

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: P593923

Luminaire Tested: **HC880D010-HM86080950-81WWWB**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P593923
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: HC880D010-HM86080950-81WWWB
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, BLACK BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 5000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6444.5 lumens
Efficiency: N/A
Efficacy: 92.1 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

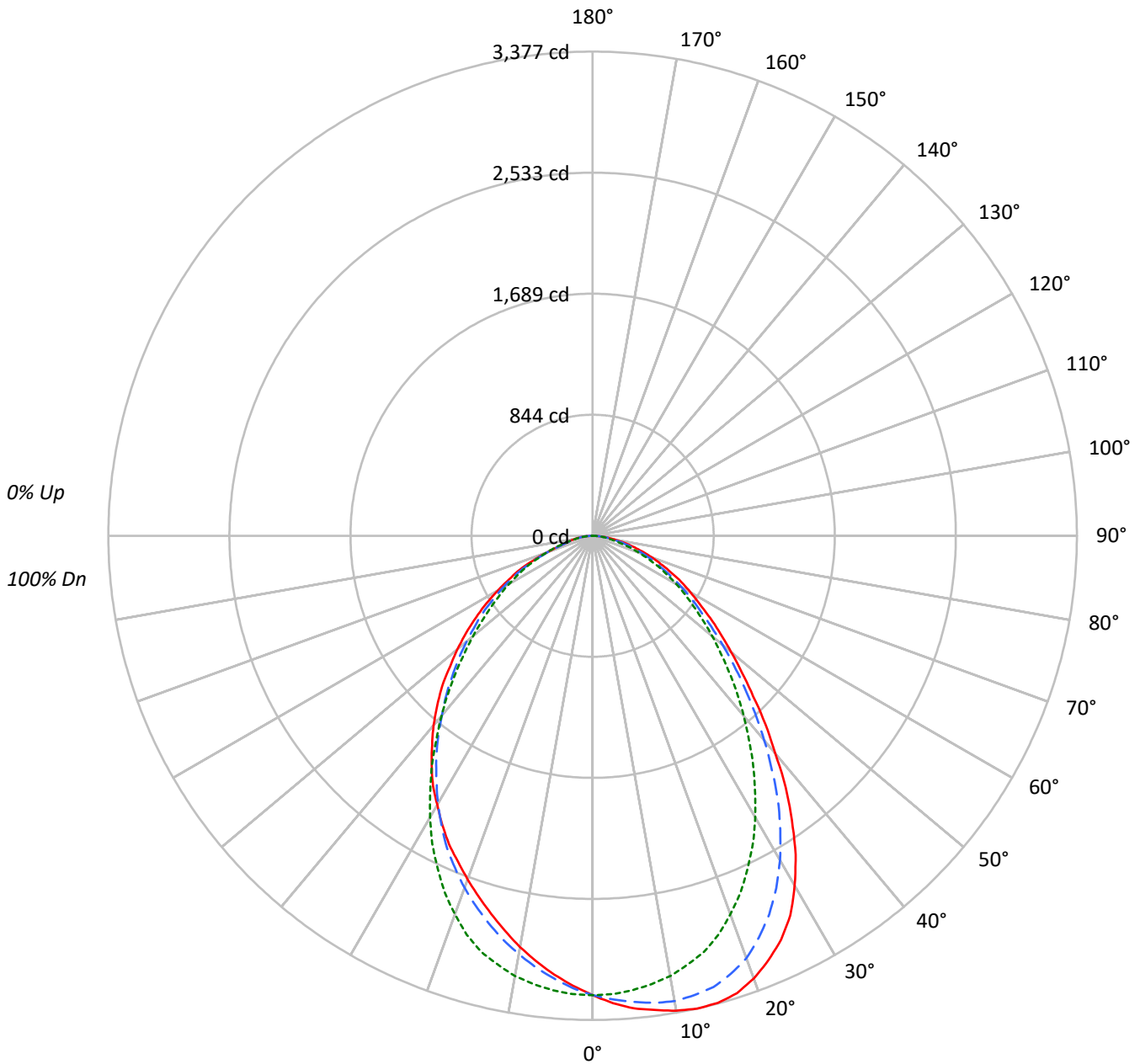
Input Watts (W): 70
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P593923

