

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: P585286

Luminaire Tested: **HC880D010-HM86080930-81WWBB**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P585286
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: HC880D010-HM86080930-81WWBB
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, WHITE BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4835.1 lumens
Efficiency: N/A
Efficacy: 69.1 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

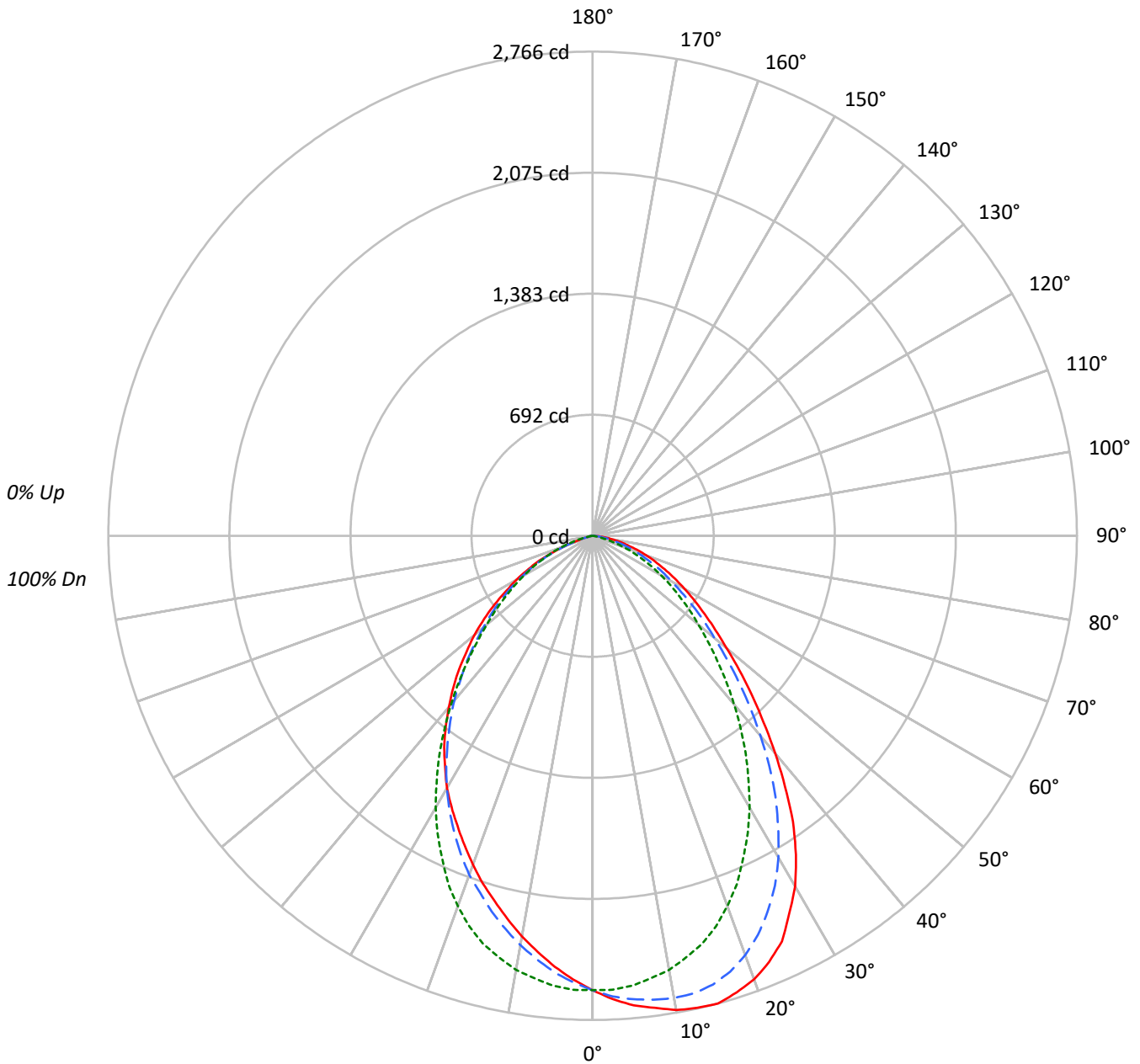
Input Watts (W): 70
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P585286

