

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: P585075

Luminaire Tested: **HC860D010-HM86080830-81RWWC**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P585075
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-HM86080830-81RWWC
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, SPECULAR TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4928.9 lumens
Efficiency: N/A
Efficacy: 88.0 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

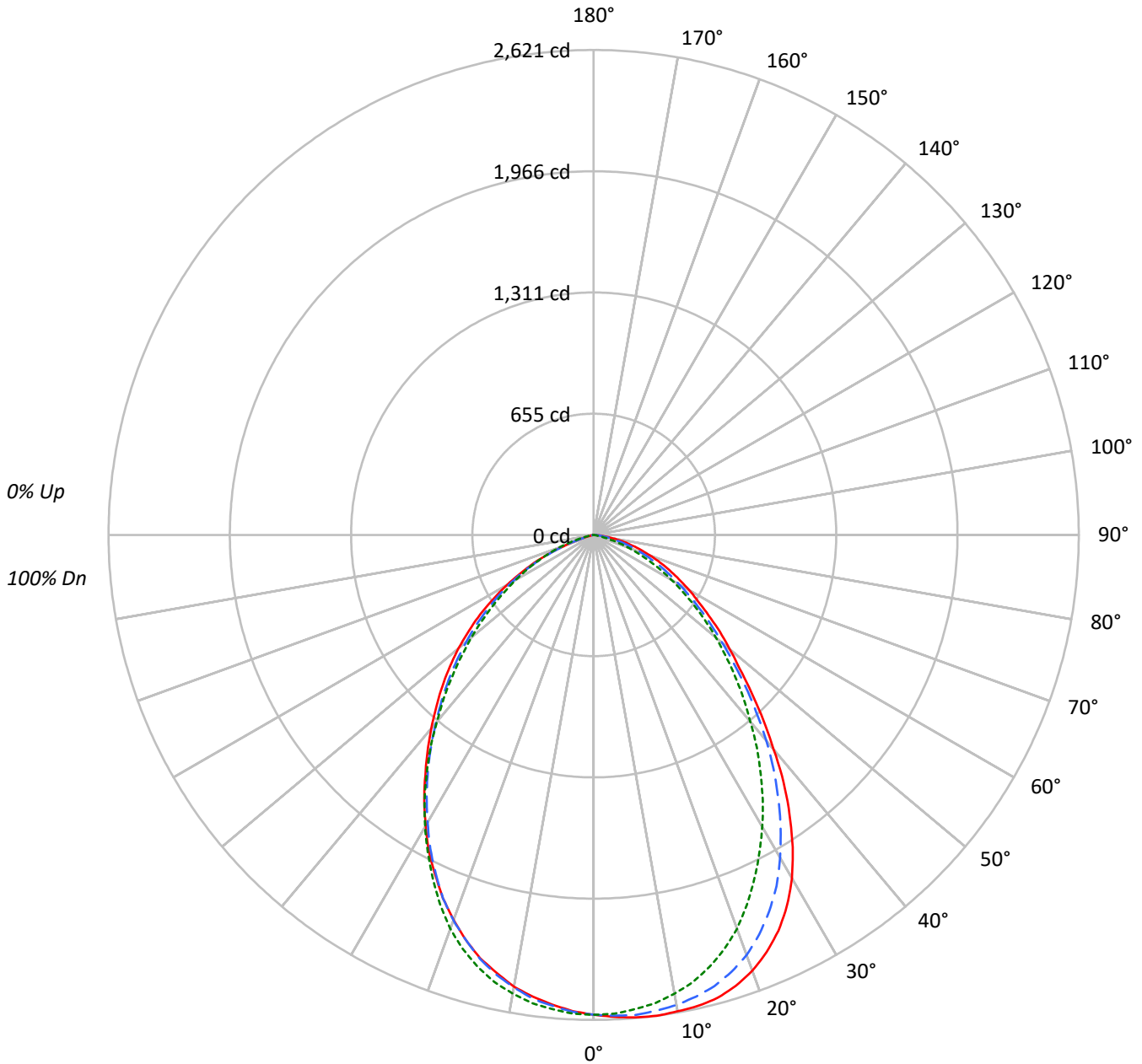
Input Watts (W): 56
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P585075

