

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: P584963

Luminaire Tested: **HC855D010-HM82555835-81WWBB**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P584963
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: HC855D010-HM82555835-81WWBB
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, WHITE BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4683.2 lumens
Efficiency: N/A
Efficacy: 90.1 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

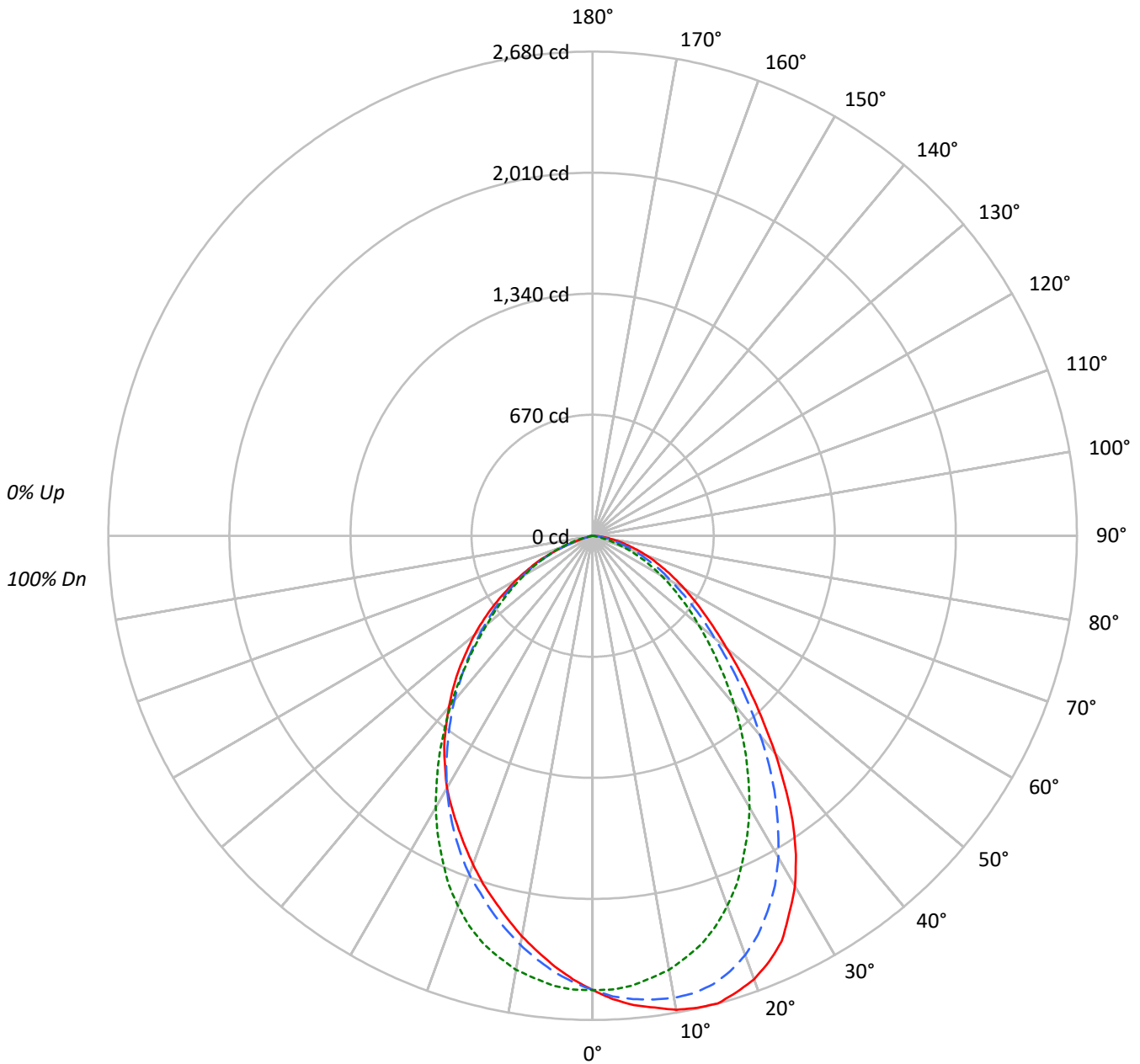
Input Watts (W): 52
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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					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°	77529	77529	77529
5°	80734	77360	74101
10°	83431	76370	70486
15°	85541	74626	66827
20°	85710	71528	63511
25°	84264	67000	60226
30°	79752	61820	57405
35°	72717	55600	53899
40°	63235	49013	49774
45°	54250	42445	45558
50°	46332	36598	40926
55°	40611	31515	35563
60°	36152	26889	29893
65°	32083	21933	23860
70°	28463	16265	13560
75°	23721	8507	4039
80°	18681	2664	675
85°	13303	1344	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	236.9	5.1
10°-20°	664.0	14.2
20°-30°	939.8	20.1
30°-40°	983.2	21.0
40°-50°	820.1	17.5
50°-60°	581.6	12.4
60°-70°	334.9	7.2
70°-80°	107.8	2.3
80°-90°	14.8	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°	1840.7	39.3
0°-40°	2823.9	60.3
0°-60°	4225.6	90.2
0°-90°	4683.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4683.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2514	2514	2514	2514	2514	
5°	2608	2574	2499	2424	2394	250
15°	2680	2570	2338	2153	2093	753
25°	2477	2292	1969	1811	1770	1130
35°	1932	1763	1477	1398	1432	1198
45°	1244	1142	973	985	1045	964
55°	755	676	586	616	662	682
65°	440	368	301	301	327	439
75°	199	147	71	34	34	216
85°	38	19	4	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°	2514.2	2514.2	2514.2	2514.2	2514.2	2514.2	2514.2	2514.2	2514.2	2514.2	2514.2
2.5°	2566.8	2563.0	2559.3	2563.0	2559.3	2563.0	2559.3	2559.3	2555.5	2551.8	2551.8
