

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: P593854

Luminaire Tested: **HC855D010-HM82555950-81WWW**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P593854
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2109-368-16)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 10/21/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HC855D010-HM82555950-81WWW
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, WHITE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 5000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5269.1 lumens
Efficiency: N/A
Efficacy: 101.3 lumens/watt
Spacing Criteria (0/90/45): 1.09 / 1.04 / 1.13
Luminous Opening: Circular (Dia: 0.67' x H: 0')
CIE Type: Direct

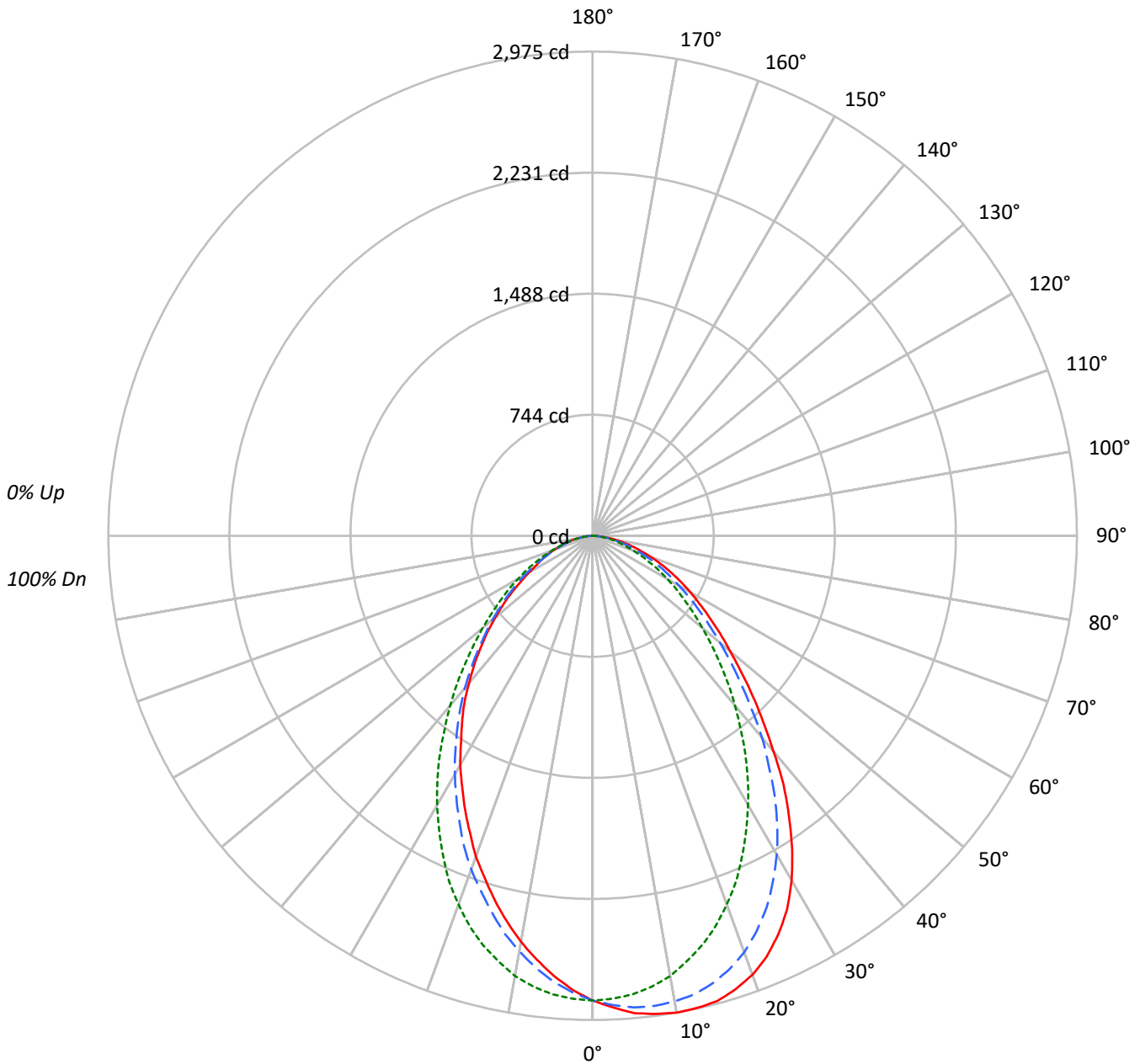
Input Watts (W): 52
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
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	93	91	89	87																			
2	102	95	89	84	99	93	88	83	90	85	81	86	83	79	83	80	78	76																			
3	94	85	78	72	92	83	77	71	81	75	70	78	73	69	75	71	68	66																			
4	87	76	69	63	85	75	68	62	73	67	62	71	65	61	68	64	60	58																			
5	81	69	61	55	79	68	61	55	66	60	54	64	59	54	63	57	53	51																			
6	75	63	55	49	73	62	55	49	61	54	49	59	53	48	57	52	48	46																			
7	70	58	50	44	69	57	50	44	56	49	44	54	48	44	53	48	43	41																			
8	66	53	46	40	64	53	45	40	51	45	40	50	44	40	49	44	39	38																			
9	62	49	42	37	60	49	42	37	48	41	36	47	41	36	46	40	36	34																			
10	58	46	39	34	57	45	38	34	44	38	33	44	38	33	43	37	33	32																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	88038	88038	88038
5°	91135	87535	84056
10°	93156	86002	79329
15°	94486	83105	74077
20°	94200	79069	68774
25°	91868	73941	63135
30°	87037	68002	57932
35°	79185	61541	52642
40°	69551	54737	47560
45°	60647	48144	42401
50°	52780	42187	37356
55°	47068	37074	32488
60°	42770	32489	27710
65°	38438	28259	25158
70°	34224	24100	22693
75°	29988	20302	19384
80°	25447	16497	17190
85°	19212	12312	13728



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	267.4	5.1
10°-20°	736.8	14.0
20°-30°	1022.8	19.4
30°-40°	1057.4	20.1
40°-50°	885.4	16.8
50°-60°	642.8	12.2
60°-70°	405.6	7.7
