

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: P584999

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

Issue Date: 10/21/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P584999  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2109-368-18)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 10/21/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC855D010-HM82555927-81WWWB  
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, BLACK BAFFLE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4145.6 lumens  
Efficiency: N/A  
Efficacy: 79.7 lumens/watt  
Spacing Criteria (0/90/45): 1.16 / 1.09 / 1.18  
Luminous Opening: Circular (Dia: 0.67' x H: 0')  
CIE Type: Direct

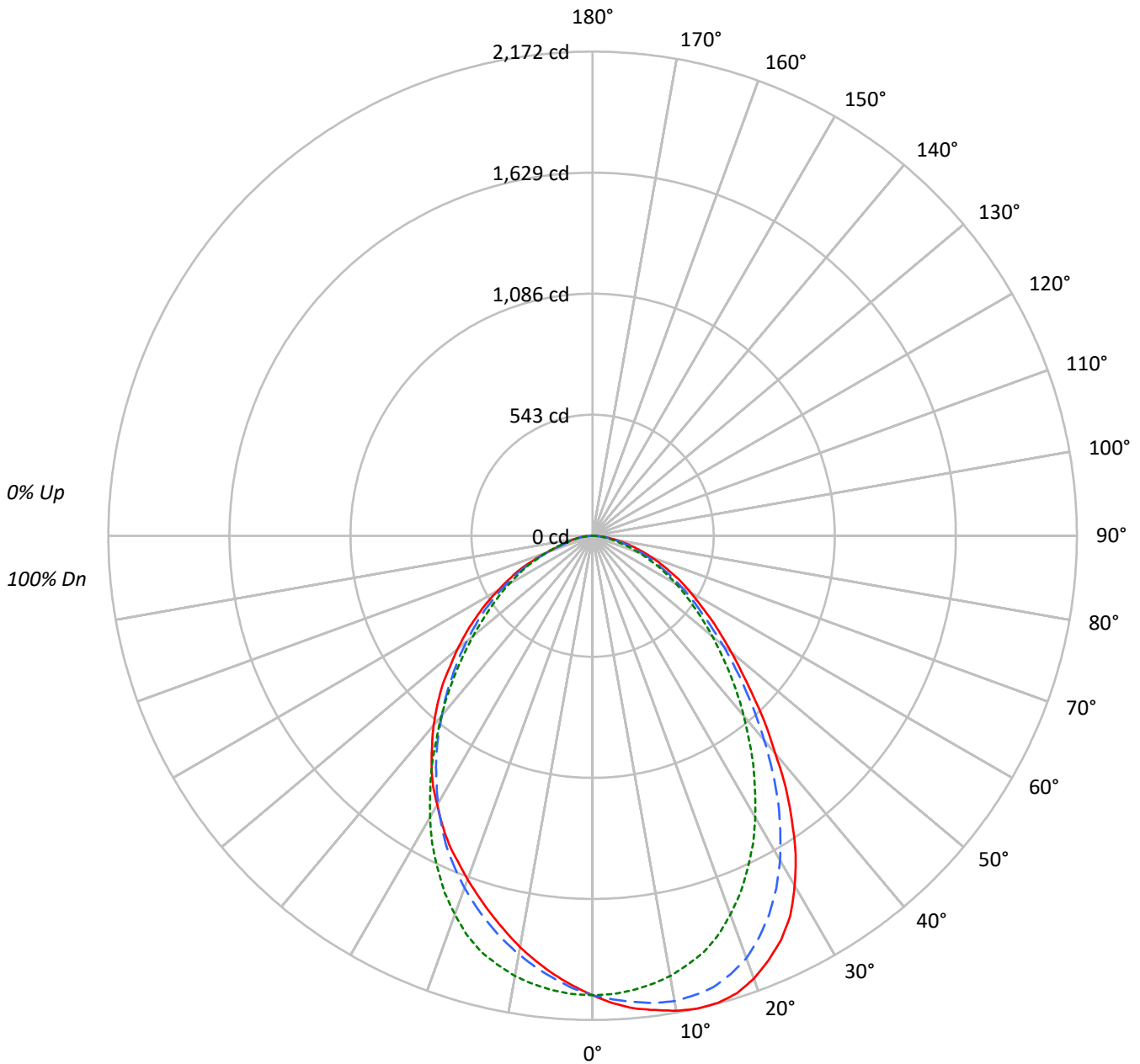
Input Watts (W): 52  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	110	106	103	99	108	104	101	98	100	97	95	96	94	92	92	91	89	87								
2	102	94	88	83	99	93	87	82	89	85	81	86	82	79	83	80	77	75								
3	94	84	77	71	91	83	76	71	80	74	69	77	72	68	75	71	67	65								
4	87	76	68	62	84	75	67	61	72	66	61	70	64	60	68	63	59	57								
5	80	69	60	54	78	67	60	54	65	59	54	64	58	53	62	57	52	50								
6	75	62	54	48	73	61	54	48	60	53	48	58	52	47	57	51	47	45								
7	70	57	49	43	68	56	49	43	55	48	43	53	47	43	52	47	42	40								
8	65	52	45	39	64	52	44	39	51	44	39	49	43	39	48	43	38	37								
9	61	48	41	36	60	48	41	36	47	40	35	46	40	35	45	39	35	33								
10	57	45	38	33	56	44	37	33	44	37	32	43	37	32	42	36	32	30								