5°	2608.2	2604.4	2604.4	2604.4	2600.7	2596.8	2596.8	2593.0	2585.5	2581.8	2574.3
7.5°	2634.4	2638.2	2638.2	2638.2	2630.7	2630.7	2623.2	2615.7	2608.2	2600.7	2589.3
10°	2664.5	2664.5	2660.8	2657.0	2649.4	2645.7	2641.9	2634.4	2623.2	2608.2	2596.8
12.5°	2675.8	2675.8	2672.0	2664.5	2660.8	2657.0	2653.2	2641.9	2626.9	2608.2	2593.0
15°	2679.5	2672.0	2668.3	2664.5	2657.0	2645.7	2645.7	2630.7	2611.9	2589.3	2570.5
17.5°	2649.4	2653.2	2645.7	2638.2	2626.9	2619.4	2608.2	2596.8	2574.3	2548.0	2529.2
20°	2611.9	2608.2	2604.4	2593.0	2578.0	2574.3	2563.0	2544.3	2525.4	2495.4	2469.1
22.5°	2551.8	2548.0	2540.4	2532.9	2517.9	2510.4	2499.2	2476.6	2450.3	2420.2	2390.2
25°	2476.6	2469.1	2457.8	2442.8	2431.5	2423.9	2408.9	2386.4	2356.3	2322.6	2292.4
27.5°	2356.3	2367.6	2360.1	2337.6	2326.3	2311.2	2307.4	2277.4	2251.1	2217.3	2183.4
30°	2239.8	2239.8	2228.6	2217.3	2198.6	2187.2	2172.2	2149.7	2123.3	2081.9	2055.7
32.5°	2093.3	2089.6	2074.4	2070.7	2055.7	2033.2	2029.4	1999.3	1973.1	1942.9	1909.1
35°	1931.7	1924.2	1909.1	1897.8	1890.3	1879.1	1867.8	1841.4	1815.2	1785.1	1762.6
37.5°	1747.6	1747.6	1743.8	1724.9	1717.4	1709.9	1698.7	1672.3	1657.3	1627.3	1604.7
40°	1570.9	1567.1	1555.8	1552.1	1544.6	1533.3	1525.8	1510.7	1488.2	1465.7	1443.1
42.5°	1398.0	1401.8	1386.7	1390.5	1375.5	1368.0	1364.2	1341.6	1330.3	1307.8	1289.1
45°	1244.0	1240.2	1232.7	1229.0	1221.3	1213.8	1206.3	1195.1	1176.3	1153.7	1142.5
47.5°	1101.1	1089.8	1089.8	1086.1	1082.3	1067.3	1063.6	1052.2	1041.0	1018.5	1003.5
50°	965.8	965.8	965.8	962.1	950.8	947.1	939.5	928.2	917.0	902.0	879.4
52.5°	856.8	856.8	856.8	853.1	838.1	834.3	830.6	815.5	800.5	789.2	774.2
55°	755.4	759.1	755.4	747.9	736.6	736.6	725.4	717.8	702.7	691.5	676.5
57.5°	669.0	669.0	661.5	657.7	650.1	646.4	638.9	631.4	612.6	601.4	582.5
60°	586.2	582.5	582.5	575.0	567.5	560.0	556.2	545.0	537.4	518.6	503.6
62.5°	511.1	511.1	503.6	503.6	488.6	488.6	484.7	473.5	462.2	443.5	436.0
65°	439.7	439.7	436.0	432.2	420.9	417.1	413.4	402.1	390.9	379.6	368.2
67.5°	375.9	375.9	368.2	364.5	357.0	353.2	345.7	338.2	327.0	315.7	304.4
