

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: P584998

Luminaire Tested: **HC855D010-HM82555927-81WWW**

Issue Date: 10/21/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P584998  
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-HM82555927-81WWW  
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, WHITE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3981.6 lumens  
Efficiency: N/A  
Efficacy: 76.6 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

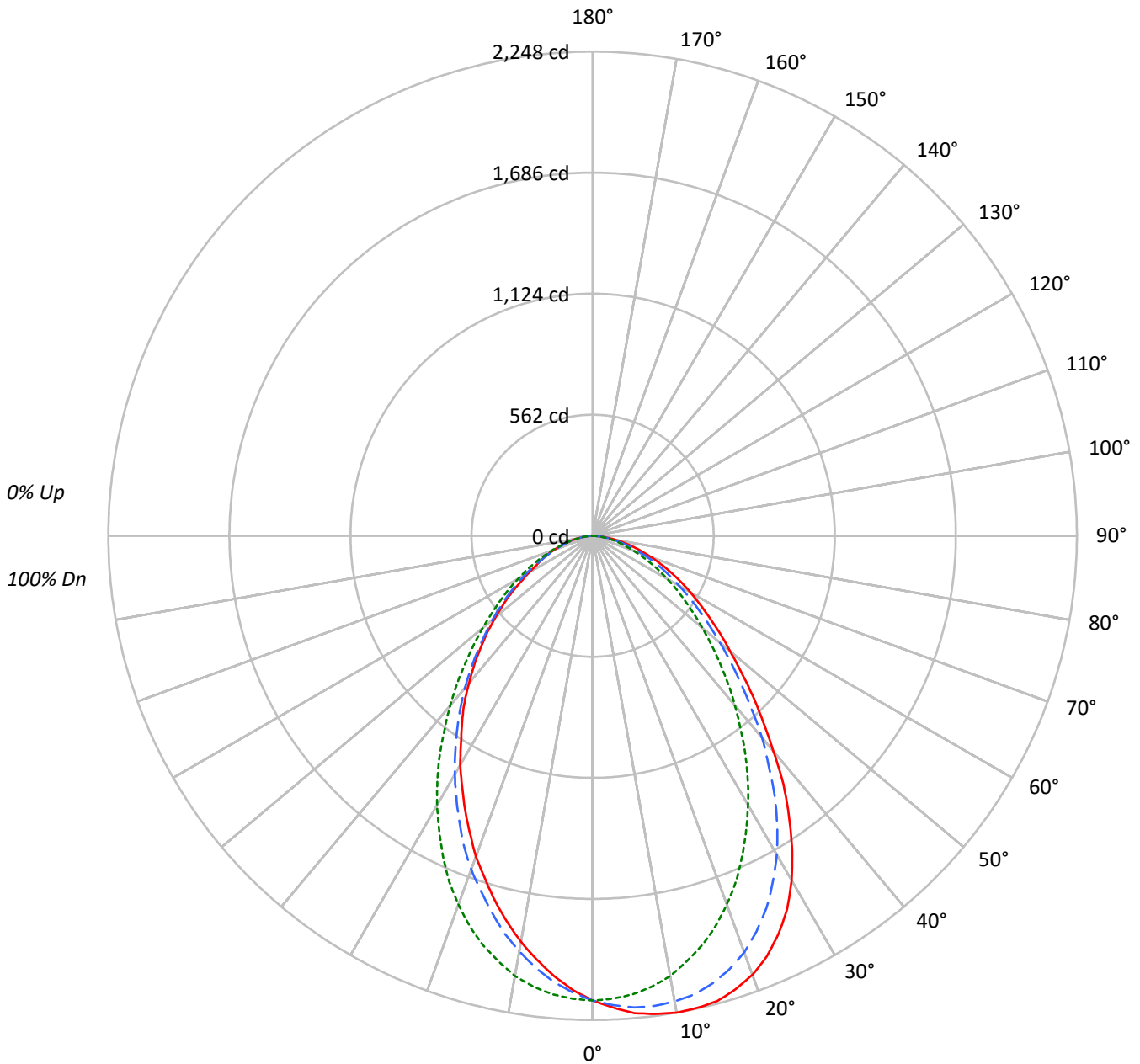
Input Watts (W): 52  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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			100
1	110	106	103	99	108	104	101	98	100	97	95	96	94	92	93	91	89	87			87
2	102	95	89	84	99	93	88	83	90	85	81	86	83	79	83	80	78	76			76
3	94	85	78	72	92	83	77	71	81	75	70	78	73	69	75	71	68	66			66
4	87	76	69	63	85	75	68	62	73	67	62	71	65	61	68	64	60	58			58
5	81	69	61	55	79	68	61	55	66	60	54	64	59	54	63	57	53	51			51
6	75	63	55	49	73	62	55	49	61	54	49	59	53	48	57	52	48	46			46
7	70	58	50	44	69	57	50	44	56	49	44	54	48	44	53	48	43	41			41
8	66	53	46	40	64	53	45	40	51	45	40	50	44	40	49	44	39	38			38
9	62	49	42	37	60	49	42	37	48	41	36	47	41	36	46	40	36	34			34
10	58	46	39	34	57	45	38	34	44	38	33	44	38	33	43	37	33	32			32

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°
0°	66526	66526	66526
5°	68867	66146	63521
10°	70393	64988	59947
15°	71395	62801	55976
20°	71180	59750	51970
25°	69419	55874	47709
30°	65769	51388	43775
35°	59835	46502	39782
40°	52556	41361	35939
45°	45829	36379	32040
50°	39880	31878	28222
55°	35569	28015	24547
60°	32316	24552	20938
65°	29047	21364	19007
70°	25867	18203	17157
75°	22673	15346	14643
80°	19232	12466	12981
85°	14506	9341	10367



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	202.1	5.1
10°-20°	556.8	14.0
20°-30°	772.9	19.4
30°-40°	799.1	20.1
40°-50°	669.1	16.8
50°-60°	485.7	12.2
60°-70°	306.5	7.7
70°-80°	151.8	3.8
80°-90°	37.7	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°	1531.7	38.5
0°-40°	2330.8	58.5
0°-60°	3485.5	87.5
0°-90°	3981.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3981.6	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	2157	2157	2157	2157	2157	