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

	0°	90°	180°
0°	63560	63560	63560
5°	65886	63348	61172
10°	67747	62796	58672
15°	69259	61690	56081
20°	69368	59281	53804
25°	68038	55987	51900
30°	64530	51918	49622
35°	58635	47281	47394
40°	51267	42428	44666
45°	44433	37796	41625
50°	38906	33571	37922
55°	34628	29746	34316
60°	31237	26723	30158
65°	28201	23502	26282
70°	25335	19799	19538
75°	22327	15691	14643
80°	18717	12999	14029
85°	14506	11393	12454



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	194.4	4.7
10°-20°	547.7	13.2
20°-30°	782.7	18.9
30°-40°	831.7	20.1
40°-50°	716.0	17.3
50°-60°	535.3	12.9
60°-70°	341.5	8.2
70°-80°	155.4	3.7
80°-90°	40.8	1.0
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°	1524.8	36.8
0°-40°	2356.5	56.8
0°-60°	3607.9	87.0
0°-90°	4145.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4145.6	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	2061	2061	2061	2061	2061	
5°	2128	2099	2046	1994	1976	204
15°	2170	2096	1932	1801	1757	611
25°	2000	1874	1646	1546	1525	915
35°	1558	1449	1256	1224	1259	970
45°	1019	963	867	890	954	792
55°	644	591	553	600	638	579
65°	386	343	322	337	360	385
75°	187	161	132	120	123	199
85°	41	35	32	35	35	49
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°	2061.2	2061.2	2061.2	2061.2	2061.2	2061.2	2061.2	2061.2	2061.2	2061.2	2061.2
2.5°	2099.3	2093.4	2096.4	2093.4	2096.4	2096.4	2090.5	2090.5	2090.5	2090.5	2081.7
5°	2128.5	2125.7	2125.7	2122.7	2119.8	2122.7	2119.8	2116.9	2111.0	2108.1	2099.3
7.5°	2146.0	2146.0	2146.0	2146.0	2143.1	2140.2	2137.3	2131.4	2125.7	2119.8	2113.9
10°	2163.6	2166.6	2163.6	2160.7	2157.8	2151.9	2149.0	2143.1	2134.3	2125.7	2119.8
12.5°	2172.4	2172.4	2169.5	2169.5	2163.6	2160.7	2151.9	2143.1	2134.3	2125.7	2111.0
15°	2169.5	2169.5	2166.6	2163.6	2154.8	2151.9	2146.0	2137.3	2122.7	2111.0	2096.4
17.5°	2151.9	2149.0	2143.1	2143.1	2131.4	2128.5	2122.7	2111.0	2096.4	2078.8	2061.2
20°	2113.9	2113.9	2111.0	2108.1	2096.4	2087.6	2081.7	2067.1	2055.3	2034.8	2017.2
22.5°	2061.2	2067.1	2061.2	2055.3	2040.7	2037.8	2029.0	2011.4	1993.8	1970.4	1950.0
25°	1999.7	1996.7	1993.8	1987.9	1976.2	1970.4	1958.8	1941.2	1923.6	1897.2	1873.8
27.5°	1920.7	1909.0	1909.0	1897.2	1888.4	1879.7	1873.8	1856.2	1832.8	1812.3	1783.1
