.0	14.0	10.5	10.5	10.5	10.5	10.5	10.5
80°	6.9	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
82.5°	3.5	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: P585058

CATALOG NUMBER: HC860D010-HM86080827-81RWWC

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	2612.3	2612.3	2612.3	2612.3	2612.3	2612.3	2612.3	2612.3
2.5°	2598.4	2598.4	2591.3	2594.9	2594.9	2594.9	2594.9	2594.9
5°	2567.0	2570.5	2567.0	2570.5	2570.5	2567.0	2567.0	2567.0
7.5°	2535.6	2539.1	2535.6	2539.1	2539.1	2539.1	2535.6	2535.6
10°	2497.2	2497.2	2497.2	2497.2	2497.2	2493.8	2497.2	2497.2
12.5°	2444.9	2444.9	2444.9	2448.4	2448.4	2444.9	2444.9	2441.4
15°	2389.2	2382.1	2385.6	2389.2	2385.6	2385.6	2385.6	2385.6
17.5°	2312.3	2315.9	2312.3	2312.3	2312.3	2312.3	2315.9	2312.3
20°	2232.2	2232.2	2235.6	2232.2	2232.2	2232.2	2232.2	2228.7
22.5°	2141.5	2137.9	2137.9	2141.5	2141.5	2137.9	2141.5	2141.5
25°	2040.4	2043.8	2040.4	2040.4	2043.8	2043.8	2043.8	2040.4
27.5°	1932.2	1935.8	1939.2	1935.8	1935.8	1935.8	1939.2	1942.7
30°	1820.6	1827.6	1820.6	1820.6	1827.6	1824.1	1827.6	1827.6
32.5°	1702.1	1712.5	1705.5	1712.5	1712.5	1716.0	1712.5	1716.0
35°	1583.4	1593.9	1593.9	1593.9	1597.3	1600.9	1600.9	1597.3
37.5°	1471.9	1475.3	1475.3	1482.3	1485.8	1489.3	1489.3	1485.8
40°	1356.7	1363.7	1367.2	1367.2	1367.2	1374.2	1381.2	1374.2
42.5°	1245.1	1248.7	1252.1	1252.1	1259.1	1262.5	1266.1	1266.1
45°	1137.0	1143.9	1147.5	1151.0	1154.4	1161.5	1157.9	1164.9
47.5°	1025.4	1035.9	1039.3	1042.8	1049.8	1053.3	1056.7	1060.3
50°	924.2	931.3	931.3	938.2	948.7	948.7	955.6	959.2
52.5°	823.1	826.6	830.1	833.6	840.6	847.5	847.5	854.6
55°	725.5	728.9	728.9	732.4	735.9	749.8	753.4	753.4
57.5°	624.3	624.3	631.3	634.7	638.3	645.2	645.2	645.2
60°	526.6	530.1	530.1	533.7	537.1	544.1	547.6	544.1
62.5°	428.9	432.5	432.5	436.0	442.9	446.5	442.9	442.9
65°	338.3	341.8	341.8	345.3	352.2	352.2	348.8	352.2
67.5°	247.6	247.6	247.6	247.6	247.6	247.6	247.6	247.6
70°	157.0	153.5	149.9	153.5	153.5	153.5	149.9	157.0
72.5°	76.7	80.2	80.2	80.2	80.2	80.2	80.2	76.7
75°	34.8	34.8	31.4	31.4	31.4	34.8	34.8	31.4
77.5°	10.5	10.5	10.5	10.5	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°	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)