70°-80°	200.9	3.8
80°-90°	50.0	0.9
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°	2027.0	38.5
0°-40°	3084.4	58.5
0°-60°	4612.6	87.5
0°-90°	5269.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5269.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2855	2855	2855	2855	2855	
5°	2944	2909	2828	2750	2716	282
15°	2960	2847	2603	2394	2320	833
25°	2700	2526	2173	1937	1856	1237
35°	2104	1949	1635	1449	1398	1310
45°	1391	1290	1104	996	972	1076
55°	876	798	690	632	604	790
65°	527	461	387	341	345	525
75°	252	209	170	163	163	270
85°	54	43	35	39	39	66
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°	2855.0	2855.0	2855.0	2855.0	2855.0	2855.0	2855.0	2855.0	2855.0	2855.0	2855.0
2.5°	2901.5	2901.5	2905.4	2901.5	2901.5	2901.5	2897.7	2897.7	2893.8	2893.8	2886.0
5°	2944.2	2936.4	2944.2	2936.4	2936.4	2936.4	2932.5	2924.7	2920.9	2913.1	2909.3
7.5°	2963.5	2959.7	2959.7	2955.8	2955.8	2951.9	2948.0	2944.2	2928.6	2924.7	2913.1
10°	2975.1	2971.3	2971.3	2967.4	2959.7	2959.7	2951.9	2948.0	2928.6	2920.9	2905.4
12.5°	2971.3	2971.3	2971.3	2967.4	2955.8	2951.9	2944.2	2932.5	2917.0	2901.5	2886.0
15°	2959.7	2959.7	2951.9	2948.0	2936.4	2928.6	2924.7	2905.4	2889.9	2870.6	2847.3
17.5°	2920.9	2920.9	2917.0	2909.3	2897.7	2889.9	2882.2	2862.7	2847.3	2816.3	2793.1
20°	2870.6	2866.7	2862.7	2851.1	2839.5	2835.7	2824.1	2797.0	2777.5	2754.3	2723.4
22.5°	2797.0	2793.1	2789.1	2781.4	2762.1	2754.3	2746.6	2727.2	2692.3	2669.1	2630.3
25°	2700.1	2700.1	2692.3	2680.7	2661.4	2653.6	2641.9	2622.6	2591.6	2556.7	2525.8
27.5°	2587.8	2583.9	2572.2	2564.5	2549.0	2537.4	2518.0	2494.7	2463.8	2436.7	2397.9
30°	2444.4	2444.4	2436.7	2425.0	2405.6	2397.9	2382.4	2355.3	2324.3	2289.5	2262.3
32.5°	2281.6	2281.6	2270.0	2262.3	2250.7	2231.4	2227.5	2196.4	2169.4	2142.3	2111.2
35°	2103.5	2107.4	2099.6	2084.2	2064.7	2064.7	2057.0	2029.9	1999.0	1971.8	1948.6
37.5°	1925.4	1913.6	1909.8	1902.0	1890.4	1875.0	1867.2	1855.6	1828.4	1809.1	1774.2
40°	1727.8	1731.6	1723.9	1716.2	1712.3	1700.6	1696.7	1677.4	1658.0	1634.8	1619.2
42.5°	1549.5	1549.5	1549.5	1541.8	1534.0	1522.4	1518.6	1507.0	1483.6	1468.2	1445.0
45°	1390.7	1379.1	1379.1	1375.2	1371.4	1363.6	1352.0	1344.3	1328.7	1317.1	1290.0
47.5°	1235.8	1239.6	1235.8	1231.9	1220.3	1216.4	1212.6	1197.1	1181.5	1169.9	1150.6