30°	1812.3	1815.2	1800.7	1797.7	1783.1	1777.2	1765.5	1747.9	1727.4	1704.0	1680.5
32.5°	1695.2	1686.4	1686.4	1674.7	1663.0	1654.3	1651.3	1630.8	1613.3	1589.8	1566.4
35°	1557.6	1557.6	1548.8	1545.9	1534.1	1528.3	1519.5	1507.8	1487.4	1466.9	1449.3
37.5°	1422.9	1417.1	1414.1	1408.3	1399.5	1390.7	1390.7	1370.2	1367.3	1343.8	1320.5
40°	1273.6	1279.5	1273.6	1264.8	1261.9	1256.0	1253.1	1241.4	1232.6	1212.1	1197.4
42.5°	1147.7	1141.9	1141.9	1138.9	1127.2	1127.2	1121.4	1115.5	1100.9	1095.0	1077.4
45°	1018.9	1024.7	1016.0	1018.9	1007.2	1007.2	1007.2	995.5	983.8	975.0	963.3
47.5°	907.6	910.5	910.5	901.7	898.8	898.8	892.9	887.1	878.3	866.7	857.9
50°	811.0	814.0	808.1	805.2	799.3	796.4	796.4	784.7	778.8	767.1	761.2
52.5°	723.1	723.1	720.2	720.2	711.4	711.4	705.7	696.9	691.0	685.2	670.5
55°	644.1	644.1	641.2	638.3	638.3	629.5	626.6	617.8	611.9	600.2	591.4
57.5°	568.0	570.9	568.0	565.0	562.1	559.2	553.3	544.6	538.8	530.0	524.1
60°	506.5	506.5	503.6	500.7	494.8	491.9	489.0	483.1	474.3	468.4	459.7
62.5°	447.9	445.0	442.1	439.1	433.3	433.3	427.4	421.6	412.8	406.9	401.1
65°	386.5	386.5	383.6	383.6	380.7	374.8	371.9	368.9	357.2	354.3	342.6
67.5°	330.9	333.8	327.9	327.9	322.1	322.1	319.1	310.3	307.4	301.6	295.7
70°	281.0	281.0	281.0	278.1	272.3	269.3	266.4	260.5	257.6	251.7	245.9
72.5°	231.4	231.4	228.4	228.4	225.5	222.6	219.6	213.8	213.8	207.9	202.1
75°	187.4	187.4	184.5	181.5	178.6	178.6	175.7	172.8	166.9	164.0	161.0
77.5°	143.5	143.5	143.5	140.5	137.6	137.6	137.6	131.7	125.9	125.9	122.9
80°	105.4	105.4	102.4	102.4	99.5	99.5	99.5	96.6	93.6	90.7	87.8
82.5°	70.3	70.3	70.3	70.3	67.4	67.4	67.4	64.5	61.5	61.5	61.5
85°	41.0	41.0	41.0	41.0	38.1	38.1	38.1	38.1	38.1	35.2	35.2
87.5°	17.6	14.6	17.6	14.6	17.6	14.6	17.6	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°	2061.2	2061.2	2061.2	2061.2	2061.2	2061.2	2061.2	2061.2	2061.2	2061.2	2061.2
2.5°	2084.6	2081.7	2078.8	2075.8	2075.8	2072.9	2067.1	2064.1	2061.2	2058.3	2058.3
5°	2096.4	2093.4	2087.6	2081.7	2078.8	2072.9	2067.1	2061.2	2055.3	2046.5	2043.6
7.5°	2105.1	2096.4	2090.5	2078.8	2075.8	2070.0	2061.2	2052.4	2040.7	2029.0	2020.2
10°	2105.1	2093.4	2084.6	2070.0	2064.1	2058.3	2046.5	2031.9	2017.2	2005.5	1990.9
12.5°	2099.3	2084.6	2070.0	2055.3	2046.5	2037.8	2020.2	2005.5	1987.9	1970.4	1958.8