70°	315.7	311.9	308.1	304.4	296.9	293.1	285.6	278.1	266.9	259.4	248.0
72.5°	255.5	255.5	251.7	244.2	240.5	236.7	233.0	225.5	214.2	203.0	195.4
75°	199.1	199.1	199.1	191.6	184.1	180.4	180.4	172.9	165.4	154.1	146.6
77.5°	154.1	150.4	146.6	146.6	139.0	135.2	131.5	127.7	116.5	112.7	105.2
80°	105.2	109.0	105.2	101.5	97.7	94.0	94.0	86.5	82.6	75.1	67.6
82.5°	71.4	67.6	67.6	63.9	63.9	60.1	60.1	52.6	48.9	45.1	41.4
85°	37.6	37.6	33.9	33.9	33.9	30.1	30.1	26.3	26.3	22.5	18.8
87.5°	11.3	11.3	11.3	11.3	11.3	11.3	11.3	11.3	7.5	7.5	7.5
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):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	2514.2	2514.2	2514.2	2514.2	2514.2	2514.2	2514.2	2514.2	2514.2	2514.2	2514.2
2.5°	2548.0	2540.4	2536.7	2536.7	2532.9	2529.2	2525.4	2521.7	2514.2	2514.2	2506.7
5°	2566.8	2559.3	2555.5	2544.3	2536.7	2536.7	2521.7	2517.9	2506.7	2499.2	2491.7
7.5°	2581.8	2566.8	2555.5	2544.3	2536.7	2529.2	2514.2	2499.2	2484.2	2469.1	2461.6
10°	2581.8	2566.8	2548.0	2529.2	2521.7	2514.2	2495.4	2472.8	2454.1	2439.0	2420.2
12.5°	2574.3	2551.8	2529.2	2514.2	2499.2	2487.9	2465.3	2442.8	2420.2	2390.2	2375.2
15°	2551.8	2521.7	2499.2	2472.8	2461.6	2442.8	2423.9	2390.2	2363.8	2337.6	2318.8
17.5°	2506.7	2469.1	2442.8	2416.4	2397.7	2386.4	2356.3	2326.3	2296.2	2266.2	2243.6
20°	2439.0	2405.2	2375.2	2341.3	2326.3	2311.2	2273.7	2243.6	2213.6	2179.7	2157.2
22.5°	2356.3	2322.6	2281.2	2254.8	2232.3	2213.6	2179.7	2145.9	2115.8	2085.8	2055.7
25°	2254.8	2221.1	2183.4	2142.2	2127.1	2108.3	2070.7	2036.9	2003.1	1969.2	1942.9
27.5°	2145.9	2100.8	2070.7	2025.6	2010.6	1991.8	1950.4	1912.9	1882.8	1856.6	1826.4
30°	2014.3	1980.6	1939.2	1897.8	1882.8	1864.1	1830.2	1796.3	1766.3	1736.2	1706.2
32.5°	1871.6	1837.7	1796.3	1766.3	1743.8	1728.7	1694.9	1664.8	1634.8	1604.7	1578.4
35°	1721.2	1683.6	1653.6	1623.5	1604.7	1586.0	1552.1	1525.8	1503.2	1477.0	1450.6
37.5°	1567.1	1540.8	1510.7	1477.0	1458.2	1443.1	1416.8	1386.7	1368.0	1345.5	1326.6
40°	1416.8	1386.7	1360.5	1330.3	1315.3	1304.1	1277.7	1255.2	1236.5	1217.6	1206.3
