

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: P584997

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

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P584997
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-HM82555927-81WWBB
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, WHITE BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3647.9 lumens
Efficiency: N/A
Efficacy: 70.2 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

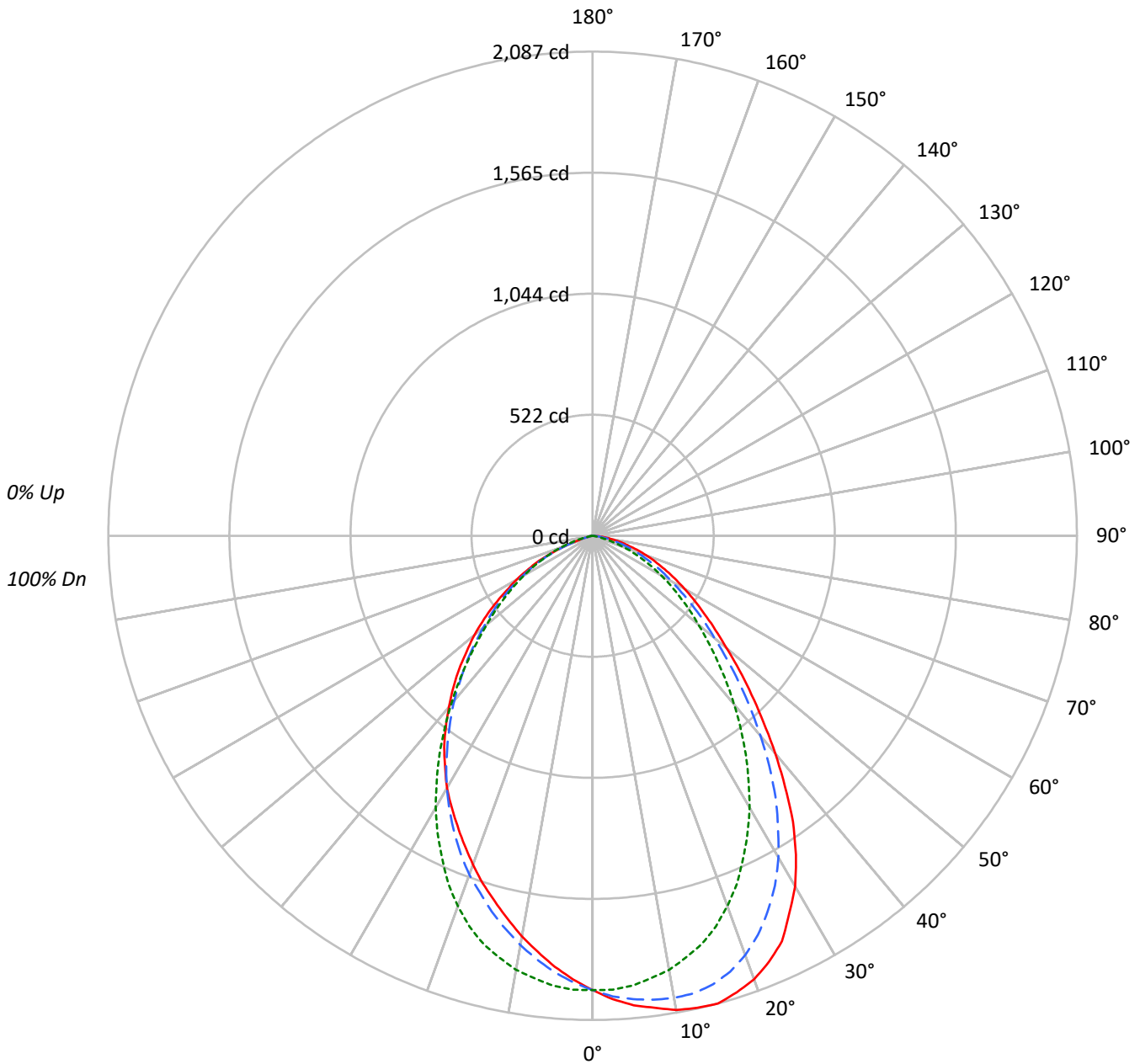
Input Watts (W): 52
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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			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	86	100	94	89	85	91	86	83	88	84	81	85	82	79	77			77
3	95	86	79	74	93	85	78	73	82	76	72	79	74	71	77	73	69	67			67
4	88	78	70	64	86	76	69	64	74	68	63	72	66	62	70	65	61	59			59
5	82	70	63	57	80	69	62	56	67	61	56	65	60	55	64	59	55	53			53
6	76	64	56	51	74	63	56	50	62	55	50	60	54	50	58	53	49	47			47
7	71	59	51	45	69	58	51	45	57	50	45	55	49	45	54	49	44	43			43
8	66	54	46	41	65	53	46	41	52	46	41	51	45	41	50	44	40	39			39
9	62	50	43	37	61	50	42	37	48	42	37	47	41	37	46	41	37	35			35
10	59	47	39	34	57	46	39	34	45	39	34	44	38	34	43	38	34	32			32