15°	2078.8	2061.2	2043.6	2026.0	2017.2	2005.5	1987.9	1967.6	1950.0	1932.4	1911.9
17.5°	2040.7	2023.1	2002.6	1982.1	1970.4	1961.7	1935.3	1920.7	1894.3	1876.7	1859.1
20°	1990.9	1970.4	1944.1	1923.6	1909.0	1900.2	1879.7	1853.3	1832.8	1806.5	1788.9
22.5°	1926.5	1900.2	1873.8	1853.3	1838.6	1826.9	1800.7	1774.3	1756.7	1733.3	1712.8
25°	1850.4	1824.0	1797.7	1768.4	1753.8	1742.1	1718.6	1695.2	1671.7	1645.5	1627.9
27.5°	1759.6	1730.3	1706.9	1680.5	1665.9	1648.4	1622.0	1598.6	1575.2	1557.6	1534.1
30°	1660.0	1627.9	1604.5	1578.1	1563.4	1548.8	1522.4	1499.0	1478.6	1458.1	1446.4
32.5°	1540.0	1516.6	1493.2	1466.9	1455.2	1446.4	1420.0	1396.6	1373.1	1355.5	1346.7
35°	1425.9	1399.5	1379.0	1355.5	1340.9	1332.2	1308.8	1288.3	1276.5	1256.0	1244.3
37.5°	1305.8	1285.3	1261.9	1238.5	1229.7	1220.9	1203.3	1182.8	1165.3	1150.7	1144.8
40°	1180.0	1162.4	1141.9	1127.2	1118.4	1109.6	1095.0	1080.3	1068.6	1054.0	1048.1
42.5°	1059.8	1048.1	1030.5	1013.1	1004.3	1001.4	983.8	972.1	966.2	960.3	954.5
45°	951.5	934.0	922.2	910.5	901.7	895.9	887.1	878.3	872.4	866.7	860.8
47.5°	846.2	831.5	819.8	811.0	802.2	799.3	793.4	784.7	778.8	778.8	778.8
50°	749.5	737.8	726.1	720.2	717.3	711.4	705.7	702.7	699.8	699.8	699.8
52.5°	664.6	652.9	644.1	638.3	638.3	632.4	626.6	623.6	623.6	623.6	623.6
55°	585.5	576.7	570.9	565.0	559.2	556.2	556.2	556.2	553.3	553.3	556.2
57.5°	515.3	509.5	500.7	494.8	491.9	491.9	489.0	486.0	489.0	491.9	494.8
60°	450.9	445.0	442.1	433.3	433.3	433.3	430.4	430.4	430.4	433.3	436.2
62.5°	392.4	389.5	383.6	380.7	377.7	377.7	374.8	374.8	374.8	374.8	377.7
65°	339.6	333.8	327.9	327.9	327.9	325.0	325.0	319.1	322.1	322.1	319.1
67.5°	289.8	284.0	281.0	278.1	275.2	275.2	272.3	269.3	266.4	266.4	266.4
70°	243.0	237.1	237.1	231.4	231.4	228.4	225.5	225.5	222.6	219.6	216.7
72.5°	196.2	193.3	190.3	187.4	187.4	187.4	184.5	181.5	178.6	175.7	169.8
75°	155.2	155.2	149.3	146.4	146.4	143.5	140.5	137.6	134.7	131.7	128.8
77.5°	120.0	117.1	111.2	108.3	108.3	108.3	105.4	102.4	99.5	96.6	93.6
80°	87.8	84.9	81.9	79.0	79.0	79.0	76.2	76.2	73.2	73.2	73.2
82.5°	58.6	58.6	55.7	55.7	55.7	55.7	52.7	52.7	52.7	52.7	52.7
85°	35.2	35.2	32.2	32.2	32.2	32.2	32.2	32.2	32.2	32.2	32.2
87.5°	14.6	14.6	14.6	14.6	14.6	14.6	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):**