CATALOG NUMBER: HC860D010-HM86080830-81RWWC

Luminous Intensity Polar Plot





TEST NUMBER: P585075

CATALOG NUMBER: HC860D010-HM86080830-81RWWC

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			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°	79971	79971	79971
5°	81025	79636	78883
10°	81856	78819	77626
15°	82683	77154	75609
20°	82261	74310	72607
25°	80348	69862	68919
30°	76312	64847	64601
35°	69476	59177	59696
40°	60908	52966	54914
45°	52549	47111	50434
50°	46015	41362	45675
55°	40762	35558	40208
60°	36726	29899	33309
65°	33097	23998	25516
70°	29031	17482	14047
75°	24746	9067	3705
80°	19072	2451	622
85°	12242	0	0



TEST NUMBER: P585075

CATALOG NUMBER: HC860D010-HM86080830-81RWWC

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	244.7	5.0
10°-20°	687.9	14.0
20°-30°	976.3	19.8
30°-40°	1027.7	20.9
40°-50°	874.3	17.7
50°-60°	631.8	12.8
60°-70°	359.3	7.3
70°-80°	113.2	2.3
80°-90°	13.7	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°	1908.9	38.7
0°-40°	2936.6	59.6
0°-60°	4442.6	90.1
0°-90°	4928.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4928.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2593	2593	2593	2593	2593	
5°	2618	2604	2573	2555	2548	250
15°	2590	2524	2417	2372	2368	729
25°	2362	2244	2053	2019	2026	1082
35°	1846	1738	1572	1562	1586	1148
45°	1205	1160	1080	1108	1156	937
55°	758	703	661	699	748	684
65°	454	391	329	326	350	450
75°	208	159	76	35	31	224
85°	35	21	0	0	0	45
90°	0	0	0	0	0	