CATALOG NUMBER: HC880D010-HM86080950-81WWWB

Luminous Intensity Polar Plot





TEST NUMBER: P593923

CATALOG NUMBER: HC880D010-HM86080950-81WWWB

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	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°	98806	98806	98806
5°	102427	98480	95100
10°	105321	97625	91209
15°	107667	95900	87182
20°	107838	92155	83643
25°	105767	87030	80681
30°	100315	80706	77142
35°	91152	73504	73673
40°	79699	65960	69438
45°	69073	58755	64707
50°	60484	52185	58959
55°	53837	46246	53342
60°	48561	41543	46877
65°	43837	36534	40846
70°	39400	30780	30366
75°	34706	24412	22780
80°	29087	20209	21824
85°	22538	17726	19318



TEST NUMBER: P593923

CATALOG NUMBER: HC880D010-HM86080950-81WWWB

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	302.3	4.7
10°-20°	851.4	13.2
20°-30°	1216.8	18.9
30°-40°	1292.9	20.1
40°-50°	1113.1	17.3
50°-60°	832.2	12.9
60°-70°	530.8	8.2
70°-80°	241.6	3.7
80°-90°	63.4	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°	2370.5	36.8
0°-40°	3663.3	56.8
0°-60°	5608.7	87.0
0°-90°	6444.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6444.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	3204	3204	3204	3204	3204	
5°	3309	3263	3182	3100	3072	317
15°	3373	3259	3004	2799	2731	950
25°	3109	2913	2558	2403	2371	1423
35°	2421	2253	1953	1902	1957	1508
45°	1584	1497	1347	1384	1484	1231
55°	1001	920	860	933	992	900
65°	601	533	501	523	560	599
75°	291	250	205	187	191	310
85°	64	55	50	55	55	77
90°	0	0	0	0	0	



