

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: P585279

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

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P585279
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: HC880D010-HM86080930-81RWWC
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, SPECULAR TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5525.9 lumens
Efficiency: N/A
Efficacy: 78.9 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

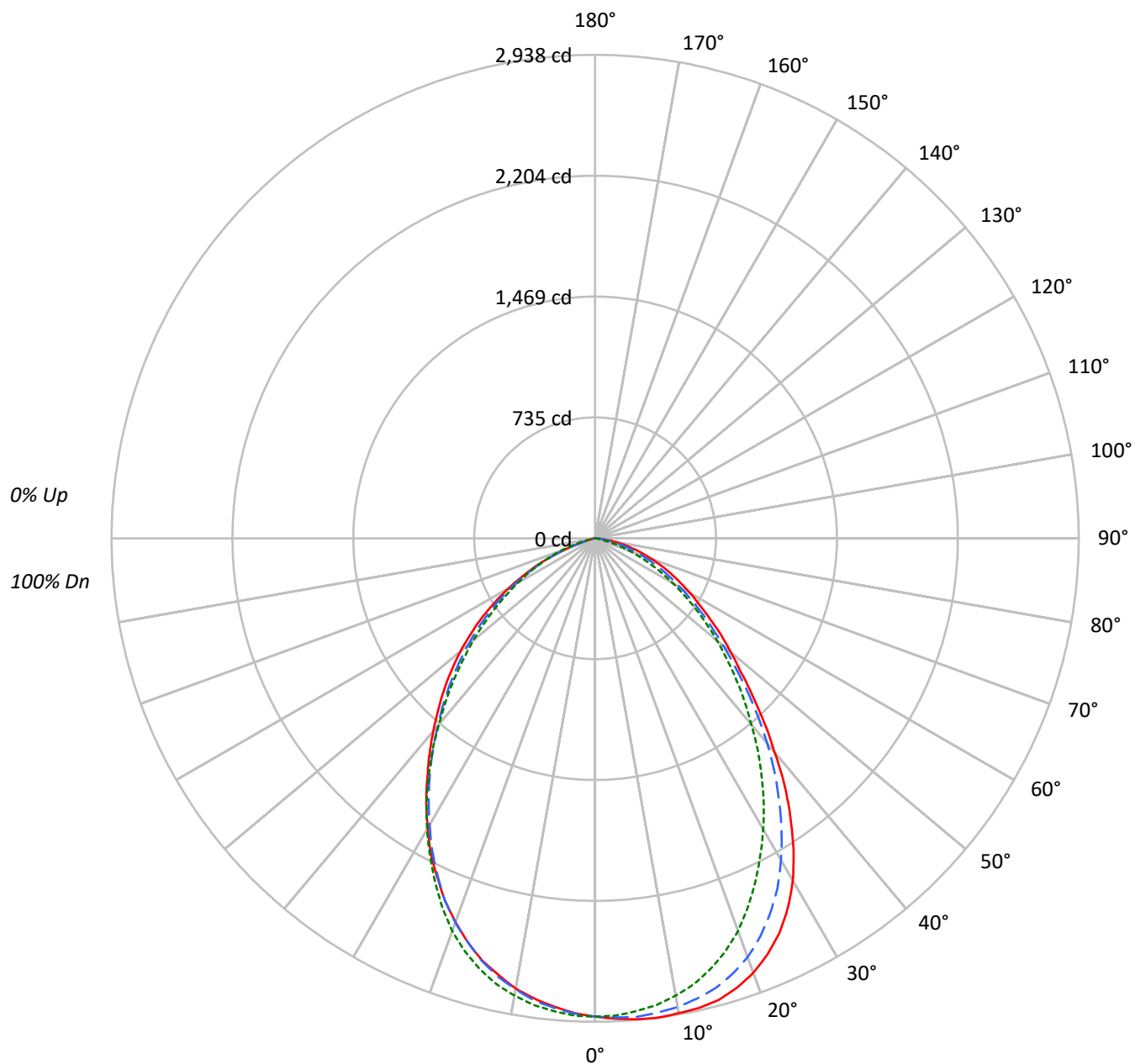
Input Watts (W): 70
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20					20					20					20
RC	80				70					50					30					10
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
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	85	100	94	89	84	91	86	82	87	84	81	84	82	79	77		
3	95	86	79	73	93	84	78	73	82	76	72	79	74	70	76	73	69	67		
4	88	77	70	64	86	76	69	64	74	68	63	72	66	62	69	65	61	59		
5	81	70	62	56	80	69	62	56	67	61	56	65	59	55	63	58	54	52		
6	76	64	56	50	74	63	55	50	61	55	50	60	54	49	58	53	49	47		
7	71	59	51	45	69	58	50	45	56	50	45	55	49	44	54	48	44	42		
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38		
9	62	50	42	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35		
10	58	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	89657	89657	89657
5°	90841	89278	88436
10°	91769	88366	87029
15°	92698	86498	84765
20°	92224	83312	81398
25°	90075	78320	77265
30°	85559	72705	72424
35°	77886	66340	66928
40°	68283	59379	61564
45°	58907	52815	56539
50°	51580	46366	51211
55°	45703	39864	45079
60°	41173	33519	37349
65°	37103	26909	28602
70°	32548	19592	15751
75°	27748	10175	4170
80°	21363	2770	693
85°	13728	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	274.3	5.0
10°-20°	771.2	14.0
20°-30°	1094.6	19.8
30°-40°	1152.2	20.9
40°-50°	980.2	17.7
50°-60°	708.3	12.8
60°-70°	402.9	7.3
70°-80°	126.9	2.3
80°-90°	15.4	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°	2140.0	38.7
0°-40°	3292.2	59.6
0°-60°	4980.7	90.1
0°-90°	5525.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5525.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2908	2908	2908	2908	2908	
5°	2935	2919	2884	2865	2857	280