50°	1100.2	1107.9	1100.2	1100.2	1092.4	1088.6	1080.8	1069.2	1057.6	1038.2	1018.8
52.5°	987.9	987.9	984.0	980.1	968.4	960.7	956.8	953.0	933.6	918.1	902.6
55°	875.5	879.4	879.4	867.7	863.9	856.1	852.3	840.7	832.8	809.6	798.0
57.5°	778.7	774.8	778.7	770.9	763.2	755.4	751.5	743.8	732.1	716.7	701.2
60°	693.5	685.6	685.6	681.8	674.0	670.1	662.4	650.8	639.2	623.7	612.0
62.5°	608.2	604.3	600.4	596.5	588.8	584.9	581.1	569.5	557.9	546.3	534.5
65°	526.8	526.8	522.9	515.2	511.3	507.5	503.6	495.9	480.4	472.7	460.9
67.5°	453.2	449.3	449.3	441.6	433.9	430.0	430.0	422.3	410.7	399.1	391.2
70°	379.6	383.5	379.6	375.7	368.0	368.0	360.3	356.4	340.9	337.1	325.3
72.5°	313.7	313.7	309.9	309.9	302.1	298.3	298.3	290.5	282.8	275.1	267.3
75°	251.7	251.7	251.7	247.9	244.0	236.3	236.3	232.4	224.7	216.9	209.2
77.5°	197.6	193.7	193.7	189.9	186.0	182.1	182.1	178.1	170.4	166.5	158.8
80°	143.3	139.5	139.5	139.5	131.7	135.6	131.7	127.9	124.0	120.1	116.3
82.5°	92.9	96.8	96.8	92.9	89.1	89.1	89.1	85.2	85.2	81.3	77.5
85°	54.3	54.3	54.3	54.3	50.4	50.4	50.4	46.5	46.5	46.5	42.7
87.5°	23.2	23.2	23.2	23.2	23.2	23.2	19.3	19.3	19.3	19.3	19.3
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°	2855.0	2855.0	2855.0	2855.0	2855.0	2855.0	2855.0	2855.0	2855.0	2855.0	2855.0
2.5°	2886.0	2878.3	2874.4	2870.6	2870.6	2866.7	2862.7	2855.0	2855.0	2847.3	2843.4
5°	2901.5	2889.9	2882.2	2874.4	2870.6	2862.7	2855.0	2843.4	2839.5	2827.9	2816.3
7.5°	2905.4	2886.0	2878.3	2862.7	2855.0	2847.3	2831.8	2820.2	2804.7	2793.1	2777.5
10°	2889.9	2874.4	2855.0	2835.7	2831.8	2820.2	2797.0	2781.4	2762.1	2746.6	2723.4
12.5°	2866.7	2843.4	2824.1	2800.8	2789.1	2777.5	2754.3	2731.1	2703.9	2676.8	2653.6
15°	2827.9	2800.8	2773.7	2746.6	2731.1	2719.5	2692.3	2665.2	2638.1	2603.2	2580.0
17.5°	2769.8	2738.8	2711.7	2676.8	2661.4	2649.8	2614.8	2583.9	2549.0	2514.2	2490.9
20°	2696.2	2657.5	2626.5	2587.8	2576.2	2556.7	2521.9	2487.0	2448.3	2409.5	2382.4
22.5°	2599.4	2560.6	2525.8	2487.0	2467.6	2448.3	2413.4	2370.8	2332.0	2301.1	2273.9
25°	2487.0	2452.2	2409.5	2374.7	2351.4	2328.2	2289.5	2254.6	2219.8	2173.2	2146.2
27.5°	2363.1	2320.4	2289.5	2243.0	2219.8	2204.2	2161.6	2115.1	2084.2	2041.5	2010.6
30°	2223.6	2184.8	2150.0	2103.5	2080.3	2064.7	2026.0	1983.4	1952.4	1909.8	1878.8