TEST NUMBER: P593923

CATALOG NUMBER: HC880D010-HM86080950-81WWWB

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	3204.2	3204.2	3204.2	3204.2	3204.2	3204.2	3204.2	3204.2	3204.2	3204.2	3204.2
2.5°	3263.4	3254.3	3258.8	3254.3	3258.8	3258.8	3249.8	3249.8	3249.8	3249.8	3236.1
5°	3309.0	3304.3	3304.3	3299.8	3295.3	3299.8	3295.3	3290.7	3281.6	3277.1	3263.4
7.5°	3336.2	3336.2	3336.2	3336.2	3331.7	3327.2	3322.5	3313.5	3304.3	3295.3	3286.2
10°	3363.6	3368.1	3363.6	3359.0	3354.4	3345.4	3340.7	3331.7	3318.0	3304.3	3295.3
12.5°	3377.2	3377.2	3372.6	3372.6	3363.6	3359.0	3345.4	3331.7	3318.0	3304.3	3281.6
15°	3372.6	3372.6	3368.1	3363.6	3349.9	3345.4	3336.2	3322.5	3299.8	3281.6	3258.8
17.5°	3345.4	3340.7	3331.7	3331.7	3313.5	3309.0	3299.8	3281.6	3258.8	3231.6	3204.2
20°	3286.2	3286.2	3281.6	3277.1	3258.8	3245.3	3236.1	3213.4	3195.2	3163.3	3136.0
22.5°	3204.2	3213.4	3204.2	3195.2	3172.4	3167.9	3154.2	3126.8	3099.6	3063.1	3031.2
25°	3108.6	3104.1	3099.6	3090.4	3072.3	3063.1	3044.9	3017.7	2990.3	2949.3	2912.9
27.5°	2985.8	2967.6	2967.6	2949.3	2935.8	2922.1	2912.9	2885.6	2849.2	2817.3	2771.8
30°	2817.3	2822.0	2799.1	2794.6	2771.8	2762.8	2744.6	2717.2	2685.4	2649.0	2612.6
32.5°	2635.3	2621.6	2621.6	2603.4	2585.2	2571.6	2567.1	2535.2	2507.8	2471.5	2435.1
35°	2421.4	2421.4	2407.7	2403.2	2385.0	2375.9	2362.2	2344.0	2312.1	2280.3	2253.0
37.5°	2212.0	2202.9	2198.3	2189.3	2175.6	2162.0	2162.0	2130.1	2125.6	2089.1	2052.7
40°	1979.9	1989.0	1979.9	1966.2	1961.7	1952.6	1948.1	1929.9	1916.2	1884.3	1861.5
42.5°	1784.2	1775.1	1775.1	1770.5	1752.3	1752.3	1743.2	1734.2	1711.3	1702.3	1674.9
45°	1583.9	1593.0	1579.3	1583.9	1565.7	1565.7	1565.7	1547.5	1529.3	1515.6	1497.4
47.5°	1411.0	1415.5	1415.5	1401.8	1397.3	1397.3	1388.2	1379.1	1365.4	1347.3	1333.6
50°	1260.8	1265.3	1256.2	1251.7	1242.5	1238.0	1238.0	1219.8	1210.6	1192.4	1183.4
52.5°	1124.2	1124.2	1119.7	1119.7	1106.0	1106.0	1096.9	1083.3	1074.1	1065.1	1042.3
55°	1001.4	1001.4	996.7	992.2	992.2	978.5	974.0	960.4	951.3	933.0	919.5
57.5°	883.0	887.6	883.0	878.4	873.9	869.3	860.2	846.6	837.5	823.9	814.7
60°	787.4	787.4	782.8	778.3	769.2	764.6	760.1	751.0	737.3	728.3	714.6
62.5°	696.4	691.9	687.2	682.7	673.6	673.6	664.5	655.4	641.7	632.7	623.5
65°	600.8	600.8	596.3	596.3	591.6	582.6	578.1	573.5	555.3	550.7	532.6
67.5°	514.4	518.9	509.7	509.7	500.7	500.7	496.2	482.5	477.9	468.8	459.7
70°	437.0	437.0	437.0	432.4	423.3	418.8	414.1	405.1	400.6	391.4	382.4
72.5°	359.6	359.6	355.0	355.0	350.5	345.9	341.4	332.2	332.2	323.2	314.0
75°	291.3	291.3	286.8	282.1	277.6	277.6	273.1	268.6	259.4	254.9	250.3
77.5°	223.1	223.1	223.1	218.4	213.9	213.9	213.9	204.9	195.7	195.7	191.2
80°	163.8	163.8	159.3	159.3	154.8	154.8	154.8	150.2	145.7	141.1	136.5
82.5°	109.3	109.3	109.3	109.3	104.6	104.6	104.6	100.1	95.6	95.6	95.6
85°	63.7	63.7	63.7	63.7	59.2	59.2	59.2	59.2	59.2	54.6	54.6
87.5°	27.3	22.7	27.3	22.7	27.3	22.7	27.3	22.7	22.7	22.7	22.7
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: P593923