CATALOG NUMBER: HC880D010-HM86080930-81WWBB

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°	80045	80045	80045
5°	83350	79868	76506
10°	86139	78850	72772
15°	88315	77046	68994
20°	88493	73848	65572
25°	86996	69178	62179
30°	82341	63832	59271
35°	75074	57404	55649
40°	65288	50603	51384
45°	56012	43823	47041
50°	47838	37788	42254
55°	41929	32542	36708
60°	37330	27753	30873
65°	33126	22648	24633
70°	29383	16788	13993
75°	24508	8781	4170
80°	19303	2770	693
85°	13728	1380	0



TEST NUMBER: P585286

CATALOG NUMBER: HC880D010-HM86080930-81WWBB

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	244.6	5.1
10°-20°	685.5	14.2
20°-30°	970.3	20.1
30°-40°	1015.2	21.0
40°-50°	846.7	17.5
50°-60°	600.4	12.4
60°-70°	345.8	7.2
70°-80°	111.3	2.3
80°-90°	15.3	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°	1900.4	39.3
0°-40°	2915.6	60.3
0°-60°	4362.7	90.2
0°-90°	4835.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4835.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2596	2596	2596	2596	2596	
5°	2693	2658	2580	2503	2472	258
15°	2766	2654	2413	2223	2161	778
25°	2557	2367	2033	1870	1828	1167
35°	1994	1820	1525	1443	1478	1236
45°	1284	1180	1005	1017	1079	995
55°	780	698	605	636	683	705
65°	454	380	310	310	338	454
75°	206	151	74	35	35	223
85°	39	19	4	0	0	49
90°	0	0	0	0	0	



