

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: P585262

Luminaire Tested: **HC880D010-HM86080927-81RWWC**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P585262
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-HM86080927-81RWWC
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, SPECULAR TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5165.3 lumens
Efficiency: N/A
Efficacy: 73.8 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

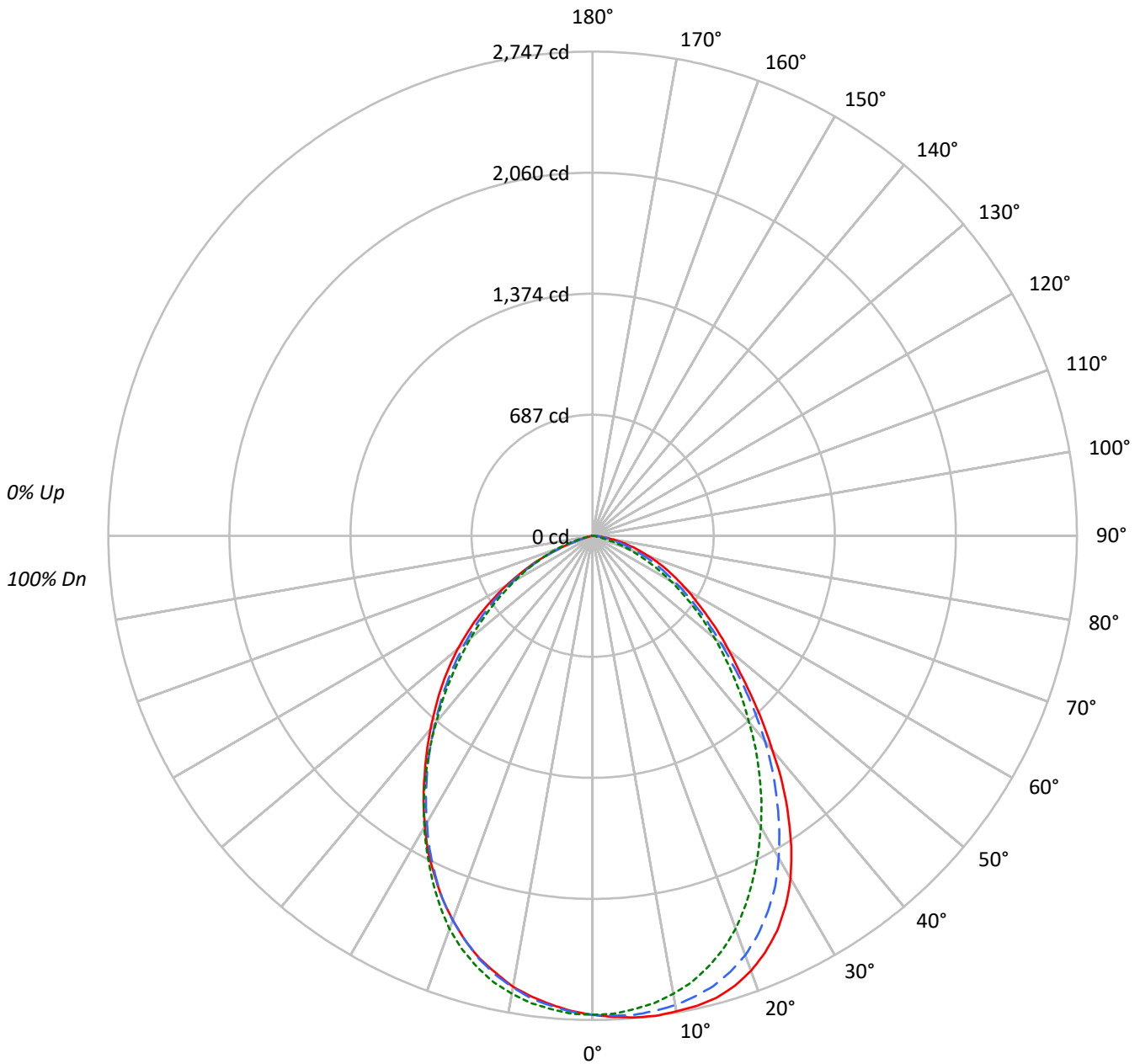
Input Watts (W): 70
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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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	84	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°	83807	83807	83807
5°	84910	83455	82666
10°	85782	82598	81352
15°	86645	80854	79232
20°	86209	77871	76089
25°	84199	73210	72223
30°	79973	67959	67699
35°	72804	62015	62561
40°	63831	55506	57551
45°	55065	49366	52850
50°	48217	43343	47867
55°	42719	37262	42138
60°	38490	31324	34913
65°	34688	25151	26734
70°	30420	18320	14714
75°	25937	9508	3896
80°	19978	2575	657
85°	12843	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	256.4	5.0
10°-20°	720.8	14.0
20°-30°	1023.1	19.8
30°-40°	1077.0	20.9
40°-50°	916.2	17.7
50°-60°	662.1	12.8
60°-70°	376.6	7.3
70°-80°	118.7	2.3
80°-90°	14.4	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°	2000.4	38.7
0°-40°	3077.4	59.6
0°-60°	4655.7	90.1
0°-90°	5165.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5165.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2718	2718	2718	2718	2718	
5°	2743	2729	2696	2678	2671	262
15°	2714	2645	2533	2486	2482	764
25°	2475	2351	2152	2116	2123	1133
35°	1934	1822	1647	1636	1662	1203
45°	1263	1216	1132	1161	1212	982
55°	795	737	693	733	784	716
65°	475	410	345	341	366	471
75°	218	167	80	36	33	234
85°	36	22	0	0	0	47
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°	2717.8	2717.8	2717.8	2717.8	2717.8	2717.8	2717.8	2717.8	2717.8	2717.8	2717.8
2.5°	2732.3	2735.9	2728.6	2728.6	2735.9	2728.6	2732.3	2732.3	2728.6	2728.6	2725.1
5°	2743.1	2739.6	2739.6	2739.6	2743.1	2735.9	2732.3	2735.9	2728.6	2728.6	2728.6
7.5°	2746.8	2746.8	2743.1	2739.6	2739.6	2739.6	2735.9	2732.3	2728.6	2721.4	2717.8
10°	2739.6	2739.6	2743.1	2735.9	2735.9	2728.6	2728.6	2721.4	2721.4	2714.1	2703.3
12.5°	2732.3	2728.6	2728.6	2721.4	2721.4	2714.1	2714.1	2703.3	2699.6	2688.8	2677.9