TEST NUMBER: P585075

CATALOG NUMBER: HC860D010-HM86080830-81RWWC

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	2593.4	2593.4	2593.4	2593.4	2593.4	2593.4	2593.4	2593.4	2593.4	2593.4	2593.4
2.5°	2607.3	2610.7	2603.8	2603.8	2610.7	2603.8	2607.3	2607.3	2603.8	2603.8	2600.3
5°	2617.6	2614.2	2614.2	2614.2	2617.6	2610.7	2607.3	2610.7	2603.8	2603.8	2603.8
7.5°	2621.1	2621.1	2617.6	2614.2	2614.2	2614.2	2610.7	2607.3	2603.8	2596.9	2593.4
10°	2614.2	2614.2	2617.6	2610.7	2610.7	2603.8	2603.8	2596.9	2596.9	2590.0	2579.6
12.5°	2607.3	2603.8	2603.8	2596.9	2596.9	2590.0	2590.0	2579.6	2576.1	2565.7	2555.4
15°	2590.0	2586.5	2579.6	2576.1	2572.7	2569.2	2562.3	2558.8	2548.4	2534.6	2524.1
17.5°	2555.4	2551.9	2548.4	2541.5	2534.6	2531.1	2527.7	2517.2	2503.3	2493.0	2475.7
20°	2506.8	2503.3	2503.3	2493.0	2489.5	2479.1	2475.7	2461.8	2451.4	2430.7	2416.8
22.5°	2441.1	2444.5	2437.6	2430.7	2423.8	2413.4	2406.5	2392.6	2375.3	2354.6	2337.1
25°	2361.5	2364.9	2358.0	2351.0	2340.6	2333.7	2326.8	2306.0	2288.7	2264.5	2243.7
27.5°	2261.0	2261.0	2261.0	2254.1	2236.8	2233.3	2226.4	2205.6	2181.4	2160.5	2139.8
30°	2143.2	2139.8	2139.8	2129.4	2122.5	2108.6	2098.3	2081.0	2063.7	2039.4	2015.2
32.5°	2001.3	2004.8	1994.3	1987.4	1977.0	1977.0	1963.2	1949.4	1928.6	1904.4	1880.2
35°	1845.6	1849.0	1842.1	1838.6	1821.2	1817.8	1814.3	1797.0	1783.2	1765.9	1738.2
37.5°	1686.3	1682.8	1679.4	1679.4	1669.0	1662.0	1655.1	1644.6	1623.9	1610.0	1596.2
40°	1513.1	1513.1	1513.1	1509.7	1506.2	1499.3	1495.8	1488.9	1475.0	1461.1	1450.7
42.5°	1357.3	1357.3	1353.9	1350.4	1343.5	1346.9	1340.0	1333.1	1319.3	1308.9	1301.8
45°	1205.0	1205.0	1205.0	1208.4	1201.5	1191.1	1191.1	1184.2	1177.3	1170.4	1160.0
47.5°	1069.9	1080.3	1073.4	1069.9	1073.4	1059.5	1059.5	1052.6	1045.7	1038.8	1024.9
50°	959.2	959.2	959.2	952.1	948.7	948.7	938.3	931.4	927.9	921.0	907.1
52.5°	858.7	851.8	851.8	848.3	844.9	837.9	837.9	831.0	817.2	810.3	799.9
55°	758.2	758.2	754.8	751.3	747.9	744.4	740.9	730.6	723.6	713.3	702.9
57.5°	668.3	675.2	671.7	664.8	657.9	657.9	651.0	644.1	633.7	623.3	612.9
60°	595.5	592.0	592.0	588.6	581.7	578.2	574.7	564.4	554.0	543.6	533.2
62.5°	519.4	519.4	519.4	512.5	505.5	502.1	498.6	491.7	477.9	467.5	460.6
65°	453.6	450.2	446.7	443.3	439.8	432.8	429.3	422.4	412.0	401.6	391.2
67.5°	387.8	384.3	384.3	380.9	370.5	367.0	367.0	356.6	346.3	335.9	325.5
70°	322.0	322.0	322.0	315.1	311.6	308.2	304.7	297.8	287.4	277.0	266.7
72.5°	266.7	263.2	263.2	259.6	249.2	245.8	242.3	235.4	225.0	218.1	211.2
75°	207.7	207.7	204.3	200.8	197.3	193.9	190.4	183.5	173.1	162.7	159.3
77.5°	159.3	155.8	155.8	152.4	145.4	142.0	142.0	135.1	124.7	117.8	110.8
80°	107.4	110.8	107.4	103.9	100.5	97.0	93.5	90.1	83.0	76.1	69.2
82.5°	65.7	69.2	65.7	65.7	62.3	58.8	58.8	51.9	48.4	45.0	41.5
85°	34.6	34.6	34.6	34.6	31.1	31.1	31.1	27.7	24.2	20.8	20.8
87.5°	10.4	13.8	10.4	10.4	10.4	10.4	10.4	10.4	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: P585075