15°	2904	2830	2710	2659	2655	818
25°	2647	2515	2302	2263	2271	1212
35°	2069	1949	1762	1751	1778	1287
45°	1351	1300	1211	1242	1296	1050
55°	850	788	742	784	838	767
65°	508	439	369	365	392	504
75°	233	179	85	39	35	251
85°	39	23	0	0	0	50
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	2907.5	2907.5	2907.5	2907.5	2907.5	2907.5	2907.5	2907.5	2907.5	2907.5	2907.5
2.5°	2923.0	2926.8	2919.1	2919.1	2926.8	2919.1	2923.0	2923.0	2919.1	2919.1	2915.2
5°	2934.7	2930.8	2930.8	2930.8	2934.7	2926.8	2923.0	2926.8	2919.1	2919.1	2919.1
7.5°	2938.5	2938.5	2934.7	2930.8	2930.8	2930.8	2926.8	2923.0	2919.1	2911.4	2907.5
10°	2930.8	2930.8	2934.7	2926.8	2926.8	2919.1	2919.1	2911.4	2911.4	2903.7	2892.0
12.5°	2923.0	2919.1	2919.1	2911.4	2911.4	2903.7	2903.7	2892.0	2888.1	2876.4	2864.8
15°	2903.7	2899.7	2892.0	2888.1	2884.2	2880.4	2872.5	2868.7	2857.0	2841.5	2829.8
17.5°	2864.8	2860.9	2857.0	2849.2	2841.5	2837.7	2833.7	2822.1	2806.5	2794.9	2775.5
20°	2810.4	2806.5	2806.5	2794.9	2791.1	2779.4	2775.5	2760.0	2748.4	2725.1	2709.5
22.5°	2736.7	2740.5	2732.8	2725.1	2717.2	2705.7	2697.8	2682.4	2662.9	2639.7	2620.2
25°	2647.4	2651.2	2643.5	2635.8	2624.1	2616.4	2608.5	2585.2	2565.9	2538.8	2515.4
27.5°	2534.8	2534.8	2534.8	2527.1	2507.6	2503.8	2496.1	2472.8	2445.5	2422.2	2398.9
30°	2402.9	2398.9	2398.9	2387.3	2379.5	2364.1	2352.4	2332.9	2313.6	2286.4	2259.2
32.5°	2243.6	2247.6	2235.9	2228.2	2216.5	2216.5	2201.0	2185.5	2162.2	2135.0	2107.9
35°	2069.0	2072.9	2065.2	2061.3	2041.9	2037.9	2034.0	2014.6	1999.2	1979.7	1948.7
37.5°	1890.4	1886.6	1882.7	1882.7	1871.0	1863.3	1855.6	1843.9	1820.6	1805.0	1789.6
40°	1696.3	1696.3	1696.3	1692.4	1688.6	1680.8	1677.0	1669.2	1653.7	1638.1	1626.4
42.5°	1521.7	1521.7	1517.8	1514.0	1506.1	1510.0	1502.3	1494.5	1479.0	1467.3	1459.6
45°	1350.8	1350.8	1350.8	1354.7	1347.0	1335.4	1335.4	1327.6	1319.8	1312.1	1300.4
47.5°	1199.5	1211.1	1203.4	1199.5	1203.4	1187.8	1187.8	1180.1	1172.4	1164.5	1149.0
50°	1075.2	1075.2	1075.2	1067.5	1063.6	1063.6	1052.0	1044.2	1040.4	1032.5	1017.1
52.5°	962.7	954.9	954.9	951.1	947.2	939.4	939.4	931.6	916.1	908.4	896.7
55°	850.1	850.1	846.2	842.4	838.5	834.6	830.8	819.1	811.3	799.6	788.1