TEST NUMBER: P585286

CATALOG NUMBER: HC880D010-HM86080930-81WWBB

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	2595.8	2595.8	2595.8	2595.8	2595.8	2595.8	2595.8	2595.8	2595.8	2595.8	2595.8
2.5°	2650.0	2646.2	2642.3	2646.2	2642.3	2646.2	2642.3	2642.3	2638.5	2634.6	2634.6
5°	2692.7	2688.9	2688.9	2688.9	2685.0	2681.2	2681.2	2677.3	2669.5	2665.6	2657.9
7.5°	2720.0	2723.8	2723.8	2723.8	2716.0	2716.0	2708.3	2700.6	2692.7	2685.0	2673.3
10°	2751.0	2751.0	2747.1	2743.3	2735.4	2731.6	2727.7	2720.0	2708.3	2692.7	2681.2
12.5°	2762.6	2762.6	2758.7	2751.0	2747.1	2743.3	2739.3	2727.7	2712.2	2692.7	2677.3
15°	2766.4	2758.7	2754.9	2751.0	2743.3	2731.6	2731.6	2716.0	2696.7	2673.3	2654.0
17.5°	2735.4	2739.3	2731.6	2723.8	2712.2	2704.4	2692.7	2681.2	2657.9	2630.7	2611.3
20°	2696.7	2692.7	2688.9	2677.3	2661.7	2657.9	2646.2	2626.9	2607.5	2576.3	2549.2
22.5°	2634.6	2630.7	2622.9	2615.2	2599.6	2591.9	2580.2	2556.9	2529.8	2498.8	2467.8
25°	2556.9	2549.2	2537.6	2522.1	2510.5	2502.6	2487.2	2463.8	2432.8	2397.9	2366.8
27.5°	2432.8	2444.5	2436.7	2413.4	2401.8	2386.2	2382.4	2351.4	2324.1	2289.3	2254.3
30°	2312.5	2312.5	2300.8	2289.3	2269.8	2258.3	2242.7	2219.4	2192.3	2149.6	2122.4
32.5°	2161.2	2157.3	2141.9	2137.9	2122.4	2099.2	2095.3	2064.2	2037.0	2006.0	1971.1
35°	1994.3	1986.6	1971.1	1959.5	1951.6	1940.1	1928.4	1901.2	1874.1	1843.1	1819.8
37.5°	1804.2	1804.2	1800.4	1781.0	1773.2	1765.4	1753.8	1726.7	1711.1	1680.1	1656.8
40°	1621.9	1618.0	1606.3	1602.5	1594.7	1583.0	1575.3	1559.8	1536.5	1513.2	1489.9
42.5°	1443.4	1447.3	1431.8	1435.6	1420.1	1412.3	1408.5	1385.2	1373.5	1350.2	1330.8
45°	1284.4	1280.4	1272.7	1268.8	1261.1	1253.3	1245.5	1233.8	1214.4	1191.1	1179.5
47.5°	1136.9	1125.3	1125.3	1121.3	1117.4	1102.0	1098.0	1086.4	1074.7	1051.6	1036.0
50°	997.2	997.2	997.2	993.3	981.6	977.8	970.0	958.3	946.7	931.2	907.9
52.5°	884.6	884.6	884.6	880.8	865.2	861.4	857.5	841.9	826.5	814.8	799.2
55°	779.9	783.8	779.9	772.1	760.5	760.5	748.8	741.1	725.5	714.0	698.4
57.5°	690.7	690.7	682.8	679.0	671.3	667.4	659.7	651.8	632.4	620.8	601.4
60°	605.3	601.4	601.4	593.7	585.9	578.1	574.3	562.6	554.9	535.4	519.9
62.5°	527.7	527.7	519.9	519.9	504.4	504.4	500.6	488.9	477.3	457.9	450.0
65°	454.0	454.0	450.0	446.2	434.6	430.7	426.9	415.2	403.5	391.9	380.2
67.5°	388.0	388.0	380.2	376.3	368.6	364.8	356.9	349.2	337.6	325.9	314.3
70°	325.9	322.1	318.2	314.3	306.5	302.6	294.9	287.1	275.5	267.8	256.1
72.5°	263.8	263.8	259.9	252.2	248.4	244.5	240.5	232.8	221.2	209.5	201.8
75°	205.7	205.7	205.7	197.8	190.1	186.2	186.2	178.5	170.7	159.1	151.4
77.5°	159.1	155.2	151.4	151.4	143.5	139.7	135.8	132.0	120.3	116.4	108.7
80°	108.7	112.5	108.7	104.8	100.8	97.0	97.0	89.3	85.4	77.6	69.8
82.5°	73.7	69.8	69.8	66.0	66.0	62.1	62.1	54.3	50.4	46.6	42.7
85°	38.8	38.8	35.0	35.0	35.0	31.0	31.0	27.1	27.1	23.3	19.4
87.5°	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	7.7	7.7	7.7
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: P585286