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	60390	60390	60390
5°	62883	60258	57720
10°	64988	59487	54902
15°	66632	58127	52052
20°	66763	55717	49469
25°	65636	52190	46909
30°	62119	48155	44715
35°	56639	43306	41985
40°	49255	38181	38765
45°	42253	33064	35489
50°	36090	28505	31878
55°	31628	24547	27698
60°	28160	20938	23288
65°	24990	17088	18584
70°	22170	12667	10558
75°	18491	6636	3145
80°	14544	2078	515
85°	10367	1026	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	184.5	5.1
10°-20°	517.2	14.2
20°-30°	732.1	20.1
30°-40°	765.9	21.0
40°-50°	638.8	17.5
50°-60°	453.0	12.4
60°-70°	260.9	7.2
70°-80°	84.0	2.3
80°-90°	11.6	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°	1433.8	39.3
0°-40°	2199.7	60.3
0°-60°	3291.4	90.2
0°-90°	3647.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3647.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1958	1958	1958	1958	1958	
5°	2032	2005	1947	1888	1865	195
15°	2087	2002	1821	1677	1630	587
25°	1929	1786	1534	1411	1379	880
35°	1505	1373	1150	1089	1115	933
45°	969	890	758	767	814	751
55°	588	527	457	480	515	532
65°	342	287	234	234	255	342
75°	155	114	56	26	26	168
85°	29	15	3	0	0	37
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°	1958.4	1958.4	1958.4	1958.4	1958.4	1958.4	1958.4	1958.4	1958.4	1958.4	1958.4
2.5°	1999.3	1996.4	1993.5	1996.4	1993.5	1996.4	1993.5	1993.5	1990.5	1987.6	1987.6
5°	2031.5	2028.6	2028.6	2028.6	2025.7	2022.8	2022.8	2019.8	2014.0	2011.0	2005.2
7.5°	2052.1	2055.0	2055.0	2055.0	2049.1	2049.1	2043.3	2037.4	2031.5	2025.7	2016.9
10°	2075.5	2075.5	2072.6	2069.6	2063.8	2060.8	2057.9	2052.1	2043.3	2031.5	2022.8
12.5°	2084.3	2084.3	2081.4	2075.5	2072.6	2069.6	2066.7	2057.9	2046.2	2031.5	2019.8
15°	2087.2	2081.4	2078.4	2075.5	2069.6	2060.8	2060.8	2049.1	2034.5	2016.9	2002.2
17.5°	2063.8	2066.7	2060.8	2055.0	2046.2	2040.3	2031.5	2022.8	2005.2	1984.8	1970.1
20°	2034.5	2031.5	2028.6	2019.8	2008.1	2005.2	1996.4	1981.9	1967.2	1943.8	1923.3
22.5°	1987.6	1984.8	1978.9	1973.1	1961.3	1955.5	1946.7	1929.1	1908.6	1885.2	1861.7
25°	1929.1	1923.3	1914.5	1902.7	1894.0	1888.1	1876.4	1858.9	1835.5	1809.1	1785.7
27.5°	1835.5	1844.3	1838.4	1820.8	1812.0	1800.3	1797.4	1773.9	1753.4	1727.2	1700.8
30°	1744.6	1744.6	1735.8	1727.2	1712.5	1703.7	1692.0	1674.4	1653.9	1621.7	1601.3
32.5°	1630.5	1627.6	1615.8	1612.9	1601.3	1583.7	1580.8	1557.4	1536.8	1513.4	1487.0
35°	1504.6	1498.8	1487.0	1478.2	1472.5	1463.7	1454.9	1434.4	1413.9	1390.5	1372.9
37.5°	1361.2	1361.2	1358.2	1343.7	1337.8	1332.0	1323.2	1302.7	1291.0	1267.5	1249.9
40°	1223.6	1220.6	1212.0	1209.0	1203.2	1194.4	1188.5	1176.8	1159.2	1141.6	1124.1
42.5°	1089.0	1091.8	1080.2	1083.2	1071.4	1065.6	1062.7	1045.1	1036.3	1018.7	1004.1
45°	968.9	966.0	960.2	957.3	951.4	945.6	939.7	930.9	916.3	898.7	889.9
47.5°	857.7	848.9	848.9	845.9	843.0	831.4	828.5	819.7	810.9	793.3	781.6
50°	752.3	752.3	752.3	749.4	740.6	737.7	731.8	723.0	714.2	702.6	685.0