57.5°	749.2	756.9	753.1	745.3	737.5	737.5	729.8	722.0	710.4	698.8	687.1
60°	667.6	663.8	663.8	659.9	652.2	648.2	644.4	632.8	621.1	609.5	597.8
62.5°	582.3	582.3	582.3	574.5	566.8	562.9	558.9	551.2	535.6	524.0	516.3
65°	508.5	504.6	500.8	496.9	493.0	485.2	481.3	473.6	461.9	450.3	438.6
67.5°	434.8	430.9	430.9	427.0	415.3	411.5	411.5	399.9	388.2	376.6	364.9
70°	361.0	361.0	361.0	353.3	349.3	345.5	341.6	333.9	322.2	310.6	298.9
72.5°	298.9	295.0	295.0	291.2	279.5	275.6	271.7	264.0	252.3	244.6	236.8
75°	232.9	232.9	229.0	225.2	221.3	217.3	213.5	205.7	194.0	182.4	178.6
77.5°	178.6	174.7	174.7	170.9	163.0	159.2	159.2	151.4	139.7	132.0	124.3
80°	120.3	124.3	120.3	116.4	112.6	108.7	104.8	100.9	93.2	85.4	77.6
82.5°	73.7	77.6	73.7	73.7	69.9	66.0	66.0	58.3	54.3	50.4	46.6
85°	38.8	38.8	38.8	38.8	35.0	35.0	35.0	31.0	27.2	23.3	23.3
87.5°	11.7	15.6	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



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CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	2907.5	2907.5	2907.5	2907.5	2907.5	2907.5	2907.5	2907.5	2907.5	2907.5	2907.5
2.5°	2919.1	2915.2	2911.4	2911.4	2911.4	2911.4	2911.4	2907.5	2903.7	2903.7	2903.7
5°	2911.4	2911.4	2911.4	2907.5	2903.7	2903.7	2895.8	2892.0	2888.1	2884.2	2880.4
7.5°	2903.7	2895.8	2892.0	2888.1	2884.2	2884.2	2876.4	2868.7	2868.7	2860.9	2853.1
10°	2880.4	2876.4	2868.7	2860.9	2857.0	2853.1	2845.4	2833.7	2829.8	2822.1	2814.4
12.5°	2853.1	2845.4	2837.7	2822.1	2818.2	2814.4	2798.8	2787.1	2779.4	2775.5	2756.1
15°	2818.2	2802.7	2791.1	2771.7	2767.8	2760.0	2748.4	2736.7	2721.1	2709.5	2701.8
17.5°	2756.1	2740.5	2721.1	2701.8	2694.0	2694.0	2674.5	2659.1	2639.7	2631.9	2616.4
20°	2682.4	2662.9	2647.4	2624.1	2612.5	2600.8	2589.2	2565.9	2550.4	2538.8	2519.3
22.5°	2596.9	2569.8	2550.4	2527.1	2507.6	2496.1	2476.6	2457.2	2437.8	2426.2	2410.6
25°	2488.2	2464.9	2433.9	2410.6	2398.9	2383.5	2360.2	2340.8	2321.3	2301.9	2294.2
27.5°	2367.9	2336.9	2309.6	2282.5	2270.9	2259.2	2232.0	2208.8	2193.2	2173.8	2166.0
30°	2235.9	2204.9	2173.8	2150.5	2138.9	2119.5	2103.9	2076.8	2057.3	2041.9	2022.5
32.5°	2084.6	2061.3	2034.0	1999.2	1991.3	1975.9	1952.6	1940.9	1917.6	1906.0	1890.4