32.5°	2076.4	2033.8	1991.1	1960.2	1933.1	1917.5	1875.0	1847.8	1809.1	1774.2	1739.4
35°	1917.5	1875.0	1843.9	1801.4	1785.9	1770.3	1735.5	1700.6	1665.8	1634.8	1607.6
37.5°	1747.1	1716.2	1681.2	1650.3	1638.7	1623.1	1580.6	1549.5	1522.4	1491.5	1468.2
40°	1580.6	1553.4	1530.2	1499.2	1479.8	1468.2	1437.2	1410.0	1379.1	1359.8	1336.4
42.5°	1429.5	1398.4	1375.2	1352.0	1332.6	1321.0	1293.9	1274.6	1251.2	1231.9	1204.8
45°	1270.7	1255.1	1228.0	1208.7	1197.1	1181.5	1162.2	1138.9	1119.5	1104.0	1084.7
47.5°	1131.2	1115.6	1096.3	1073.1	1065.3	1053.7	1034.3	1018.8	1003.3	987.9	968.4
50°	1003.3	984.0	968.4	953.0	945.2	933.6	914.3	906.5	894.8	879.4	867.7
52.5°	887.1	871.6	856.1	836.8	832.8	825.1	813.5	798.0	786.4	778.7	770.9
55°	782.5	767.1	755.4	739.9	736.0	728.3	712.8	705.1	697.3	689.6	681.8
57.5°	689.6	674.0	658.5	650.8	643.1	635.3	631.5	619.9	612.0	608.2	600.4
60°	604.3	588.8	577.2	565.6	561.7	557.9	550.1	542.3	534.5	526.8	522.9
62.5°	522.9	507.5	499.7	492.0	484.3	484.3	476.5	468.7	460.9	457.1	449.3
65°	449.3	441.6	430.0	418.4	414.5	414.5	402.9	399.1	395.1	387.3	379.6
67.5°	379.6	371.9	360.3	356.4	352.5	348.7	344.8	337.1	329.3	325.3	317.6
70°	317.6	309.9	302.1	298.3	294.4	290.5	282.8	278.9	271.2	267.3	263.5
72.5°	255.7	251.7	244.0	240.1	236.3	232.4	228.5	224.7	216.9	213.1	209.2
75°	205.3	201.5	193.7	189.9	186.0	186.0	182.1	174.3	170.4	170.4	166.5
77.5°	154.9	151.1	147.2	143.3	139.5	139.5	135.6	131.7	127.9	127.9	124.0
80°	112.4	108.4	104.5	104.5	104.5	100.7	96.8	96.8	92.9	92.9	89.1
82.5°	73.6	73.6	69.7	69.7	69.7	65.9	65.9	62.0	62.0	62.0	62.0
85°	42.7	42.7	42.7	38.8	38.8	38.8	38.8	38.8	38.8	34.8	38.8
87.5°	19.3	19.3	19.3	19.3	19.3	19.3	19.3	19.3	15.5	15.5	15.5
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°	2855.0	2855.0	2855.0	2855.0	2855.0	2855.0	2855.0	2855.0	2855.0	2855.0	2855.0
2.5°	2839.5	2835.7	2827.9	2827.9	2820.2	2820.2	2816.3	2812.4	2808.6	2804.7	2800.8
5°	2812.4	2797.0	2789.1	2785.3	2777.5	2773.7	2762.1	2754.3	2750.4	2742.7	2735.0
7.5°	2762.1	2746.6	2731.1	2727.2	2723.4	2707.8	2696.2	2684.6	2676.8	2669.1	2661.4
10°	2703.9	2688.5	2669.1	2661.4	2653.6	2634.2	2618.7	2607.1	2591.6	2576.2	2572.2
12.5°	2634.2	2611.0	2587.8	2580.0	2568.3	2549.0	2533.5	2514.2	2502.6	2483.1	2479.2