42.5°	1262.7	1236.5	1210.1	1191.3	1180.1	1168.7	1150.0	1123.7	1112.3	1093.6	1082.3
45°	1120.0	1097.3	1078.6	1052.2	1044.7	1037.2	1014.7	995.8	984.6	973.3	965.8
47.5°	984.6	969.6	947.1	932.0	920.7	913.2	898.2	883.1	871.9	864.4	856.8
50°	868.1	849.3	834.3	819.2	811.7	800.5	785.5	778.0	770.4	762.9	762.9
52.5°	759.1	740.4	725.4	714.1	706.5	699.0	687.7	684.0	676.5	676.5	672.7
55°	657.7	646.4	631.4	616.4	612.6	608.9	601.4	593.7	590.0	586.2	590.0
57.5°	571.2	560.0	545.0	533.6	529.9	526.1	522.4	514.9	511.1	511.1	511.1
60°	492.4	481.0	469.7	458.5	458.5	451.0	447.2	443.5	439.7	436.0	436.0
62.5°	420.9	409.6	398.4	390.9	387.1	383.4	375.9	372.1	368.2	368.2	364.5
65°	357.0	342.0	338.2	327.0	323.2	319.5	315.7	308.1	304.4	300.6	296.9
67.5°	293.1	285.6	274.4	266.9	263.1	259.4	255.5	248.0	244.2	240.5	233.0
70°	236.7	229.2	221.7	214.2	210.5	206.7	199.1	191.6	187.9	180.4	169.1
72.5°	184.1	176.6	169.1	161.6	157.9	154.1	146.6	139.0	131.5	124.0	116.5
75°	139.0	131.5	120.2	112.7	109.0	109.0	97.7	90.2	82.6	71.4	63.9
77.5°	97.7	86.5	82.6	75.1	71.4	63.9	56.4	48.9	41.4	37.6	30.1
80°	63.9	56.4	48.9	45.1	41.4	37.6	33.9	26.3	18.8	15.0	11.3
82.5°	37.6	33.9	30.1	26.3	22.5	18.8	15.0	15.0	11.3	7.5	3.8
85°	18.8	15.0	11.3	11.3	7.5	7.5	7.5	3.8	3.8	3.8	3.8
87.5°	7.5	3.8	3.8	3.8	3.8	3.8	3.8	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°	2514.2	2514.2	2514.2	2514.2	2514.2	2514.2	2514.2	2514.2	2514.2	2514.2	2514.2
2.5°	2502.9	2499.2	2495.4	2491.7	2491.7	2484.2	2484.2	2480.3	2472.8	2469.1	2469.1
5°	2480.3	2469.1	2461.6	2457.8	2454.1	2442.8	2439.0	2431.5	2423.9	2416.4	2412.7
7.5°	2446.5	2427.8	2420.2	2416.4	2405.2	2393.9	2386.4	2375.2	2363.8	2352.6	2348.8
10°	2405.2	2386.4	2367.6	2360.1	2348.8	2341.3	2326.3	2311.2	2299.9	2288.7	2277.4
12.5°	2352.6	2330.1	2311.2	2303.7	2292.4	2277.4	2254.8	2247.3	2228.6	2221.1	2206.1
15°	2292.4	2266.2	2247.3	2236.1	2224.8	2202.3	2187.2	2172.2	2153.4	2145.9	2130.8
17.5°	2217.3	2187.2	2168.4	2157.2	2149.7	2130.8	2108.3	2089.6	2070.7	2063.2	2051.9
20°	2127.1	2108.3	2081.9	2070.7	2063.2	2040.7	2018.1	2010.6	1995.6	1980.6	1969.2