35°	1921.5	1906.0	1878.9	1851.6	1840.0	1832.2	1812.9	1789.6	1774.0	1762.3	1754.6
37.5°	1766.3	1746.9	1719.7	1700.3	1692.4	1680.8	1657.6	1645.9	1630.4	1622.6	1607.1
40°	1599.3	1579.9	1560.4	1548.8	1537.3	1529.4	1514.0	1502.3	1486.7	1475.1	1471.3
42.5°	1436.3	1424.7	1409.1	1393.6	1389.7	1378.1	1370.3	1358.7	1347.0	1343.1	1331.4
45°	1288.8	1277.1	1261.6	1246.1	1242.1	1234.4	1230.5	1218.8	1211.1	1211.1	1211.1
47.5°	1141.2	1129.7	1114.1	1106.4	1110.2	1094.7	1094.7	1090.8	1083.1	1083.1	1086.9
50°	1009.2	993.8	989.8	982.1	974.4	966.5	970.5	958.8	958.8	966.5	962.7
52.5°	885.1	869.5	865.6	857.9	854.1	854.1	850.1	850.1	846.2	850.1	850.1
55°	772.5	760.8	753.1	745.3	741.5	741.5	741.5	737.5	733.6	741.5	745.3
57.5°	671.5	667.6	659.9	648.2	644.4	640.5	636.6	636.6	636.6	636.6	640.5
60°	582.3	574.5	566.8	555.1	555.1	551.2	547.3	543.5	543.5	543.5	543.5
62.5°	504.6	493.0	481.3	473.6	469.7	465.9	461.9	454.2	454.2	454.2	454.2
65°	427.0	415.3	407.6	399.9	392.0	392.0	384.3	380.4	372.6	368.8	361.0
67.5°	353.3	345.5	337.7	326.0	322.2	318.3	310.6	306.6	295.0	291.2	287.3
70°	287.3	275.6	267.9	260.0	256.2	248.4	240.7	232.9	225.2	217.3	209.6
72.5°	225.2	213.5	205.7	198.0	190.2	190.2	178.6	170.9	159.2	151.4	139.7
75°	166.9	155.3	147.6	135.9	132.0	128.1	116.4	108.7	97.0	85.4	77.6
77.5°	112.6	104.8	97.0	85.4	77.6	77.6	66.0	58.3	50.4	38.8	35.0
80°	69.9	62.1	54.3	46.6	46.6	38.8	35.0	27.2	19.4	15.6	11.7
82.5°	38.8	35.0	31.0	23.3	23.3	19.4	15.6	11.7	7.7	3.9	3.9
85°	19.4	15.6	11.7	11.7	7.7	7.7	7.7	3.9	3.9	0.0	0.0
87.5°	7.7	3.9	3.9	3.9	3.9	3.9	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



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CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	2907.5	2907.5	2907.5	2907.5	2907.5	2907.5	2907.5	2907.5	2907.5	2907.5	2907.5
2.5°	2899.7	2899.7	2895.8	2895.8	2895.8	2892.0	2895.8	2892.0	2892.0	2892.0	2895.8
5°	2884.2	2876.4	2876.4	2872.5	2872.5	2868.7	2872.5	2868.7	2864.8	2860.9	2864.8
7.5°	2853.1	2845.4	2841.5	2837.7	2837.7	2837.7	2833.7	2829.8	2833.7	2822.1	2829.8
10°	2810.4	2806.5	2798.8	2794.9	2791.1	2794.9	2791.1	2783.2	2783.2	2783.2	2779.4
12.5°	2756.1	2748.4	2744.4	2740.5	2732.8	2732.8	2736.7	2728.9	2728.9	2721.1	2721.1