15°	2552.9	2525.8	2506.4	2487.0	2479.2	2459.9	2432.8	2417.2	2394.0	2386.3	2367.0
17.5°	2456.0	2429.0	2401.8	2394.0	2382.4	2355.3	2328.2	2308.8	2285.6	2273.9	2262.3
20°	2355.3	2320.4	2293.4	2285.6	2270.0	2246.8	2219.8	2200.3	2181.0	2157.8	2146.2
22.5°	2239.1	2200.3	2177.1	2157.8	2153.9	2126.7	2095.8	2080.3	2064.7	2045.4	2029.9
25°	2111.2	2076.4	2049.2	2033.8	2026.0	2002.8	1979.5	1960.2	1937.0	1925.4	1905.9
27.5°	1979.5	1956.3	1921.5	1905.9	1894.3	1875.0	1847.8	1836.2	1813.0	1797.5	1785.9
30°	1851.8	1816.8	1797.5	1778.2	1766.4	1747.1	1723.9	1712.3	1692.8	1677.4	1665.8
32.5°	1712.3	1689.0	1661.9	1654.2	1638.7	1619.2	1603.8	1584.4	1569.0	1553.4	1549.5
35°	1584.4	1553.4	1526.3	1518.6	1507.0	1487.6	1479.8	1468.2	1448.8	1445.0	1429.5
37.5°	1445.0	1429.5	1398.4	1386.8	1383.0	1367.5	1352.0	1344.3	1332.6	1321.0	1317.1
40°	1313.2	1293.9	1278.4	1266.7	1259.0	1247.4	1231.9	1228.0	1220.3	1204.8	1200.9
42.5°	1189.2	1169.9	1154.4	1150.6	1138.9	1127.3	1119.5	1107.9	1104.0	1100.2	1092.4
45°	1069.2	1057.6	1042.0	1038.2	1034.3	1018.8	1011.1	1003.3	995.6	991.7	984.0
47.5°	960.7	949.1	937.5	933.6	925.9	922.0	910.4	906.5	894.8	891.0	887.1
50°	856.1	848.4	840.7	836.8	829.0	825.1	817.4	809.6	801.9	798.0	794.1
52.5°	763.2	755.4	747.6	743.8	739.9	732.1	724.4	716.7	712.8	708.9	705.1
55°	674.0	666.3	662.4	658.5	654.7	650.8	639.2	635.3	631.5	627.6	619.9
57.5°	592.7	584.9	577.2	577.2	573.3	569.5	561.7	554.0	554.0	546.3	538.4
60°	519.1	511.3	503.6	499.7	495.9	488.1	484.3	480.4	476.5	472.7	464.8
62.5°	441.6	437.7	430.0	430.0	422.3	418.4	414.5	410.7	406.8	399.1	395.1
65°	375.7	371.9	364.1	360.3	360.3	356.4	348.7	344.8	340.9	340.9	337.1
67.5°	313.7	309.9	302.1	298.3	298.3	294.4	290.5	290.5	286.7	282.8	286.7
70°	259.6	251.7	251.7	247.9	247.9	244.0	240.1	240.1	240.1	244.0	244.0
72.5°	205.3	201.5	197.6	197.6	197.6	197.6	193.7	193.7	197.6	201.5	201.5
75°	162.7	158.8	158.8	158.8	154.9	154.9	158.8	158.8	162.7	162.7	162.7
77.5°	120.1	120.1	120.1	120.1	120.1	120.1	124.0	124.0	127.9	127.9	127.9
80°	89.1	89.1	89.1	89.1	89.1	92.9	92.9	92.9	92.9	92.9	96.8
82.5°	62.0	62.0	62.0	62.0	62.0	62.0	62.0	65.9	65.9	65.9	65.9
85°	34.8	38.8	38.8	38.8	38.8	38.8	38.8	38.8	38.8	38.8	38.8
87.5°	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5