CATALOG NUMBER: HC880D010-HM86080950-81WWWB

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	3204.2	3204.2	3204.2	3204.2	3204.2	3204.2	3204.2	3204.2	3204.2	3204.2	3204.2
2.5°	3240.6	3236.1	3231.6	3226.9	3226.9	3222.4	3213.4	3208.8	3204.2	3199.7	3199.7
5°	3258.8	3254.3	3245.3	3236.1	3231.6	3222.4	3213.4	3204.2	3195.2	3181.5	3176.9
7.5°	3272.5	3258.8	3249.8	3231.6	3226.9	3217.9	3204.2	3190.6	3172.4	3154.2	3140.5
10°	3272.5	3254.3	3240.6	3217.9	3208.8	3199.7	3181.5	3158.7	3136.0	3117.8	3095.0
12.5°	3263.4	3240.6	3217.9	3195.2	3181.5	3167.9	3140.5	3117.8	3090.4	3063.1	3044.9
15°	3231.6	3204.2	3176.9	3149.7	3136.0	3117.8	3090.4	3058.6	3031.2	3004.0	2972.1
17.5°	3172.4	3145.0	3113.2	3081.4	3063.1	3049.5	3008.5	2985.8	2944.8	2917.4	2890.2
20°	3095.0	3063.1	3022.2	2990.3	2967.6	2954.0	2922.1	2881.1	2849.2	2808.3	2781.0
22.5°	2994.9	2954.0	2912.9	2881.1	2858.4	2840.2	2799.1	2758.2	2730.9	2694.5	2662.6
25°	2876.5	2835.5	2794.6	2749.1	2726.4	2708.2	2671.7	2635.3	2598.9	2557.9	2530.7
27.5°	2735.4	2689.9	2653.5	2612.6	2589.8	2562.5	2521.5	2485.1	2448.7	2421.4	2385.0
30°	2580.7	2530.7	2494.2	2453.3	2430.4	2407.7	2366.8	2330.3	2298.5	2266.6	2248.4
32.5°	2394.1	2357.7	2321.3	2280.3	2262.1	2248.4	2207.5	2171.1	2134.6	2107.4	2093.7
35°	2216.5	2175.6	2143.8	2107.4	2084.6	2070.9	2034.5	2002.6	1984.4	1952.6	1934.4
37.5°	2030.0	1998.1	1961.7	1925.2	1911.7	1898.0	1870.7	1838.8	1811.4	1788.7	1779.6
40°	1834.3	1806.9	1775.1	1752.3	1738.7	1725.0	1702.3	1679.5	1661.3	1638.6	1629.4
42.5°	1647.6	1629.4	1602.2	1574.8	1561.2	1556.6	1529.3	1511.1	1501.9	1492.9	1483.8
45°	1479.2	1451.9	1433.7	1415.5	1401.8	1392.8	1379.1	1365.4	1356.3	1347.3	1338.1
47.5°	1315.4	1292.6	1274.4	1260.8	1247.1	1242.5	1233.5	1219.8	1210.6	1210.6	1210.6
50°	1165.2	1147.0	1128.7	1119.7	1115.2	1106.0	1096.9	1092.3	1087.8	1087.8	1087.8
52.5°	1033.2	1014.9	1001.4	992.2	992.2	983.1	974.0	969.5	969.5	969.5	969.5
55°	910.3	896.6	887.6	878.4	869.3	864.8	864.8	864.8	860.2	860.2	864.8
57.5°	801.0	792.0	778.3	769.2	764.6	764.6	760.1	755.5	760.1	764.6	769.2
60°	700.9	691.9	687.2	673.6	673.6	673.6	669.1	669.1	669.1	673.6	678.2
62.5°	610.0	605.3	596.3	591.6	587.1	587.1	582.6	582.6	582.6	582.6	587.1
65°	527.9	518.9	509.7	509.7	509.7	505.2	505.2	496.2	500.7	500.7	496.2
67.5°	450.6	441.5	437.0	432.4	427.8	427.8	423.3	418.8	414.1	414.1	414.1
70°	377.7	368.7	368.7	359.6	359.6	355.0	350.5	350.5	345.9	341.4	336.8
72.5°	305.0	300.3	295.8	291.3	291.3	291.3	286.8	282.1	277.6	273.1	264.0
75°	241.2	241.2	232.1	227.6	227.6	223.1	218.4	213.9	209.4	204.9	200.2
77.5°	186.6	182.0	173.0	168.4	168.4	168.4	163.8	159.3	154.8	150.2	145.7
80°	136.5	132.0	127.5	122.9	122.9	122.9	118.3	118.3	113.8	113.8	113.8
82.5°	91.1	91.1	86.4	86.4	86.4	86.4	81.9	81.9	81.9	81.9	81.9
85°	54.6	54.6	50.1	50.1	50.1	50.1	50.1	50.1	50.1	50.1	50.1
87.5°	22.7	22.7	22.7	22.7	22.7	22.7	22.7	22.7	22.7	22.7	22.7
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: P593923