15°	2714.1	2710.6	2703.3	2699.6	2696.1	2692.4	2685.1	2681.4	2670.6	2656.1	2645.2
17.5°	2677.9	2674.2	2670.6	2663.4	2656.1	2652.4	2648.9	2637.9	2623.4	2612.6	2594.4
20°	2627.1	2623.4	2623.4	2612.6	2608.9	2598.1	2594.4	2579.9	2569.0	2547.2	2532.7
22.5°	2558.1	2561.7	2554.4	2547.2	2539.9	2529.1	2521.9	2507.4	2489.2	2467.4	2449.2
25°	2474.7	2478.4	2471.0	2463.7	2452.9	2445.7	2438.4	2416.6	2398.5	2373.0	2351.2
27.5°	2369.4	2369.4	2369.4	2362.2	2344.0	2340.4	2333.2	2311.4	2286.0	2264.2	2242.5
30°	2246.0	2242.5	2242.5	2231.5	2224.3	2209.8	2198.9	2180.7	2162.6	2137.2	2111.8
32.5°	2097.3	2101.0	2090.0	2082.8	2072.0	2072.0	2057.3	2042.8	2021.1	1995.7	1970.3
35°	1934.0	1937.6	1930.3	1926.8	1908.6	1905.0	1901.3	1883.3	1868.8	1850.6	1821.5
37.5°	1767.1	1763.5	1759.8	1759.8	1748.9	1741.6	1734.4	1723.6	1701.8	1687.3	1672.8
40°	1585.7	1585.7	1585.7	1582.1	1578.4	1571.1	1567.6	1560.3	1545.7	1531.2	1520.4
42.5°	1422.4	1422.4	1418.7	1415.1	1407.9	1411.5	1404.2	1397.0	1382.5	1371.6	1364.4
45°	1262.7	1262.7	1262.7	1266.4	1259.2	1248.2	1248.2	1241.0	1233.7	1226.5	1215.5
47.5°	1121.2	1132.0	1124.8	1121.2	1124.8	1110.3	1110.3	1103.0	1095.8	1088.5	1074.0
50°	1005.1	1005.1	1005.1	997.8	994.2	994.2	983.3	976.1	972.5	965.2	950.7
52.5°	899.8	892.6	892.6	889.0	885.3	878.1	878.1	870.8	856.3	849.1	838.2
55°	794.6	794.6	791.0	787.4	783.8	780.1	776.5	765.6	758.3	747.5	736.6
57.5°	700.3	707.6	703.9	696.6	689.4	689.4	682.1	674.9	664.1	653.1	642.3
60°	624.1	620.5	620.5	616.9	609.6	605.9	602.3	591.4	580.6	569.6	558.8
62.5°	544.3	544.3	544.3	537.1	529.8	526.1	522.6	515.2	500.7	489.9	482.6
65°	475.4	471.7	468.1	464.4	460.9	453.6	449.9	442.7	431.8	420.9	410.0
67.5°	406.4	402.7	402.7	399.1	388.2	384.6	384.6	373.7	362.9	351.9	341.1
70°	337.4	337.4	337.4	330.2	326.6	322.9	319.4	312.1	301.2	290.2	279.4
72.5°	279.4	275.7	275.7	272.2	261.2	257.7	254.0	246.7	235.9	228.6	221.4
75°	217.7	217.7	214.1	210.5	206.9	203.2	199.5	192.3	181.4	170.5	166.9
77.5°	166.9	163.2	163.2	159.7	152.4	148.7	148.7	141.5	130.7	123.4	116.2
80°	112.5	116.2	112.5	108.9	105.2	101.5	98.0	94.3	87.0	79.8	72.5
82.5°	69.0	72.5	69.0	69.0	65.3	61.7	61.7	54.5	50.8	47.2	43.5
85°	36.3	36.3	36.3	36.3	32.7	32.7	32.7	29.0	25.4	21.8	21.8
87.5°	10.9	14.5	10.9	10.9	10.9	10.9	10.9	10.9	7.3	7.3	7.3
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°	2717.8	2717.8	2717.8	2717.8	2717.8	2717.8	2717.8	2717.8	2717.8	2717.8	2717.8
2.5°	2728.6	2725.1	2721.4	2721.4	2721.4	2721.4	2721.4	2717.8	2714.1	2714.1	2714.1