CATALOG NUMBER: HC860D010-HM86080830-81RWWC

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	2593.4	2593.4	2593.4	2593.4	2593.4	2593.4	2593.4	2593.4	2593.4	2593.4	2593.4
2.5°	2603.8	2600.3	2596.9	2596.9	2596.9	2596.9	2596.9	2593.4	2590.0	2590.0	2590.0
5°	2596.9	2596.9	2596.9	2593.4	2590.0	2590.0	2583.0	2579.6	2576.1	2572.7	2569.2
7.5°	2590.0	2583.0	2579.6	2576.1	2572.7	2572.7	2565.7	2558.8	2558.8	2551.9	2545.0
10°	2569.2	2565.7	2558.8	2551.9	2548.4	2545.0	2538.1	2527.7	2524.1	2517.2	2510.3
12.5°	2545.0	2538.1	2531.1	2517.2	2513.7	2510.3	2496.4	2486.0	2479.1	2475.7	2458.4
15°	2513.7	2499.9	2489.5	2472.2	2468.7	2461.8	2451.4	2441.1	2427.2	2416.8	2409.9
17.5°	2458.4	2444.5	2427.2	2409.9	2403.0	2403.0	2385.7	2371.9	2354.6	2347.5	2333.7
20°	2392.6	2375.3	2361.5	2340.6	2330.2	2319.8	2309.5	2288.7	2274.9	2264.5	2247.2
22.5°	2316.4	2292.2	2274.9	2254.1	2236.8	2226.4	2209.1	2191.8	2174.4	2164.0	2150.2
25°	2219.5	2198.7	2170.9	2150.2	2139.8	2125.9	2105.2	2087.9	2070.6	2053.3	2046.4
27.5°	2112.1	2084.4	2060.2	2036.0	2025.6	2015.2	1990.9	1970.1	1956.3	1939.0	1932.1
30°	1994.3	1966.7	1939.0	1918.2	1907.8	1890.5	1876.7	1852.5	1835.2	1821.2	1803.9
32.5°	1859.4	1838.6	1814.3	1783.2	1776.2	1762.4	1741.6	1731.3	1710.5	1700.1	1686.3
35°	1714.0	1700.1	1675.9	1651.6	1641.2	1634.3	1617.0	1596.2	1582.3	1572.0	1565.0
37.5°	1575.4	1558.1	1533.9	1516.6	1509.7	1499.3	1478.4	1468.0	1454.2	1447.3	1433.4
40°	1426.5	1409.2	1391.9	1381.5	1371.2	1364.2	1350.4	1340.0	1326.2	1315.8	1312.3
42.5°	1281.1	1270.7	1256.9	1243.0	1239.6	1229.2	1222.3	1211.9	1201.5	1198.0	1187.7
45°	1149.6	1139.2	1125.3	1111.4	1108.0	1101.0	1097.6	1087.2	1080.3	1080.3	1080.3
47.5°	1018.0	1007.6	993.8	986.8	990.3	976.5	976.5	973.0	966.1	966.1	969.5
50°	900.2	886.4	882.9	876.0	869.1	862.2	865.6	855.2	855.2	862.2	858.7
52.5°	789.5	775.5	772.1	765.2	761.7	761.7	758.2	758.2	754.8	758.2	758.2
55°	689.0	678.7	671.7	664.8	661.4	661.4	661.4	657.9	654.4	661.4	664.8
57.5°	599.0	595.5	588.6	578.2	574.7	571.3	567.8	567.8	567.8	567.8	571.3
60°	519.4	512.5	505.5	495.2	495.2	491.7	488.2	484.8	484.8	484.8	484.8
62.5°	450.2	439.8	429.3	422.4	418.9	415.5	412.0	405.1	405.1	405.1	405.1
65°	380.9	370.5	363.6	356.6	349.7	349.7	342.8	339.3	332.4	328.9	322.0
67.5°	315.1	308.2	301.3	290.9	287.4	284.0	277.0	273.6	263.2	259.6	256.2
70°	256.2	245.8	238.9	231.9	228.5	221.6	214.6	207.7	200.8	193.9	187.0
72.5°	200.8	190.4	183.5	176.6	169.7	169.7	159.3	152.4	142.0	135.1	124.7
75°	148.9	138.5	131.6	121.2	117.8	114.3	103.9	97.0	86.5	76.1	69.2
77.5°	100.5	93.5	86.5	76.1	69.2	69.2	58.8	51.9	45.0	34.6	31.1
80°	62.3	55.4	48.4	41.5	41.5	34.6	31.1	24.2	17.3	13.8	10.4
82.5°	34.6	31.1	27.7	20.8	20.8	17.3	13.8	10.4	6.9	3.5	3.5
85°	17.3	13.8	10.4	10.4	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: P585075