CATALOG NUMBER: HC880D010-HM86080930-81WWBB

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	2595.8	2595.8	2595.8	2595.8	2595.8	2595.8	2595.8	2595.8	2595.8	2595.8	2595.8
2.5°	2630.7	2622.9	2619.0	2619.0	2615.2	2611.3	2607.5	2603.6	2595.8	2595.8	2588.0
5°	2650.0	2642.3	2638.5	2626.9	2619.0	2619.0	2603.6	2599.6	2588.0	2580.2	2572.5
7.5°	2665.6	2650.0	2638.5	2626.9	2619.0	2611.3	2595.8	2580.2	2564.8	2549.2	2541.5
10°	2665.6	2650.0	2630.7	2611.3	2603.6	2595.8	2576.3	2553.1	2533.6	2518.2	2498.8
12.5°	2657.9	2634.6	2611.3	2595.8	2580.2	2568.6	2545.3	2522.1	2498.8	2467.8	2452.2
15°	2634.6	2603.6	2580.2	2553.1	2541.5	2522.1	2502.6	2467.8	2440.5	2413.4	2394.1
17.5°	2588.0	2549.2	2522.1	2494.9	2475.5	2463.8	2432.8	2401.8	2370.7	2339.7	2316.4
20°	2518.2	2483.2	2452.2	2417.2	2401.8	2386.2	2347.4	2316.4	2285.4	2250.4	2227.1
22.5°	2432.8	2397.9	2355.2	2328.1	2304.8	2285.4	2250.4	2215.6	2184.4	2153.4	2122.4
25°	2328.1	2293.1	2254.3	2211.7	2196.1	2176.7	2137.9	2103.0	2068.0	2033.2	2006.0
27.5°	2215.6	2169.0	2137.9	2091.3	2075.9	2056.5	2013.8	1974.9	1943.9	1916.8	1885.8
30°	2079.7	2044.8	2002.2	1959.5	1943.9	1924.5	1889.6	1854.7	1823.7	1792.7	1761.5
32.5°	1932.2	1897.4	1854.7	1823.7	1800.4	1784.8	1750.0	1718.9	1687.8	1656.8	1629.6
35°	1777.1	1738.3	1707.3	1676.3	1656.8	1637.4	1602.5	1575.3	1552.0	1524.9	1497.7
37.5°	1618.0	1590.9	1559.8	1524.9	1505.5	1489.9	1462.8	1431.8	1412.3	1389.1	1369.7
40°	1462.8	1431.8	1404.6	1373.5	1358.1	1346.4	1319.2	1295.9	1276.5	1257.1	1245.5
42.5°	1303.7	1276.5	1249.4	1230.0	1218.4	1206.7	1187.3	1160.1	1148.5	1129.1	1117.4
45°	1156.3	1133.0	1113.6	1086.4	1078.7	1070.9	1047.6	1028.2	1016.6	1004.9	997.2
47.5°	1016.6	1001.0	977.8	962.3	950.6	942.9	927.3	911.8	900.2	892.5	884.6
50°	896.3	876.9	861.4	845.9	838.1	826.5	810.9	803.2	795.4	787.7	787.7
52.5°	783.8	764.4	748.8	737.2	729.5	721.7	710.1	706.1	698.4	698.4	694.5
55°	679.0	667.4	651.8	636.4	632.4	628.6	620.8	613.0	609.1	605.3	609.1
57.5°	589.7	578.1	562.6	551.0	547.1	543.3	539.3	531.6	527.7	527.7	527.7
60°	508.3	496.6	485.0	473.3	473.3	465.6	461.7	457.9	454.0	450.0	450.0
62.5°	434.6	422.9	411.3	403.5	399.6	395.8	388.0	384.2	380.2	380.2	376.3
65°	368.6	353.1	349.2	337.6	333.6	329.8	325.9	318.2	314.3	310.4	306.5
67.5°	302.6	294.9	283.2	275.5	271.6	267.8	263.8	256.1	252.2	248.4	240.5
70°	244.5	236.7	228.9	221.2	217.2	213.4	205.7	197.8	194.0	186.2	174.5
72.5°	190.1	182.4	174.5	166.8	163.0	159.1	151.4	143.5	135.8	128.1	120.3
75°	143.5	135.8	124.1	116.4	112.5	112.5	100.8	93.1	85.4	73.7	66.0
77.5°	100.8	89.3	85.4	77.6	73.7	66.0	58.1	50.4	42.7	38.8	31.0
80°	66.0	58.1	50.4	46.6	42.7	38.8	35.0	27.1	19.4	15.6	11.7
82.5°	38.8	35.0	31.0	27.1	23.3	19.4	15.6	15.6	11.7	7.7	3.9
85°	19.4	15.6	11.7	11.7	7.7	7.7	7.7	3.9	3.9	3.9	3.9
87.5°	7.7	3.9	3.9	3.9	3.9	3.9	3.9	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: P585286