CATALOG NUMBER: HC880D010-HM86080950-81WWWB

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	3204.2	3204.2	3204.2	3204.2	3204.2	3204.2	3204.2	3204.2	3204.2	3204.2	3204.2
2.5°	3190.6	3190.6	3181.5	3176.9	3172.4	3176.9	3167.9	3163.3	3158.7	3158.7	3154.2
5°	3163.3	3158.7	3140.5	3136.0	3131.5	3126.8	3117.8	3108.6	3099.6	3095.0	3090.4
7.5°	3126.8	3113.2	3095.0	3090.4	3085.9	3072.3	3058.6	3049.5	3035.9	3031.2	3022.2
10°	3076.8	3058.6	3044.9	3031.2	3022.2	3008.5	2994.9	2981.2	2963.0	2958.5	2944.8
12.5°	3017.7	2994.9	2967.6	2963.0	2949.3	2931.1	2912.9	2899.3	2885.6	2876.5	2862.9
15°	2944.8	2922.1	2894.7	2881.1	2867.4	2853.8	2831.0	2812.8	2799.1	2785.5	2771.8
17.5°	2858.4	2831.0	2808.3	2794.6	2785.5	2762.8	2744.6	2721.7	2708.2	2694.5	2680.8
20°	2753.6	2730.9	2699.0	2685.4	2680.8	2662.6	2639.8	2630.8	2612.6	2598.9	2589.8
22.5°	2635.3	2612.6	2585.2	2576.1	2557.9	2548.9	2526.0	2517.0	2507.8	2494.2	2489.6
25°	2503.3	2480.6	2457.8	2453.3	2439.6	2430.4	2416.9	2403.2	2403.2	2389.5	2389.5
27.5°	2366.8	2344.0	2325.8	2316.6	2312.1	2303.1	2289.4	2284.9	2280.3	2275.7	2275.7
30°	2221.2	2193.8	2184.7	2180.2	2175.6	2166.5	2162.0	2152.8	2157.4	2162.0	2157.4
32.5°	2066.4	2057.3	2039.0	2030.0	2034.5	2030.0	2020.8	2030.0	2025.5	2034.5	2039.0
35°	1916.2	1907.0	1898.0	1898.0	1888.8	1888.8	1888.8	1893.4	1902.5	1907.0	1916.2
37.5°	1770.5	1756.9	1752.3	1747.7	1752.3	1752.3	1752.3	1761.4	1770.5	1779.6	1793.2
40°	1615.7	1606.7	1606.7	1606.7	1606.7	1620.4	1615.7	1624.9	1633.9	1647.6	1661.3
42.5°	1470.1	1470.1	1474.7	1474.7	1474.7	1474.7	1483.8	1497.4	1511.1	1524.8	1538.4
45°	1333.6	1333.6	1333.6	1342.7	1342.7	1347.3	1365.4	1374.6	1383.6	1397.3	1411.0
47.5°	1206.1	1206.1	1210.6	1215.3	1219.8	1229.0	1238.0	1251.7	1265.3	1274.4	1288.0
50°	1087.8	1092.3	1101.5	1110.5	1110.5	1115.2	1128.7	1137.9	1147.0	1160.6	1165.2
52.5°	974.0	983.1	992.2	996.7	1001.4	1010.4	1014.9	1028.6	1033.2	1046.8	1051.4
55°	869.3	873.9	887.6	892.1	892.1	901.1	910.3	919.5	933.0	933.0	942.2
57.5°	773.8	778.3	787.4	792.0	787.4	801.0	805.7	814.7	819.2	828.4	832.9
60°	678.2	687.2	691.9	691.9	696.4	700.9	710.1	710.1	719.1	728.3	728.3
62.5°	587.1	591.6	596.3	600.8	605.3	600.8	614.5	614.5	623.5	628.1	637.2
65°	500.7	505.2	505.2	509.7	509.7	514.4	514.4	518.9	523.4	532.6	537.1
67.5°	414.1	414.1	414.1	418.8	414.1	418.8	418.8	423.3	423.3	432.4	437.0
70°	336.8	332.2	327.7	327.7	327.7	327.7	323.2	327.7	327.7	332.2	332.2
72.5°	259.4	254.9	250.3	245.8	245.8	241.2	236.7	241.2	241.2	245.8	245.8
75°	195.7	186.6	186.6	186.6	182.0	182.0	182.0	186.6	186.6	186.6	191.2
77.5°	145.7	145.7	141.1	141.1	141.1	145.7	145.7	150.2	150.2	150.2	150.2
80°	109.3	113.8	113.8	113.8	113.8	118.3	118.3	118.3	118.3	122.9	122.9
82.5°	81.9	81.9	81.9	81.9	86.4	86.4	86.4	86.4	86.4	86.4	86.4
85°	50.1	54.6	54.6	50.1	54.6	54.6	54.6	54.6	54.6	54.6	54.6
87.5°	22.7	22.7	22.7	22.7	22.7	22.7	22.7	22.7	22.7	22.7	22.7
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: P593923