CATALOG NUMBER: HC860D010-HM86080830-81RWWC

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	2593.4	2593.4	2593.4	2593.4	2593.4	2593.4	2593.4	2593.4	2593.4	2593.4	2593.4
2.5°	2586.5	2586.5	2583.0	2583.0	2583.0	2579.6	2583.0	2579.6	2579.6	2579.6	2583.0
5°	2572.7	2565.7	2565.7	2562.3	2562.3	2558.8	2562.3	2558.8	2555.4	2551.9	2555.4
7.5°	2545.0	2538.1	2534.6	2531.1	2531.1	2531.1	2527.7	2524.1	2527.7	2517.2	2524.1
10°	2506.8	2503.3	2496.4	2493.0	2489.5	2493.0	2489.5	2482.6	2482.6	2482.6	2479.1
12.5°	2458.4	2451.4	2448.0	2444.5	2437.6	2437.6	2441.1	2434.1	2434.1	2427.2	2427.2
15°	2399.5	2392.6	2385.7	2385.7	2378.8	2378.8	2375.3	2375.3	2371.9	2368.4	2368.4
17.5°	2326.8	2316.4	2309.5	2312.9	2309.5	2306.0	2306.0	2299.1	2295.6	2299.1	2299.1
20°	2240.2	2233.3	2226.4	2229.9	2222.9	2219.5	2222.9	2212.6	2216.0	2216.0	2216.0
22.5°	2143.2	2139.8	2129.4	2129.4	2122.5	2119.0	2122.5	2122.5	2125.9	2122.5	2122.5
25°	2036.0	2029.1	2022.1	2022.1	2018.7	2015.2	2018.7	2022.1	2018.7	2022.1	2022.1
27.5°	1921.7	1911.3	1911.3	1904.4	1904.4	1907.8	1904.4	1907.8	1911.3	1911.3	1918.2
30°	1797.0	1793.5	1790.1	1786.6	1786.6	1790.1	1790.1	1790.1	1793.5	1800.5	1800.5
32.5°	1679.4	1672.4	1665.5	1665.5	1672.4	1669.0	1672.4	1672.4	1679.4	1679.4	1686.3
35°	1551.2	1551.2	1544.3	1547.7	1547.7	1547.7	1547.7	1554.7	1561.6	1565.0	1572.0
37.5°	1433.4	1423.1	1426.5	1426.5	1430.0	1426.5	1436.9	1436.9	1443.8	1443.8	1450.7
40°	1305.3	1305.3	1308.9	1305.3	1308.9	1308.9	1315.8	1322.7	1326.2	1333.1	1336.6
42.5°	1184.2	1191.1	1184.2	1187.7	1191.1	1194.6	1198.0	1201.5	1215.3	1222.3	1232.6
45°	1073.4	1076.8	1080.3	1083.7	1080.3	1087.2	1090.7	1097.6	1108.0	1111.4	1114.9
47.5°	966.1	969.5	973.0	976.5	976.5	983.4	986.8	993.8	1000.7	1004.2	1007.6
50°	862.2	869.1	872.5	872.5	876.0	882.9	889.8	889.8	896.8	907.1	910.6
52.5°	768.6	768.6	775.5	779.0	782.5	782.5	793.0	796.4	799.9	806.8	813.7
55°	664.8	675.2	678.7	678.7	685.6	692.5	696.0	699.4	699.4	713.3	713.3
57.5°	574.7	578.2	585.1	585.1	585.1	595.5	595.5	602.4	605.9	609.3	616.4
60°	484.8	491.7	491.7	495.2	491.7	498.6	502.1	509.0	512.5	515.9	519.4
62.5°	401.6	401.6	405.1	405.1	405.1	405.1	412.0	412.0	418.9	422.4	425.8
65°	322.0	322.0	322.0	322.0	322.0	322.0	322.0	322.0	325.5	325.5	332.4
67.5°	249.2	245.8	238.9	242.3	238.9	238.9	235.4	235.4	238.9	238.9	245.8
70°	180.0	176.6	169.7	169.7	166.2	162.7	159.3	155.8	152.4	152.4	152.4
72.5°	117.8	110.8	100.5	97.0	97.0	90.1	83.0	79.6	79.6	79.6	79.6
75°	58.8	51.9	45.0	41.5	41.5	34.6	38.1	34.6	34.6	34.6	34.6
77.5°	24.2	17.3	13.8	13.8	13.8	10.4	10.4	10.4	10.4	10.4	10.4
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: P585075