5°	2721.4	2721.4	2721.4	2717.8	2714.1	2714.1	2706.9	2703.3	2699.6	2696.1	2692.4
7.5°	2714.1	2706.9	2703.3	2699.6	2696.1	2696.1	2688.8	2681.4	2681.4	2674.2	2666.9
10°	2692.4	2688.8	2681.4	2674.2	2670.6	2666.9	2659.7	2648.9	2645.2	2637.9	2630.7
12.5°	2666.9	2659.7	2652.4	2637.9	2634.3	2630.7	2616.2	2605.3	2598.1	2594.4	2576.2
15°	2634.3	2619.8	2608.9	2590.8	2587.1	2579.9	2569.0	2558.1	2543.6	2532.7	2525.4
17.5°	2576.2	2561.7	2543.6	2525.4	2518.2	2518.2	2500.1	2485.6	2467.4	2460.2	2445.7
20°	2507.4	2489.2	2474.7	2452.9	2442.0	2431.1	2420.2	2398.5	2383.9	2373.0	2354.9
22.5°	2427.5	2402.1	2383.9	2362.2	2344.0	2333.2	2315.0	2296.9	2278.7	2267.8	2253.3
25°	2325.9	2304.2	2275.2	2253.3	2242.5	2227.9	2206.2	2188.0	2169.9	2151.7	2144.5
27.5°	2213.4	2184.4	2159.0	2133.5	2122.7	2111.8	2086.5	2064.7	2050.1	2032.0	2024.7
30°	2090.0	2061.0	2032.0	2010.2	1999.3	1981.2	1966.7	1941.3	1923.1	1908.6	1890.5
32.5°	1948.5	1926.8	1901.3	1868.8	1861.5	1846.9	1825.1	1814.3	1792.5	1781.6	1767.1
35°	1796.1	1781.6	1756.3	1730.8	1719.9	1712.6	1694.6	1672.8	1658.3	1647.4	1640.1
37.5°	1650.9	1632.9	1607.4	1589.3	1582.1	1571.1	1549.4	1538.4	1523.9	1516.7	1502.2
40°	1494.9	1476.9	1458.7	1447.8	1436.9	1429.7	1415.1	1404.2	1389.7	1378.9	1375.2
42.5°	1342.6	1331.7	1317.2	1302.7	1299.0	1288.2	1280.9	1270.0	1259.2	1255.5	1244.6
45°	1204.7	1193.8	1179.3	1164.7	1161.2	1153.9	1150.2	1139.4	1132.0	1132.0	1132.0
47.5°	1066.8	1056.0	1041.4	1034.2	1037.8	1023.3	1023.3	1019.6	1012.3	1012.3	1016.0
50°	943.5	928.8	925.3	918.0	910.8	903.5	907.1	896.3	896.3	903.5	899.8
52.5°	827.3	812.8	809.1	801.9	798.3	798.3	794.6	794.6	791.0	794.6	794.6
55°	722.1	711.1	703.9	696.6	693.1	693.1	693.1	689.4	685.8	693.1	696.6
57.5°	627.8	624.1	616.9	605.9	602.3	598.7	595.1	595.1	595.1	595.1	598.7
60°	544.3	537.1	529.8	518.9	518.9	515.2	511.6	507.9	507.9	507.9	507.9
62.5°	471.7	460.9	449.9	442.7	439.1	435.4	431.8	424.6	424.6	424.6	424.6
65°	399.1	388.2	381.0	373.7	366.4	366.4	359.2	355.6	348.4	344.7	337.4
67.5°	330.2	322.9	315.7	304.7	301.2	297.5	290.2	286.7	275.7	272.2	268.5
70°	268.5	257.7	250.4	243.2	239.5	232.2	225.0	217.7	210.5	203.2	195.9
72.5°	210.5	199.5	192.3	185.0	177.8	177.8	166.9	159.7	148.7	141.5	130.7
75°	156.0	145.2	137.9	127.0	123.4	119.7	108.9	101.5	90.7	79.8	72.5
77.5°	105.2	98.0	90.7	79.8	72.5	72.5	61.7	54.5	47.2	36.3	32.7
80°	65.3	58.0	50.8	43.5	43.5	36.3	32.7	25.4	18.2	14.5	10.9