5°	2225	2198	2137	2078	2052	213
15°	2236	2152	1967	1809	1753	629
25°	2040	1909	1642	1464	1402	935
35°	1590	1472	1235	1095	1057	990
45°	1051	975	834	752	735	813
55°	662	603	521	477	457	597
65°	398	348	293	258	260	397
75°	190	158	129	123	123	204
85°	41	32	26	29	29	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°	2157.4	2157.4	2157.4	2157.4	2157.4	2157.4	2157.4	2157.4	2157.4	2157.4	2157.4
2.5°	2192.6	2192.6	2195.5	2192.6	2192.6	2192.6	2189.6	2189.6	2186.7	2186.7	2180.9
5°	2224.8	2218.9	2224.8	2218.9	2218.9	2218.9	2216.0	2210.2	2207.2	2201.4	2198.4
7.5°	2239.3	2236.4	2236.4	2233.5	2233.5	2230.6	2227.6	2224.8	2213.1	2210.2	2201.4
10°	2248.1	2245.2	2245.2	2242.3	2236.4	2236.4	2230.6	2227.6	2213.1	2207.2	2195.5
12.5°	2245.2	2245.2	2245.2	2242.3	2233.5	2230.6	2224.8	2216.0	2204.3	2192.6	2180.9
15°	2236.4	2236.4	2230.6	2227.6	2218.9	2213.1	2210.2	2195.5	2183.8	2169.1	2151.6
17.5°	2207.2	2207.2	2204.3	2198.4	2189.6	2183.8	2177.9	2163.3	2151.6	2128.1	2110.5
20°	2169.1	2166.2	2163.3	2154.5	2145.7	2142.8	2134.0	2113.5	2098.8	2081.4	2057.9
22.5°	2113.5	2110.5	2107.6	2101.7	2087.2	2081.4	2075.5	2060.8	2034.5	2016.9	1987.6
25°	2040.3	2040.3	2034.5	2025.7	2011.0	2005.2	1996.4	1981.7	1958.4	1932.0	1908.6
27.5°	1955.5	1952.6	1943.8	1937.9	1926.2	1917.4	1902.7	1885.2	1861.7	1841.3	1812.0
30°	1847.1	1847.1	1841.3	1832.5	1817.9	1812.0	1800.3	1779.8	1756.4	1730.0	1709.6
32.5°	1724.1	1724.1	1715.5	1709.6	1700.8	1686.2	1683.2	1659.8	1639.3	1618.8	1595.3
35°	1589.5	1592.4	1586.7	1574.9	1560.3	1560.3	1554.4	1533.9	1510.5	1490.0	1472.4
37.5°	1454.9	1446.1	1443.2	1437.3	1428.6	1416.8	1411.0	1402.2	1381.7	1367.0	1340.7
40°	1305.6	1308.5	1302.7	1296.8	1293.9	1285.1	1282.2	1267.5	1252.9	1235.3	1223.6
42.5°	1170.9	1170.9	1170.9	1165.1	1159.2	1150.4	1147.5	1138.7	1121.1	1109.4	1091.8
45°	1050.9	1042.1	1042.1	1039.2	1036.3	1030.4	1021.6	1015.8	1004.1	995.3	974.8
47.5°	933.8	936.8	933.8	930.9	922.1	919.2	916.3	904.5	892.8	884.0	869.4
50°	831.3	837.2	831.3	831.3	825.6	822.6	816.8	808.0	799.2	784.5	769.9
52.5°	746.4	746.4	743.5	740.6	731.8	725.9	723.0	720.1	705.4	693.8	682.1
55°	661.6	664.5	664.5	655.7	652.8	646.9	644.0	635.2	629.4	611.8	603.0