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: P593854

CATALOG NUMBER: HC855D010-HM82555950-81WWW

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	2855.0	2855.0	2855.0	2855.0	2855.0	2855.0	2855.0	2855.0
2.5°	2797.0	2797.0	2797.0	2800.8	2793.1	2793.1	2793.1	2793.1
5°	2731.1	2727.2	2723.4	2727.2	2719.5	2719.5	2715.5	2715.5
7.5°	2649.8	2645.9	2641.9	2641.9	2634.2	2634.2	2630.3	2626.5
10°	2560.6	2552.9	2556.7	2549.0	2545.1	2541.2	2537.4	2533.5
12.5°	2463.8	2456.0	2452.2	2444.4	2436.7	2432.8	2436.7	2429.0
15°	2359.2	2347.5	2343.6	2335.9	2328.2	2324.3	2324.3	2320.4
17.5°	2243.0	2235.2	2231.4	2223.6	2219.8	2212.0	2208.0	2204.2
20°	2134.4	2115.1	2119.0	2111.2	2107.4	2091.9	2091.9	2095.8
22.5°	2014.4	2002.8	1995.1	1987.2	1983.4	1975.6	1975.6	1971.8
25°	1894.3	1882.7	1878.8	1871.1	1867.2	1859.5	1855.6	1855.6
27.5°	1778.2	1762.6	1762.6	1754.8	1747.1	1743.2	1739.4	1735.5
30°	1654.2	1642.6	1638.7	1638.7	1634.8	1634.8	1623.1	1627.0
32.5°	1537.9	1530.2	1526.3	1518.6	1518.6	1514.7	1514.7	1503.1
35°	1421.8	1410.0	1414.0	1406.2	1402.3	1398.4	1402.3	1398.4
37.5°	1309.4	1301.6	1301.6	1293.9	1293.9	1290.0	1286.2	1293.9
40°	1197.1	1193.1	1189.2	1185.4	1189.2	1185.4	1177.6	1181.5
42.5°	1084.7	1084.7	1080.8	1080.8	1077.0	1077.0	1077.0	1077.0
45°	984.0	980.1	980.1	976.2	976.2	976.2	976.2	972.3
47.5°	883.2	879.4	879.4	879.4	875.5	875.5	871.6	875.5
50°	786.4	786.4	782.5	782.5	786.4	782.5	778.7	778.7
52.5°	697.3	697.3	693.5	693.5	689.6	685.6	689.6	689.6
55°	615.9	612.0	608.2	608.2	604.3	600.4	600.4	604.3
57.5°	538.4	534.5	530.7	530.7	522.9	519.1	519.1	519.1
60°	464.8	457.1	457.1	453.2	453.2	449.3	449.3	449.3
62.5°	395.1	391.2	391.2	391.2	391.2	387.3	387.3	387.3
65°	337.1	337.1	337.1	340.9	340.9	344.8	344.8	344.8
67.5°	290.5	294.4	294.4	294.4	298.3	298.3	298.3	294.4
70°	247.9	247.9	247.9	251.7	251.7	251.7	251.7	251.7
72.5°	205.3	205.3	205.3	205.3	205.3	205.3	205.3	205.3
75°	162.7	166.5	166.5	166.5	162.7	166.5	166.5	162.7
77.5°	127.9	127.9	127.9	127.9	127.9	127.9	127.9	127.9
80°	96.8	96.8	96.8	96.8	96.8	96.8	96.8	96.8
82.5°	65.9	65.9	65.9	65.9	65.9	65.9	65.9	65.9
85°	38.8	38.8	38.8	38.8	38.8	38.8	38.8	38.8
87.5°	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5
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)