82.5°	36.3	32.7	29.0	21.8	21.8	18.2	14.5	10.9	7.3	3.7	3.7
85°	18.2	14.5	10.9	10.9	7.3	7.3	7.3	3.7	3.7	0.0	0.0
87.5°	7.3	3.7	3.7	3.7	3.7	3.7	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°	2717.8	2717.8	2717.8	2717.8	2717.8	2717.8	2717.8	2717.8	2717.8	2717.8	2717.8
2.5°	2710.6	2710.6	2706.9	2706.9	2706.9	2703.3	2706.9	2703.3	2703.3	2703.3	2706.9
5°	2696.1	2688.8	2688.8	2685.1	2685.1	2681.4	2685.1	2681.4	2677.9	2674.2	2677.9
7.5°	2666.9	2659.7	2656.1	2652.4	2652.4	2652.4	2648.9	2645.2	2648.9	2637.9	2645.2
10°	2627.1	2623.4	2616.2	2612.6	2608.9	2612.6	2608.9	2601.7	2601.7	2601.7	2598.1
12.5°	2576.2	2569.0	2565.4	2561.7	2554.4	2554.4	2558.1	2550.9	2550.9	2543.6	2543.6
15°	2514.6	2507.4	2500.1	2500.1	2492.9	2492.9	2489.2	2489.2	2485.6	2481.9	2481.9
17.5°	2438.4	2427.5	2420.2	2423.9	2420.2	2416.6	2416.6	2409.4	2405.7	2409.4	2409.4
20°	2347.7	2340.4	2333.2	2336.7	2329.5	2325.9	2329.5	2318.7	2322.2	2322.2	2322.2
22.5°	2246.0	2242.5	2231.5	2231.5	2224.3	2220.7	2224.3	2224.3	2227.9	2224.3	2224.3
25°	2133.5	2126.3	2119.0	2119.0	2115.5	2111.8	2115.5	2119.0	2115.5	2119.0	2119.0
27.5°	2013.8	2003.0	2003.0	1995.7	1995.7	1999.3	1995.7	1999.3	2003.0	2003.0	2010.2
30°	1883.3	1879.6	1876.0	1872.3	1872.3	1876.0	1876.0	1876.0	1879.6	1886.8	1886.8
32.5°	1759.8	1752.6	1745.3	1745.3	1752.6	1748.9	1752.6	1752.6	1759.8	1759.8	1767.1
35°	1625.6	1625.6	1618.3	1621.9	1621.9	1621.9	1621.9	1629.2	1636.4	1640.1	1647.4
37.5°	1502.2	1491.4	1494.9	1494.9	1498.6	1494.9	1505.9	1505.9	1513.1	1513.1	1520.4
40°	1367.9	1367.9	1371.6	1367.9	1371.6	1371.6	1378.9	1386.1	1389.7	1397.0	1400.6
42.5°	1241.0	1248.2	1241.0	1244.6	1248.2	1251.9	1255.5	1259.2	1273.7	1280.9	1291.7
45°	1124.8	1128.5	1132.0	1135.7	1132.0	1139.4	1143.0	1150.2	1161.2	1164.7	1168.4
47.5°	1012.3	1016.0	1019.6	1023.3	1023.3	1030.5	1034.2	1041.4	1048.7	1052.3	1056.0
50°	903.5	910.8	914.3	914.3	918.0	925.3	932.5	932.5	939.8	950.7	954.3
52.5°	805.5	805.5	812.8	816.4	820.1	820.1	831.0	834.6	838.2	845.5	852.8
55°	696.6	707.6	711.1	711.1	718.4	725.8	729.3	733.0	733.0	747.5	747.5
57.5°	602.3	605.9	613.2	613.2	613.2	624.1	624.1	631.4	635.0	638.6	645.9
60°	507.9	515.2	515.2	518.9	515.2	522.6	526.1	533.4	537.1	540.6	544.3
62.5°	420.9	420.9	424.6	424.6	424.6	424.6	431.8	431.8	439.1	442.7	446.4
65°	337.4	337.4	337.4	337.4	337.4	337.4	337.4	337.4	341.1	341.1	348.4
67.5°	261.2	257.7	250.4	254.0	250.4	250.4	246.7	246.7	250.4	250.4	257.7