CATALOG NUMBER: HC880D010-HM86080930-81WWBB

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	2595.8	2595.8	2595.8	2595.8	2595.8	2595.8	2595.8	2595.8	2595.8	2595.8	2595.8
2.5°	2584.2	2580.2	2576.3	2572.5	2572.5	2564.8	2564.8	2560.9	2553.1	2549.2	2549.2
5°	2560.9	2549.2	2541.5	2537.6	2533.6	2522.1	2518.2	2510.5	2502.6	2494.9	2491.1
7.5°	2525.9	2506.5	2498.8	2494.9	2483.2	2471.6	2463.8	2452.2	2440.5	2428.9	2425.1
10°	2483.2	2463.8	2444.5	2436.7	2425.1	2417.2	2401.8	2386.2	2374.7	2363.0	2351.4
12.5°	2428.9	2405.7	2386.2	2378.5	2366.8	2351.4	2328.1	2320.3	2300.8	2293.1	2277.6
15°	2366.8	2339.7	2320.3	2308.7	2297.0	2273.7	2258.3	2242.7	2223.3	2215.6	2200.0
17.5°	2289.3	2258.3	2238.8	2227.1	2219.4	2200.0	2176.7	2157.3	2137.9	2130.2	2118.6
20°	2196.1	2176.7	2149.6	2137.9	2130.2	2106.9	2083.6	2075.9	2060.3	2044.8	2033.2
22.5°	2091.3	2072.0	2044.8	2033.2	2029.3	2009.9	1990.5	1978.9	1967.2	1955.5	1943.9
25°	1982.8	1959.5	1936.2	1928.4	1920.6	1905.1	1889.6	1881.8	1870.2	1862.4	1854.7
27.5°	1866.4	1843.1	1823.7	1812.0	1804.2	1792.7	1784.8	1777.1	1769.4	1761.5	1757.7
30°	1742.1	1718.9	1703.4	1695.6	1687.8	1684.0	1672.3	1668.4	1664.6	1656.8	1660.7
32.5°	1618.0	1598.6	1583.0	1571.4	1571.4	1563.7	1559.8	1559.8	1555.9	1555.9	1555.9
35°	1482.2	1470.6	1458.9	1455.0	1451.2	1447.3	1443.4	1447.3	1443.4	1447.3	1451.2
37.5°	1358.1	1346.4	1338.6	1334.8	1330.8	1334.8	1330.8	1330.8	1334.8	1342.5	1346.4
40°	1230.0	1222.2	1214.4	1218.4	1214.4	1214.4	1214.4	1226.1	1230.0	1233.8	1237.7
42.5°	1109.7	1102.0	1098.0	1098.0	1102.0	1098.0	1105.8	1109.7	1117.4	1129.1	1136.9
45°	993.3	989.4	989.4	993.3	989.4	997.2	997.2	1004.9	1016.6	1024.3	1032.1
47.5°	884.6	884.6	884.6	888.5	888.5	892.5	900.2	904.1	911.8	919.6	927.3
50°	783.8	787.7	791.5	791.5	791.5	799.2	807.1	810.9	814.8	818.7	830.4
52.5°	694.5	698.4	698.4	702.3	706.1	710.1	714.0	721.7	725.5	733.4	737.2
55°	609.1	609.1	617.0	620.8	620.8	620.8	628.6	628.6	636.4	640.2	648.0
57.5°	527.7	531.6	531.6	535.4	535.4	539.3	543.3	547.1	551.0	554.9	558.7
60°	450.0	450.0	450.0	454.0	457.9	461.7	457.9	465.6	465.6	473.3	477.3
62.5°	376.3	380.2	380.2	380.2	380.2	380.2	380.2	384.2	388.0	391.9	395.8
65°	306.5	306.5	306.5	302.6	306.5	302.6	306.5	310.4	310.4	314.3	318.2
67.5°	236.7	236.7	228.9	228.9	232.8	232.8	232.8	232.8	228.9	236.7	236.7
70°	170.7	166.8	163.0	159.1	159.1	155.2	155.2	151.4	151.4	151.4	151.4
72.5°	112.5	104.8	97.0	93.1	89.3	89.3	81.4	77.6	81.4	81.4	81.4
75°	58.1	50.4	46.6	42.7	38.8	38.8	35.0	35.0	35.0	35.0	35.0
77.5°	23.3	19.4	15.6	15.6	11.7	11.7	11.7	11.7	11.7	11.7	11.7
80°	7.7	7.7	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
82.5°	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
85°	3.9	0.0	0.0	3.9	0.0	3.9	3.9	3.9	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: P585286