15°	2690.1	2682.4	2674.5	2674.5	2666.8	2666.8	2662.9	2662.9	2659.1	2655.2	2655.2
17.5°	2608.5	2596.9	2589.2	2593.1	2589.2	2585.2	2585.2	2577.5	2573.6	2577.5	2577.5
20°	2511.5	2503.8	2496.1	2499.9	2492.1	2488.2	2492.1	2480.5	2484.4	2484.4	2484.4
22.5°	2402.9	2398.9	2387.3	2387.3	2379.5	2375.6	2379.5	2379.5	2383.5	2379.5	2379.5
25°	2282.5	2274.8	2266.9	2266.9	2263.1	2259.2	2263.1	2266.9	2263.1	2266.9	2266.9
27.5°	2154.5	2142.8	2142.8	2135.0	2135.0	2138.9	2135.0	2138.9	2142.8	2142.8	2150.5
30°	2014.6	2010.8	2006.9	2003.0	2003.0	2006.9	2006.9	2006.9	2010.8	2018.6	2018.6
32.5°	1882.7	1874.9	1867.2	1867.2	1874.9	1871.0	1874.9	1874.9	1882.7	1882.7	1890.4
35°	1739.0	1739.0	1731.3	1735.2	1735.2	1735.2	1735.2	1743.0	1750.7	1754.6	1762.3
37.5°	1607.1	1595.4	1599.3	1599.3	1603.2	1599.3	1611.0	1611.0	1618.7	1618.7	1626.4
40°	1463.4	1463.4	1467.3	1463.4	1467.3	1467.3	1475.1	1482.8	1486.7	1494.5	1498.4
42.5°	1327.6	1335.4	1327.6	1331.4	1335.4	1339.2	1343.1	1347.0	1362.5	1370.3	1382.0
45°	1203.4	1207.2	1211.1	1215.0	1211.1	1218.8	1222.8	1230.5	1242.1	1246.1	1250.0
47.5°	1083.1	1086.9	1090.8	1094.7	1094.7	1102.4	1106.4	1114.1	1121.8	1125.7	1129.7
50°	966.5	974.4	978.2	978.2	982.1	989.8	997.6	997.6	1005.4	1017.1	1020.9
52.5°	861.8	861.8	869.5	873.4	877.2	877.2	888.9	892.8	896.7	904.5	912.2
55°	745.3	756.9	760.8	760.8	768.6	776.4	780.2	784.1	784.1	799.6	799.6
57.5°	644.4	648.2	656.0	656.0	656.0	667.6	667.6	675.5	679.3	683.2	690.9
60°	543.5	551.2	551.2	555.1	551.2	558.9	562.9	570.6	574.5	578.4	582.3
62.5°	450.3	450.3	454.2	454.2	454.2	454.2	461.9	461.9	469.7	473.6	477.5
65°	361.0	361.0	361.0	361.0	361.0	361.0	361.0	361.0	364.9	364.9	372.6
67.5°	279.5	275.6	267.9	271.7	267.9	267.9	264.0	264.0	267.9	267.9	275.6
70°	201.9	198.0	190.2	190.2	186.3	182.4	178.6	174.7	170.9	170.9	170.9
72.5°	132.0	124.3	112.6	108.7	108.7	100.9	93.2	89.3	89.3	89.3	89.3
75°	66.0	58.3	50.4	46.6	46.6	38.8	42.7	38.8	38.8	38.8	38.8
77.5°	27.2	19.4	15.6	15.6	15.6	11.7	11.7	11.7	11.7	11.7	11.7
80°	7.7	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
82.5°	3.9	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: P585279