57.5°	588.3	585.4	588.3	582.5	576.6	570.9	568.0	562.1	553.3	541.6	529.9
60°	524.0	518.1	518.1	515.2	509.4	506.4	500.6	491.8	483.0	471.3	462.5
62.5°	459.5	456.6	453.7	450.8	445.0	442.1	439.1	430.4	421.6	412.8	404.0
65°	398.1	398.1	395.2	389.3	386.4	383.5	380.5	374.7	363.0	357.1	348.3
67.5°	342.5	339.5	339.5	333.7	327.8	324.9	324.9	319.0	310.3	301.6	295.7
70°	286.9	289.8	286.9	284.0	278.1	278.1	272.3	269.3	257.6	254.7	245.9
72.5°	237.1	237.1	234.2	234.2	228.3	225.4	225.4	219.5	213.7	207.8	201.9
75°	190.3	190.3	190.3	187.4	184.5	178.6	178.6	175.7	169.8	164.0	158.1
77.5°	149.3	146.4	146.4	143.5	140.5	137.6	137.6	134.7	128.8	125.9	120.0
80°	108.3	105.4	105.4	105.4	99.5	102.4	99.5	96.6	93.6	90.7	87.8
82.5°	70.2	73.1	73.1	70.2	67.3	67.3	67.3	64.3	64.3	61.5	58.6
85°	41.0	41.0	41.0	41.0	38.1	38.1	38.1	35.2	35.2	35.2	32.2
87.5°	17.6	17.6	17.6	17.6	17.6	17.6	14.6	14.6	14.6	14.6	14.6
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°	2157.4	2157.4	2157.4	2157.4	2157.4	2157.4	2157.4	2157.4	2157.4	2157.4	2157.4
2.5°	2180.9	2175.0	2172.1	2169.1	2169.1	2166.2	2163.3	2157.4	2157.4	2151.6	2148.6
5°	2192.6	2183.8	2177.9	2172.1	2169.1	2163.3	2157.4	2148.6	2145.7	2136.9	2128.1
7.5°	2195.5	2180.9	2175.0	2163.3	2157.4	2151.6	2139.8	2131.0	2119.3	2110.5	2098.8
10°	2183.8	2172.1	2157.4	2142.8	2139.8	2131.0	2113.5	2101.7	2087.2	2075.5	2057.9
12.5°	2166.2	2148.6	2134.0	2116.4	2107.6	2098.8	2081.4	2063.8	2043.3	2022.8	2005.2
15°	2136.9	2116.4	2096.0	2075.5	2063.8	2055.0	2034.5	2014.0	1993.5	1967.2	1949.6
17.5°	2093.1	2069.6	2049.1	2022.8	2011.0	2002.2	1975.9	1952.6	1926.2	1899.8	1882.2
20°	2037.4	2008.1	1984.7	1955.5	1946.7	1932.0	1905.7	1879.3	1850.0	1820.8	1800.3
22.5°	1964.3	1935.0	1908.6	1879.3	1864.7	1850.0	1823.7	1791.5	1762.2	1738.8	1718.3
25°	1879.3	1852.9	1820.8	1794.4	1776.9	1759.3	1730.0	1703.7	1677.4	1642.2	1621.7
27.5°	1785.7	1753.4	1730.0	1694.9	1677.4	1665.6	1633.4	1598.3	1574.9	1542.7	1519.3
30°	1680.3	1651.0	1624.6	1589.5	1572.0	1560.3	1531.0	1498.8	1475.3	1443.2	1419.8
32.5°	1569.1	1536.8	1504.6	1481.2	1460.8	1449.1	1416.8	1396.3	1367.0	1340.7	1314.4
35°	1449.1	1416.8	1393.4	1361.2	1349.4	1337.7	1311.5	1285.1	1258.7	1235.3	1214.8