22.5°	2025.6	2006.8	1980.6	1969.2	1965.4	1946.7	1927.9	1916.7	1905.3	1894.1	1882.8
25°	1920.4	1897.8	1875.3	1867.8	1860.3	1845.2	1830.2	1822.7	1811.4	1803.9	1796.3
27.5°	1807.7	1785.1	1766.3	1755.1	1747.6	1736.2	1728.7	1721.2	1713.7	1706.2	1702.4
30°	1687.4	1664.8	1649.8	1642.3	1634.8	1631.1	1619.7	1616.0	1612.2	1604.7	1608.5
32.5°	1567.1	1548.3	1533.3	1522.1	1522.1	1514.6	1510.7	1510.7	1507.0	1507.0	1507.0
35°	1435.6	1424.3	1413.1	1409.3	1405.6	1401.8	1398.0	1401.8	1398.0	1401.8	1405.6
37.5°	1315.3	1304.1	1296.6	1292.8	1289.1	1292.8	1289.1	1289.1	1292.8	1300.3	1304.1
40°	1191.3	1183.8	1176.3	1180.1	1176.3	1176.3	1176.3	1187.6	1191.3	1195.1	1198.8
42.5°	1074.8	1067.3	1063.6	1063.6	1067.3	1063.6	1071.1	1074.8	1082.3	1093.6	1101.1
45°	962.1	958.3	958.3	962.1	958.3	965.8	965.8	973.3	984.6	992.1	999.7
47.5°	856.8	856.8	856.8	860.6	860.6	864.4	871.9	875.6	883.1	890.7	898.2
50°	759.1	762.9	766.6	766.6	766.6	774.2	781.7	785.5	789.2	793.0	804.2
52.5°	672.7	676.5	676.5	680.2	684.0	687.7	691.5	699.0	702.7	710.2	714.1
55°	590.0	590.0	597.5	601.4	601.4	601.4	608.9	608.9	616.4	620.1	627.6
57.5°	511.1	514.9	514.9	518.6	518.6	522.4	526.1	529.9	533.6	537.4	541.1
60°	436.0	436.0	436.0	439.7	443.5	447.2	443.5	451.0	451.0	458.5	462.2
62.5°	364.5	368.2	368.2	368.2	368.2	368.2	368.2	372.1	375.9	379.6	383.4
65°	296.9	296.9	296.9	293.1	296.9	293.1	296.9	300.6	300.6	304.4	308.1
67.5°	229.2	229.2	221.7	221.7	225.5	225.5	225.5	225.5	221.7	229.2	229.2
70°	165.4	161.6	157.9	154.1	154.1	150.4	150.4	146.6	146.6	146.6	146.6
72.5°	109.0	101.5	94.0	90.2	86.5	86.5	78.9	75.1	78.9	78.9	78.9
75°	56.4	48.9	45.1	41.4	37.6	37.6	33.9	33.9	33.9	33.9	33.9
77.5°	22.5	18.8	15.0	15.0	11.3	11.3	11.3	11.3	11.3	11.3	11.3
80°	7.5	7.5	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
82.5°	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
85°	3.8	0.0	0.0	3.8	0.0	3.8	3.8	3.8	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: P584963

CATALOG NUMBER: HC855D010-HM82555835-81WWBB