CATALOG NUMBER: HC860D010-HM86080830-81RWWC

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	2593.4	2593.4	2593.4	2593.4	2593.4	2593.4	2593.4	2593.4
2.5°	2579.6	2579.6	2572.7	2576.1	2576.1	2576.1	2576.1	2576.1
5°	2548.4	2551.9	2548.4	2551.9	2551.9	2548.4	2548.4	2548.4
7.5°	2517.2	2520.6	2517.2	2520.6	2520.6	2520.6	2517.2	2517.2
10°	2479.1	2479.1	2479.1	2479.1	2479.1	2475.7	2479.1	2479.1
12.5°	2427.2	2427.2	2427.2	2430.7	2430.7	2427.2	2427.2	2423.8
15°	2371.9	2364.9	2368.4	2371.9	2368.4	2368.4	2368.4	2368.4
17.5°	2295.6	2299.1	2295.6	2295.6	2295.6	2295.6	2299.1	2295.6
20°	2216.0	2216.0	2219.5	2216.0	2216.0	2216.0	2216.0	2212.6
22.5°	2125.9	2122.5	2122.5	2125.9	2125.9	2122.5	2125.9	2125.9
25°	2025.6	2029.1	2025.6	2025.6	2029.1	2029.1	2029.1	2025.6
27.5°	1918.2	1921.7	1925.1	1921.7	1921.7	1921.7	1925.1	1928.6
30°	1807.4	1814.3	1807.4	1807.4	1814.3	1810.8	1814.3	1814.3
32.5°	1689.7	1700.1	1693.2	1700.1	1700.1	1703.6	1700.1	1703.6
35°	1572.0	1582.3	1582.3	1582.3	1585.8	1589.3	1589.3	1585.8
37.5°	1461.1	1464.6	1464.6	1471.5	1475.0	1478.4	1478.4	1475.0
40°	1346.9	1353.9	1357.3	1357.3	1357.3	1364.2	1371.2	1364.2
42.5°	1236.1	1239.6	1243.0	1243.0	1249.9	1253.4	1256.9	1256.9
45°	1128.7	1135.8	1139.2	1142.7	1146.1	1153.1	1149.6	1156.5
47.5°	1018.0	1028.4	1031.8	1035.3	1042.2	1045.7	1049.1	1052.6
50°	917.5	924.5	924.5	931.4	941.8	941.8	948.7	952.1
52.5°	817.2	820.6	824.1	827.6	834.5	841.4	841.4	848.3
55°	720.2	723.6	723.6	727.1	730.6	744.4	747.9	747.9
57.5°	619.8	619.8	626.8	630.2	633.7	640.6	640.6	640.6
60°	522.8	526.3	526.3	529.8	533.2	540.1	543.6	540.1
62.5°	425.8	429.3	429.3	432.8	439.8	443.3	439.8	439.8
65°	335.9	339.3	339.3	342.8	349.7	349.7	346.3	349.7
67.5°	245.8	245.8	245.8	245.8	245.8	245.8	245.8	245.8
70°	155.8	152.4	148.9	152.4	152.4	152.4	148.9	155.8
72.5°	76.1	79.6	79.6	79.6	79.6	79.6	79.6	76.1
75°	34.6	34.6	31.1	31.1	31.1	34.6	34.6	31.1
77.5°	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4
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)