37.5°	1320.3	1296.8	1270.4	1247.0	1238.2	1226.5	1194.4	1170.9	1150.4	1127.0	1109.4
40°	1194.4	1173.9	1156.3	1132.9	1118.2	1109.4	1086.0	1065.6	1042.1	1027.5	1009.9
42.5°	1080.2	1056.8	1039.2	1021.6	1007.0	998.2	977.7	963.0	945.6	930.9	910.4
45°	960.1	948.5	928.0	913.3	904.5	892.8	878.2	860.6	845.9	834.2	819.7
47.5°	854.7	843.0	828.4	810.9	805.0	796.3	781.6	769.9	758.2	746.4	731.8
50°	758.2	743.5	731.8	720.1	714.2	705.4	690.9	685.0	676.2	664.5	655.7
52.5°	670.4	658.7	646.9	632.3	629.4	623.5	614.7	603.0	594.2	588.3	582.5
55°	591.3	579.6	570.9	559.2	556.2	550.4	538.7	532.8	526.9	521.1	515.2
57.5°	521.1	509.4	497.6	491.8	485.9	480.1	477.1	468.3	462.5	459.5	453.7
60°	456.6	445.0	436.2	427.4	424.5	421.6	415.7	409.8	404.0	398.1	395.2
62.5°	395.2	383.5	377.6	371.8	365.9	365.9	360.0	354.2	348.3	345.4	339.5
65°	339.5	333.7	324.9	316.2	313.3	313.3	304.5	301.6	298.6	292.8	286.9
67.5°	286.9	281.0	272.3	269.3	266.4	263.5	260.5	254.7	248.8	245.9	240.0
70°	240.0	234.2	228.3	225.4	222.4	219.5	213.7	210.7	204.9	201.9	199.0
72.5°	193.1	190.3	184.5	181.5	178.6	175.7	172.8	169.8	164.0	161.0	158.1
75°	155.2	152.2	146.4	143.5	140.5	140.5	137.6	131.7	128.8	128.8	125.9
77.5°	117.1	114.2	111.2	108.3	105.4	105.4	102.4	99.5	96.6	96.6	93.6
80°	84.9	81.9	79.0	79.0	79.0	76.1	73.1	73.1	70.2	70.2	67.3
82.5°	55.7	55.7	52.7	52.7	52.7	49.8	49.8	46.9	46.9	46.9	46.9
85°	32.2	32.2	32.2	29.3	29.3	29.3	29.3	29.3	29.3	26.4	29.3
87.5°	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	11.7	11.7	11.7
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):**

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	2157.4	2157.4	2157.4	2157.4	2157.4	2157.4	2157.4	2157.4	2157.4	2157.4	2157.4
2.5°	2145.7	2142.8	2136.9	2136.9	2131.0	2131.0	2128.1	2125.2	2122.3	2119.3	2116.4
5°	2125.2	2113.5	2107.6	2104.7	2098.8	2096.0	2087.2	2081.4	2078.4	2072.6	2066.7
7.5°	2087.2	2075.5	2063.8	2060.8	2057.9	2046.2	2037.4	2028.6	2022.8	2016.9	2011.0
10°	2043.3	2031.5	2016.9	2011.0	2005.2	1990.5	1978.8	1970.1	1958.4	1946.7	1943.8
12.5°	1990.5	1972.9	1955.5	1949.6	1940.8	1926.2	1914.5	1899.8	1891.0	1876.4	1873.4
15°	1929.1	1908.6	1894.0	1879.3	1873.4	1858.8	1838.4	1826.7	1809.1	1803.2	1788.6