70°	188.7	185.0	177.8	177.8	174.2	170.5	166.9	163.2	159.7	159.7	159.7
72.5°	123.4	116.2	105.2	101.5	101.5	94.3	87.0	83.5	83.5	83.5	83.5
75°	61.7	54.5	47.2	43.5	43.5	36.3	40.0	36.3	36.3	36.3	36.3
77.5°	25.4	18.2	14.5	14.5	14.5	10.9	10.9	10.9	10.9	10.9	10.9
80°	7.3	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
82.5°	3.7	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: P585262

CATALOG NUMBER: HC880D010-HM86080927-81RWWC

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	2717.8	2717.8	2717.8	2717.8	2717.8	2717.8	2717.8	2717.8
2.5°	2703.3	2703.3	2696.1	2699.6	2699.6	2699.6	2699.6	2699.6
5°	2670.6	2674.2	2670.6	2674.2	2674.2	2670.6	2670.6	2670.6
7.5°	2637.9	2641.6	2637.9	2641.6	2641.6	2641.6	2637.9	2637.9
10°	2598.1	2598.1	2598.1	2598.1	2598.1	2594.4	2598.1	2598.1
12.5°	2543.6	2543.6	2543.6	2547.2	2547.2	2543.6	2543.6	2539.9
15°	2485.6	2478.4	2481.9	2485.6	2481.9	2481.9	2481.9	2481.9
17.5°	2405.7	2409.4	2405.7	2405.7	2405.7	2405.7	2409.4	2405.7
20°	2322.2	2322.2	2325.9	2322.2	2322.2	2322.2	2322.2	2318.7
22.5°	2227.9	2224.3	2224.3	2227.9	2227.9	2224.3	2227.9	2227.9
25°	2122.7	2126.3	2122.7	2122.7	2126.3	2126.3	2126.3	2122.7
27.5°	2010.2	2013.8	2017.5	2013.8	2013.8	2013.8	2017.5	2021.1
30°	1894.1	1901.3	1894.1	1894.1	1901.3	1897.8	1901.3	1901.3
32.5°	1770.8	1781.6	1774.3	1781.6	1781.6	1785.3	1781.6	1785.3
35°	1647.4	1658.3	1658.3	1658.3	1661.9	1665.6	1665.6	1661.9
37.5°	1531.2	1534.9	1534.9	1542.1	1545.7	1549.4	1549.4	1545.7
40°	1411.5	1418.7	1422.4	1422.4	1422.4	1429.7	1436.9	1429.7
42.5°	1295.4	1299.0	1302.7	1302.7	1309.9	1313.5	1317.2	1317.2
45°	1182.9	1190.2	1193.8	1197.4	1201.0	1208.3	1204.7	1211.9
47.5°	1066.8	1077.7	1081.3	1085.0	1092.2	1095.8	1099.5	1103.0
50°	961.5	968.8	968.8	976.1	987.0	987.0	994.2	997.8
52.5°	856.3	860.0	863.6	867.3	874.5	881.8	881.8	889.0
55°	754.8	758.3	758.3	762.0	765.6	780.1	783.8	783.8
57.5°	649.6	649.6	656.8	660.4	664.1	671.3	671.3	671.3
60°	547.9	551.6	551.6	555.1	558.8	566.1	569.6	566.1
62.5°	446.4	449.9	449.9	453.6	460.9	464.4	460.9	460.9
65°	351.9	355.6	355.6	359.2	366.4	366.4	362.9	366.4
67.5°	257.7	257.7	257.7	257.7	257.7	257.7	257.7	257.7
70°	163.2	159.7	156.0	159.7	159.7	159.7	156.0	163.2
72.5°	79.8	83.5	83.5	83.5	83.5	83.5	83.5	79.8
75°	36.3	36.3	32.7	32.7	32.7	36.3	36.3	32.7
77.5°	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9
80°	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
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)