CATALOG NUMBER: HC880D010-HM86080930-81WWBB

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	2595.8	2595.8	2595.8	2595.8	2595.8	2595.8	2595.8	2595.8
2.5°	2545.3	2545.3	2541.5	2545.3	2537.6	2541.5	2537.6	2537.6
5°	2487.2	2479.4	2479.4	2479.4	2475.5	2475.5	2471.6	2471.6
7.5°	2417.2	2413.4	2409.5	2405.7	2401.8	2397.9	2397.9	2397.9
10°	2347.4	2339.7	2339.7	2335.8	2328.1	2324.1	2324.1	2324.1
12.5°	2266.0	2262.1	2258.3	2258.3	2242.7	2246.6	2242.7	2242.7
15°	2188.4	2184.4	2184.4	2172.9	2165.1	2165.1	2165.1	2161.2
17.5°	2106.9	2103.0	2099.2	2091.3	2083.6	2083.6	2079.7	2083.6
20°	2021.5	2017.6	2009.9	2009.9	2006.0	2002.2	1994.3	1998.2
22.5°	1936.2	1928.4	1924.5	1924.5	1920.6	1920.6	1912.9	1912.9
25°	1846.9	1843.1	1839.1	1843.1	1835.2	1835.2	1827.5	1827.5
27.5°	1753.8	1750.0	1750.0	1750.0	1746.0	1750.0	1746.0	1746.0
30°	1660.7	1660.7	1656.8	1656.8	1660.7	1656.8	1660.7	1664.6
32.5°	1559.8	1559.8	1563.7	1563.7	1567.6	1567.6	1567.6	1567.6
35°	1455.0	1462.8	1462.8	1466.6	1470.6	1474.5	1474.5	1478.3
37.5°	1358.1	1361.9	1365.8	1369.7	1377.5	1377.5	1377.5	1377.5
40°	1253.3	1257.1	1264.9	1261.1	1276.5	1280.4	1276.5	1276.5
42.5°	1144.7	1152.4	1156.3	1164.0	1168.0	1175.7	1179.5	1179.5
45°	1043.7	1047.6	1055.4	1063.1	1067.0	1078.7	1078.7	1078.7
47.5°	939.0	946.7	950.6	958.3	962.3	973.9	977.8	973.9
50°	838.1	845.9	853.6	853.6	865.2	869.2	876.9	880.8
52.5°	741.1	745.0	752.8	756.6	764.4	772.1	776.1	779.9
55°	648.0	651.8	659.7	659.7	671.3	675.1	682.8	682.8
57.5°	562.6	566.4	574.3	570.4	578.1	585.9	585.9	582.0
60°	481.2	481.2	481.2	488.9	492.7	496.6	500.6	500.6
62.5°	395.8	403.5	407.4	407.4	411.3	415.2	415.2	411.3
65°	318.2	325.9	329.8	329.8	333.6	333.6	333.6	337.6
67.5°	240.5	240.5	240.5	244.5	240.5	240.5	240.5	240.5
70°	151.4	151.4	151.4	151.4	147.4	151.4	151.4	155.2
72.5°	81.4	81.4	81.4	81.4	81.4	81.4	81.4	81.4
75°	35.0	35.0	35.0	38.8	35.0	35.0	35.0	35.0
77.5°	15.6	11.7	15.6	15.6	11.7	11.7	11.7	11.7
80°	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
82.5°	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
85°	0.0	3.9	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)