17.5°	1855.9	1835.5	1815.0	1809.1	1800.3	1779.8	1759.3	1744.6	1727.1	1718.3	1709.6
20°	1779.8	1753.4	1732.9	1727.1	1715.5	1697.9	1677.4	1662.7	1648.1	1630.5	1621.7
22.5°	1692.0	1662.7	1645.1	1630.5	1627.6	1607.0	1583.7	1572.0	1560.3	1545.6	1533.9
25°	1595.3	1569.1	1548.6	1536.8	1531.0	1513.4	1495.8	1481.2	1463.6	1454.9	1440.3
27.5°	1495.8	1478.2	1452.0	1440.3	1431.5	1416.8	1396.3	1387.5	1370.0	1358.2	1349.4
30°	1399.3	1372.9	1358.2	1343.6	1334.9	1320.3	1302.7	1293.9	1279.2	1267.5	1258.7
32.5°	1293.9	1276.3	1255.8	1249.9	1238.2	1223.6	1211.8	1197.3	1185.6	1173.9	1170.9
35°	1197.3	1173.9	1153.4	1147.5	1138.7	1124.1	1118.2	1109.4	1094.8	1091.8	1080.2
37.5°	1091.8	1080.2	1056.8	1048.0	1045.1	1033.4	1021.6	1015.8	1007.0	998.2	995.3
40°	992.3	977.7	966.0	957.2	951.4	942.6	930.9	928.0	922.1	910.4	907.5
42.5°	898.7	884.0	872.3	869.4	860.6	851.8	845.9	837.2	834.2	831.3	825.6
45°	808.0	799.2	787.5	784.5	781.6	769.9	764.0	758.2	752.3	749.4	743.5
47.5°	725.9	717.1	708.4	705.4	699.6	696.8	688.0	685.0	676.2	673.3	670.4
50°	646.9	641.1	635.2	632.3	626.4	623.5	617.6	611.8	605.9	603.0	600.1
52.5°	576.6	570.9	565.0	562.1	559.2	553.3	547.4	541.6	538.7	535.7	532.8
55°	509.4	503.5	500.6	497.6	494.7	491.8	483.0	480.1	477.1	474.2	468.3
57.5°	447.8	442.1	436.2	436.2	433.3	430.4	424.5	418.6	418.6	412.8	406.9
60°	392.3	386.4	380.5	377.6	374.7	368.8	365.9	363.0	360.0	357.1	351.2
62.5°	333.7	330.7	324.9	324.9	319.0	316.2	313.3	310.3	307.4	301.6	298.6
65°	284.0	281.0	275.2	272.3	272.3	269.3	263.5	260.5	257.6	257.6	254.7
67.5°	237.1	234.2	228.3	225.4	225.4	222.4	219.5	219.5	216.6	213.7	216.6
70°	196.1	190.3	190.3	187.4	187.4	184.5	181.5	181.5	181.5	184.5	184.5
72.5°	155.2	152.2	149.3	149.3	149.3	149.3	146.4	146.4	149.3	152.2	152.2
75°	122.9	120.0	120.0	120.0	117.1	117.1	120.0	120.0	122.9	122.9	122.9
77.5°	90.7	90.7	90.7	90.7	90.7	90.7	93.6	93.6	96.6	96.6	96.6
80°	67.3	67.3	67.3	67.3	67.3	70.2	70.2	70.2	70.2	70.2	73.1
82.5°	46.9	46.9	46.9	46.9	46.9	46.9	46.9	49.8	49.8	49.8	49.8
85°	26.4	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3
87.5°	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7
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: P584998