CATALOG NUMBER: HC880D010-HM86080930-81RWWC

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	2907.5	2907.5	2907.5	2907.5	2907.5	2907.5	2907.5	2907.5
2.5°	2892.0	2892.0	2884.2	2888.1	2888.1	2888.1	2888.1	2888.1
5°	2857.0	2860.9	2857.0	2860.9	2860.9	2857.0	2857.0	2857.0
7.5°	2822.1	2826.0	2822.1	2826.0	2826.0	2826.0	2822.1	2822.1
10°	2779.4	2779.4	2779.4	2779.4	2779.4	2775.5	2779.4	2779.4
12.5°	2721.1	2721.1	2721.1	2725.1	2725.1	2721.1	2721.1	2717.2
15°	2659.1	2651.2	2655.2	2659.1	2655.2	2655.2	2655.2	2655.2
17.5°	2573.6	2577.5	2573.6	2573.6	2573.6	2573.6	2577.5	2573.6
20°	2484.4	2484.4	2488.2	2484.4	2484.4	2484.4	2484.4	2480.5
22.5°	2383.5	2379.5	2379.5	2383.5	2383.5	2379.5	2383.5	2383.5
25°	2270.9	2274.8	2270.9	2270.9	2274.8	2274.8	2274.8	2270.9
27.5°	2150.5	2154.5	2158.3	2154.5	2154.5	2154.5	2158.3	2162.2
30°	2026.3	2034.0	2026.3	2026.3	2034.0	2030.2	2034.0	2034.0
32.5°	1894.3	1906.0	1898.2	1906.0	1906.0	1909.9	1906.0	1909.9
35°	1762.3	1774.0	1774.0	1774.0	1777.9	1781.7	1781.7	1777.9
37.5°	1638.1	1642.0	1642.0	1649.7	1653.7	1657.6	1657.6	1653.7
40°	1510.0	1517.8	1521.7	1521.7	1521.7	1529.4	1537.3	1529.4
42.5°	1385.8	1389.7	1393.6	1393.6	1401.4	1405.3	1409.1	1409.1
45°	1265.5	1273.2	1277.1	1281.0	1284.8	1292.7	1288.8	1296.5
47.5°	1141.2	1152.9	1156.8	1160.7	1168.4	1172.4	1176.2	1180.1
50°	1028.7	1036.5	1036.5	1044.2	1055.8	1055.8	1063.6	1067.5
52.5°	916.1	920.0	923.9	927.8	935.5	943.2	943.2	951.1
55°	807.4	811.3	811.3	815.2	819.1	834.6	838.5	838.5
57.5°	694.9	694.9	702.6	706.5	710.4	718.2	718.2	718.2
60°	586.2	590.0	590.0	593.9	597.8	605.6	609.5	605.6
62.5°	477.5	481.3	481.3	485.2	493.0	496.9	493.0	493.0
65°	376.6	380.4	380.4	384.3	392.0	392.0	388.2	392.0
67.5°	275.6	275.6	275.6	275.6	275.6	275.6	275.6	275.6
70°	174.7	170.9	166.9	170.9	170.9	170.9	166.9	174.7
72.5°	85.4	89.3	89.3	89.3	89.3	89.3	89.3	85.4
75°	38.8	38.8	35.0	35.0	35.0	38.8	38.8	35.0
77.5°	11.7	11.7	11.7	11.7	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°	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



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— 0°-180° - - 45°-225° - - - 90°-270°













(END OF REPORT)