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	2514.2	2514.2	2514.2	2514.2	2514.2	2514.2	2514.2	2514.2
2.5°	2465.3	2465.3	2461.6	2465.3	2457.8	2461.6	2457.8	2457.8
5°	2408.9	2401.4	2401.4	2401.4	2397.7	2397.7	2393.9	2393.9
7.5°	2341.3	2337.6	2333.8	2330.1	2326.3	2322.6	2322.6	2322.6
10°	2273.7	2266.2	2266.2	2262.4	2254.8	2251.1	2251.1	2251.1
12.5°	2194.7	2190.9	2187.2	2187.2	2172.2	2175.9	2172.2	2172.2
15°	2119.6	2115.8	2115.8	2104.6	2097.1	2097.1	2097.1	2093.3
17.5°	2040.7	2036.9	2033.2	2025.6	2018.1	2018.1	2014.3	2018.1
20°	1957.9	1954.2	1946.7	1946.7	1942.9	1939.2	1931.7	1935.4
22.5°	1875.3	1867.8	1864.1	1864.1	1860.3	1860.3	1852.7	1852.7
25°	1788.8	1785.1	1781.3	1785.1	1777.6	1777.6	1770.1	1770.1
27.5°	1698.7	1694.9	1694.9	1694.9	1691.2	1694.9	1691.2	1691.2
30°	1608.5	1608.5	1604.7	1604.7	1608.5	1604.7	1608.5	1612.2
32.5°	1510.7	1510.7	1514.6	1514.6	1518.3	1518.3	1518.3	1518.3
35°	1409.3	1416.8	1416.8	1420.6	1424.3	1428.1	1428.1	1431.8
37.5°	1315.3	1319.1	1322.8	1326.6	1334.1	1334.1	1334.1	1334.1
40°	1213.8	1217.6	1225.1	1221.3	1236.5	1240.2	1236.5	1236.5
42.5°	1108.6	1116.2	1120.0	1127.5	1131.2	1138.7	1142.5	1142.5
45°	1011.0	1014.7	1022.2	1029.7	1033.5	1044.7	1044.7	1044.7
47.5°	909.5	917.0	920.7	928.2	932.0	943.3	947.1	943.3
50°	811.7	819.2	826.7	826.7	838.1	841.8	849.3	853.1
52.5°	717.8	721.6	729.1	732.9	740.4	747.9	751.6	755.4
55°	627.6	631.4	638.9	638.9	650.1	653.9	661.5	661.5
57.5°	545.0	548.7	556.2	552.5	560.0	567.5	567.5	563.7
60°	466.0	466.0	466.0	473.5	477.2	481.0	484.7	484.7
62.5°	383.4	390.9	394.6	394.6	398.4	402.1	402.1	398.4
65°	308.1	315.7	319.5	319.5	323.2	323.2	323.2	327.0
67.5°	233.0	233.0	233.0	236.7	233.0	233.0	233.0	233.0
70°	146.6	146.6	146.6	146.6	142.9	146.6	146.6	150.4
72.5°	78.9	78.9	78.9	78.9	78.9	78.9	78.9	78.9
75°	33.9	33.9	33.9	37.6	33.9	33.9	33.9	33.9
77.5°	15.0	11.3	15.0	15.0	11.3	11.3	11.3	11.3
80°	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
82.5°	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
85°	0.0	3.8	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)