CATALOG NUMBER: HC880D010-HM86080950-81WWWB

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	3204.2	3204.2	3204.2	3204.2	3204.2	3204.2	3204.2	3204.2
2.5°	3149.7	3149.7	3149.7	3149.7	3145.0	3145.0	3145.0	3140.5
5°	3081.4	3081.4	3081.4	3072.3	3076.8	3076.8	3067.7	3072.3
7.5°	3013.0	3008.5	3004.0	3004.0	2999.4	2994.9	2990.3	2994.9
10°	2935.8	2922.1	2922.1	2917.4	2917.4	2908.4	2908.4	2912.9
12.5°	2849.2	2840.2	2840.2	2835.5	2831.0	2826.5	2822.0	2822.0
15°	2762.8	2753.6	2749.1	2744.6	2740.1	2730.9	2735.4	2730.9
17.5°	2676.3	2662.6	2662.6	2658.0	2653.5	2644.5	2644.5	2639.8
20°	2576.1	2571.6	2562.5	2567.1	2562.5	2553.4	2548.9	2548.9
22.5°	2476.0	2476.0	2471.5	2471.5	2466.9	2462.3	2457.8	2457.8
25°	2380.4	2375.9	2380.4	2380.4	2366.8	2366.8	2366.8	2371.3
27.5°	2271.2	2275.7	2271.2	2271.2	2271.2	2271.2	2275.7	2271.2
30°	2162.0	2162.0	2162.0	2166.5	2175.6	2171.1	2171.1	2166.5
32.5°	2043.7	2048.2	2048.2	2052.7	2057.3	2066.4	2066.4	2070.9
35°	1925.2	1934.4	1938.9	1934.4	1948.1	1948.1	1957.1	1957.1
37.5°	1802.4	1806.9	1816.1	1820.6	1829.8	1834.3	1838.8	1838.8
40°	1670.4	1688.6	1693.1	1697.7	1711.3	1711.3	1716.0	1725.0
42.5°	1547.5	1565.7	1570.3	1574.8	1583.9	1597.5	1593.0	1602.2
45°	1429.2	1442.9	1447.4	1451.9	1465.6	1470.1	1470.1	1483.8
47.5°	1301.7	1310.9	1315.4	1324.4	1333.6	1342.7	1351.8	1347.3
50°	1174.3	1187.9	1197.1	1201.6	1215.3	1219.8	1224.3	1229.0
52.5°	1060.5	1069.6	1074.1	1078.7	1092.3	1096.9	1101.5	1110.5
55°	951.3	955.8	964.9	960.4	974.0	978.5	983.1	992.2
57.5°	842.0	846.6	851.1	851.1	860.2	869.3	873.9	878.4
60°	737.3	746.5	751.0	751.0	751.0	760.1	760.1	760.1
62.5°	641.7	641.7	646.3	646.3	655.4	655.4	655.4	655.4
65°	541.6	546.2	550.7	550.7	559.8	555.3	564.4	559.8
67.5°	437.0	437.0	446.0	446.0	441.5	446.0	446.0	446.0
70°	332.2	332.2	336.8	336.8	336.8	336.8	336.8	336.8
72.5°	245.8	245.8	245.8	250.3	245.8	245.8	250.3	245.8
75°	191.2	191.2	191.2	191.2	191.2	191.2	191.2	191.2
77.5°	150.2	150.2	154.8	154.8	154.8	154.8	154.8	154.8
80°	122.9	122.9	122.9	122.9	127.5	122.9	122.9	122.9
82.5°	91.1	86.4	91.1	86.4	91.1	91.1	91.1	91.1
85°	54.6	54.6	54.6	54.6	54.6	54.6	54.6	54.6
87.5°	22.7	22.7	22.7	22.7	22.7	22.7	22.7	22.7
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)