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	2061.2	2061.2	2061.2	2061.2	2061.2	2061.2	2061.2	2061.2	2061.2	2061.2	2061.2
2.5°	2052.4	2052.4	2046.5	2043.6	2040.7	2043.6	2037.8	2034.8	2031.9	2031.9	2029.0
5°	2034.8	2031.9	2020.2	2017.2	2014.3	2011.4	2005.5	1999.7	1993.8	1990.9	1987.9
7.5°	2011.4	2002.6	1990.9	1987.9	1985.0	1976.2	1967.6	1961.7	1952.9	1950.0	1944.1
10°	1979.2	1967.6	1958.8	1950.0	1944.1	1935.3	1926.5	1917.7	1906.0	1903.1	1894.3
12.5°	1941.2	1926.5	1909.0	1906.0	1897.2	1885.5	1873.8	1865.0	1856.2	1850.4	1841.6
15°	1894.3	1879.7	1862.1	1853.3	1844.5	1835.7	1821.1	1809.5	1800.7	1791.9	1783.1
17.5°	1838.6	1821.1	1806.5	1797.7	1791.9	1777.2	1765.5	1750.9	1742.1	1733.3	1724.5
20°	1771.4	1756.7	1736.2	1727.4	1724.5	1712.8	1698.1	1692.3	1680.5	1671.7	1665.9
22.5°	1695.2	1680.5	1663.0	1657.1	1645.5	1639.6	1625.0	1619.1	1613.3	1604.5	1601.5
25°	1610.3	1595.7	1581.0	1578.1	1569.3	1563.4	1554.7	1545.9	1545.9	1537.1	1537.1
27.5°	1522.4	1507.8	1496.2	1490.3	1487.4	1481.5	1472.7	1469.8	1466.9	1463.9	1463.9
30°	1428.8	1411.2	1405.3	1402.4	1399.5	1393.6	1390.7	1384.8	1387.8	1390.7	1387.8
32.5°	1329.3	1323.4	1311.7	1305.8	1308.8	1305.8	1300.0	1305.8	1302.9	1308.8	1311.7
35°	1232.6	1226.7	1220.9	1220.9	1215.0	1215.0	1215.0	1217.9	1223.8	1226.7	1232.6
37.5°	1138.9	1130.2	1127.2	1124.3	1127.2	1127.2	1127.2	1133.1	1138.9	1144.8	1153.6
40°	1039.3	1033.5	1033.5	1033.5	1033.5	1042.3	1039.3	1045.2	1051.0	1059.8	1068.6
42.5°	945.7	945.7	948.6	948.6	948.6	948.6	954.5	963.3	972.1	980.8	989.6
45°	857.9	857.9	857.9	863.8	863.8	866.7	878.3	884.2	890.0	898.8	907.6
47.5°	775.9	775.9	778.8	781.7	784.7	790.5	796.4	805.2	814.0	819.8	828.6
50°	699.8	702.7	708.6	714.3	714.3	717.3	726.1	731.9	737.8	746.6	749.5
52.5°	626.6	632.4	638.3	641.2	644.1	650.0	652.9	661.7	664.6	673.4	676.4
55°	559.2	562.1	570.9	573.8	573.8	579.7	585.5	591.4	600.2	600.2	606.0
57.5°	497.7	500.7	506.5	509.5	506.5	515.3	518.3	524.1	527.0	532.9	535.8
60°	436.2	442.1	445.0	445.0	447.9	450.9	456.7	456.7	462.6	468.4	468.4
62.5°	377.7	380.7	383.6	386.5	389.5	386.5	395.2	395.2	401.1	404.0	409.8
65°	322.1	325.0	325.0	327.9	327.9	330.9	330.9	333.8	336.7	342.6	345.5
67.5°	266.4	266.4	266.4	269.3	266.4	269.3	269.3	272.3	272.3	278.1	281.0
70°	216.7	213.8	210.8	210.8	210.8	210.8	207.9	210.8	210.8	213.8	213.8
72.5°	166.9	164.0	161.0	158.1	158.1	155.2	152.2	155.2	155.2	158.1	158.1
75°	125.9	120.0	120.0	120.0	117.1	117.1	117.1	120.0	120.0	120.0	122.9
77.5°	93.6	93.6	90.7	90.7	90.7	93.6	93.6	96.6	96.6	96.6	96.6
80°	70.3	73.2	73.2	73.2	73.2	76.2	76.2	76.2	76.2	79.0	79.0
82.5°	52.7	52.7	52.7	52.7	55.7	55.7	55.7	55.7	55.7	55.7	55.7
85°	32.2	35.2	35.2	32.2	35.2	35.2	35.2	35.2	35.2	35.2	35.2
87.5°	14.6	14.6	14.6	14.6	14.6	14.6	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