CATALOG NUMBER: HC855D010-HM82555927-81WWW

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	2157.4	2157.4	2157.4	2157.4	2157.4	2157.4	2157.4	2157.4
2.5°	2113.5	2113.5	2113.5	2116.4	2110.5	2110.5	2110.5	2110.5
5°	2063.8	2060.8	2057.9	2060.8	2055.0	2055.0	2052.1	2052.1
7.5°	2002.2	1999.3	1996.4	1996.4	1990.5	1990.5	1987.6	1984.7
10°	1935.0	1929.1	1932.0	1926.2	1923.3	1920.3	1917.4	1914.5
12.5°	1861.7	1855.9	1852.9	1847.1	1841.3	1838.4	1841.3	1835.5
15°	1782.7	1773.9	1771.0	1765.1	1759.3	1756.4	1756.4	1753.4
17.5°	1694.9	1689.1	1686.2	1680.3	1677.4	1671.5	1668.6	1665.6
20°	1612.9	1598.3	1601.2	1595.3	1592.4	1580.8	1580.8	1583.7
22.5°	1522.2	1513.4	1507.5	1501.7	1498.8	1492.9	1492.9	1490.0
25°	1431.5	1422.7	1419.8	1413.9	1411.0	1405.1	1402.2	1402.2
27.5°	1343.6	1332.0	1332.0	1326.1	1320.3	1317.3	1314.4	1311.5
30°	1249.9	1241.1	1238.2	1238.2	1235.3	1235.3	1226.5	1229.4
32.5°	1162.2	1156.3	1153.4	1147.5	1147.5	1144.6	1144.6	1135.8
35°	1074.4	1065.6	1068.5	1062.7	1059.7	1056.8	1059.7	1056.8
37.5°	989.4	983.5	983.5	977.7	977.7	974.8	971.8	977.7
40°	904.5	901.6	898.7	895.8	898.7	895.8	889.9	892.8
42.5°	819.7	819.7	816.8	816.8	813.8	813.8	813.8	813.8
45°	743.5	740.6	740.6	737.7	737.7	737.7	737.7	734.7
47.5°	667.5	664.5	664.5	664.5	661.6	661.6	658.7	661.6
50°	594.2	594.2	591.3	591.3	594.2	591.3	588.3	588.3
52.5°	526.9	526.9	524.0	524.0	521.1	518.1	521.1	521.1
55°	465.4	462.5	459.5	459.5	456.6	453.7	453.7	456.6
57.5°	406.9	404.0	401.1	401.1	395.2	392.3	392.3	392.3
60°	351.2	345.4	345.4	342.5	342.5	339.5	339.5	339.5
62.5°	298.6	295.7	295.7	295.7	295.7	292.8	292.8	292.8
65°	254.7	254.7	254.7	257.6	257.6	260.5	260.5	260.5
67.5°	219.5	222.4	222.4	222.4	225.4	225.4	225.4	222.4
70°	187.4	187.4	187.4	190.3	190.3	190.3	190.3	190.3
72.5°	155.2	155.2	155.2	155.2	155.2	155.2	155.2	155.2
75°	122.9	125.9	125.9	125.9	122.9	125.9	125.9	122.9
77.5°	96.6	96.6	96.6	96.6	96.6	96.6	96.6	96.6
80°	73.1	73.1	73.1	73.1	73.1	73.1	73.1	73.1
82.5°	49.8	49.8	49.8	49.8	49.8	49.8	49.8	49.8
85°	29.3	29.3	29.3	29.3	29.3	29.3	29.3	29.3
87.5°	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7
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)