TEST NUMBER: P584999

CATALOG NUMBER: HC855D010-HM82555927-81WWWB

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	2061.2	2061.2	2061.2	2061.2	2061.2	2061.2	2061.2	2061.2
2.5°	2026.0	2026.0	2026.0	2026.0	2023.1	2023.1	2023.1	2020.2
5°	1982.1	1982.1	1982.1	1976.2	1979.2	1979.2	1973.3	1976.2
7.5°	1938.3	1935.3	1932.4	1932.4	1929.5	1926.5	1923.6	1926.5
10°	1888.4	1879.7	1879.7	1876.7	1876.7	1870.9	1870.9	1873.8
12.5°	1832.8	1826.9	1826.9	1824.0	1821.1	1818.1	1815.2	1815.2
15°	1777.2	1771.4	1768.4	1765.5	1762.6	1756.7	1759.6	1756.7
17.5°	1721.6	1712.8	1712.8	1709.8	1706.9	1701.0	1701.0	1698.1
20°	1657.1	1654.3	1648.4	1651.3	1648.4	1642.6	1639.6	1639.6
22.5°	1592.7	1592.7	1589.8	1589.8	1586.9	1584.0	1581.0	1581.0
25°	1531.2	1528.3	1531.2	1531.2	1522.4	1522.4	1522.4	1525.4
27.5°	1461.0	1463.9	1461.0	1461.0	1461.0	1461.0	1463.9	1461.0
30°	1390.7	1390.7	1390.7	1393.6	1399.5	1396.6	1396.6	1393.6
32.5°	1314.6	1317.6	1317.6	1320.5	1323.4	1329.3	1329.3	1332.2
35°	1238.5	1244.3	1247.2	1244.3	1253.1	1253.1	1259.0	1259.0
37.5°	1159.5	1162.4	1168.2	1171.2	1177.0	1180.0	1182.8	1182.8
40°	1074.5	1086.2	1089.1	1092.1	1100.9	1100.9	1103.8	1109.6
42.5°	995.5	1007.2	1010.1	1013.1	1018.9	1027.6	1024.7	1030.5
45°	919.3	928.1	931.0	934.0	942.8	945.7	945.7	954.5
47.5°	837.4	843.3	846.2	852.0	857.9	863.8	869.5	866.7
50°	755.4	764.1	770.0	772.9	781.7	784.7	787.6	790.5
52.5°	682.2	688.1	691.0	693.9	702.7	705.7	708.6	714.3
55°	611.9	614.8	620.7	617.8	626.6	629.5	632.4	638.3
57.5°	541.7	544.6	547.6	547.6	553.3	559.2	562.1	565.0
60°	474.3	480.2	483.1	483.1	483.1	489.0	489.0	489.0
62.5°	412.8	412.8	415.7	415.7	421.6	421.6	421.6	421.6
65°	348.4	351.4	354.3	354.3	360.2	357.2	363.1	360.2
67.5°	281.0	281.0	286.9	286.9	284.0	286.9	286.9	286.9
70°	213.8	213.8	216.7	216.7	216.7	216.7	216.7	216.7
72.5°	158.1	158.1	158.1	161.0	158.1	158.1	161.0	158.1
75°	122.9	122.9	122.9	122.9	122.9	122.9	122.9	122.9
77.5°	96.6	96.6	99.5	99.5	99.5	99.5	99.5	99.5
80°	79.0	79.0	79.0	79.0	81.9	79.0	79.0	79.0
82.5°	58.6	55.7	58.6	55.7	58.6	58.6	58.6	58.6
85°	35.2	35.2	35.2	35.2	35.2	35.2	35.2	35.2
87.5°	14.6	14.6	14.6	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



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— 0°-180°    - - 45°-225°    - - - - 90°-270°















(END OF REPORT)