52.5°	667.5	667.5	667.5	664.5	652.8	649.9	646.9	635.2	623.5	614.7	603.0
55°	588.3	591.3	588.3	582.5	573.8	573.8	565.0	559.2	547.4	538.7	526.9
57.5°	521.1	521.1	515.2	512.3	506.4	503.5	497.6	491.8	477.1	468.3	453.7
60°	456.6	453.7	453.7	447.9	442.1	436.2	433.3	424.5	418.6	404.0	392.3
62.5°	398.1	398.1	392.3	392.3	380.5	380.5	377.6	368.8	360.0	345.4	339.5
65°	342.5	342.5	339.5	336.6	327.8	324.9	321.9	313.3	304.5	295.7	286.9
67.5°	292.8	292.8	286.9	284.0	278.1	275.2	269.3	263.5	254.7	245.9	237.1
70°	245.9	243.0	240.0	237.1	231.2	228.3	222.4	216.6	207.8	201.9	193.1
72.5°	199.0	199.0	196.1	190.3	187.4	184.5	181.5	175.7	166.9	158.1	152.2
75°	155.2	155.2	155.2	149.3	143.5	140.5	140.5	134.7	128.8	120.0	114.2
77.5°	120.0	117.1	114.2	114.2	108.3	105.4	102.4	99.5	90.7	87.8	81.9
80°	81.9	84.9	81.9	79.0	76.1	73.1	73.1	67.3	64.3	58.6	52.7
82.5°	55.7	52.7	52.7	49.8	49.8	46.9	46.9	41.0	38.1	35.2	32.2
85°	29.3	29.3	26.4	26.4	26.4	23.4	23.4	20.5	20.5	17.6	14.6
87.5°	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	5.9	5.9	5.9
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°	1958.4	1958.4	1958.4	1958.4	1958.4	1958.4	1958.4	1958.4	1958.4	1958.4	1958.4
2.5°	1984.8	1978.9	1976.0	1976.0	1973.1	1970.1	1967.2	1964.3	1958.4	1958.4	1952.6
5°	1999.3	1993.5	1990.5	1981.9	1976.0	1976.0	1964.3	1961.3	1952.6	1946.7	1940.8
7.5°	2011.0	1999.3	1990.5	1981.9	1976.0	1970.1	1958.4	1946.7	1935.0	1923.3	1917.4
10°	2011.0	1999.3	1984.8	1970.1	1964.3	1958.4	1943.8	1926.2	1911.5	1899.8	1885.2
12.5°	2005.2	1987.6	1970.1	1958.4	1946.7	1937.9	1920.3	1902.7	1885.2	1861.7	1850.1
15°	1987.6	1964.3	1946.7	1926.2	1917.4	1902.7	1888.1	1861.7	1841.3	1820.8	1806.2
17.5°	1952.6	1923.3	1902.7	1882.2	1867.6	1858.9	1835.5	1812.0	1788.6	1765.1	1747.6
20°	1899.8	1873.4	1850.1	1823.7	1812.0	1800.3	1771.0	1747.6	1724.2	1697.9	1680.3
22.5°	1835.5	1809.1	1776.9	1756.4	1738.8	1724.2	1697.9	1671.5	1648.1	1624.6	1601.3
25°	1756.4	1730.1	1700.8	1668.6	1656.9	1642.2	1612.9	1586.7	1560.3	1533.9	1513.4
27.5°	1671.5	1636.3	1612.9	1577.9	1566.1	1551.5	1519.3	1490.0	1466.6	1446.1	1422.7
30°	1569.1	1542.7	1510.5	1478.2	1466.6	1452.0	1425.6	1399.3	1375.8	1352.4	1329.0
32.5°	1457.9	1431.5	1399.3	1375.8	1358.2	1346.5	1320.3	1296.8	1273.4	1249.9	1229.4
35°	1340.8	1311.5	1288.0	1264.6	1249.9	1235.3	1209.0	1188.5	1170.9	1150.4	1129.9
37.5°	1220.6	1200.2	1176.8	1150.4	1135.8	1124.1	1103.6	1080.2	1065.6	1048.0	1033.4
40°	1103.6	1080.2	1059.7	1036.3	1024.6	1015.8	995.3	977.7	963.0	948.5	939.7
42.5°	983.5	963.0	942.6	928.0	919.2	910.4	895.8	875.2	866.5	851.8	843.0
45°	872.3	854.7	840.1	819.7	813.8	808.0	790.4	775.7	767.0	758.2	752.3
47.5°	767.0	755.2	737.7	725.9	717.1	711.3	699.7	688.0	679.2	673.3	667.5
50°	676.2	661.6	649.9	638.2	632.3	623.5	611.8	605.9	600.1	594.2	594.2
52.5°	591.3	576.7	565.0	556.2	550.4	544.5	535.7	532.8	526.9	526.9	524.0
55°	512.3	503.5	491.8	480.1	477.1	474.2	468.3	462.5	459.5	456.6	459.5
57.5°	445.0	436.2	424.5	415.7	412.8	409.8	406.9	401.1	398.1	398.1	398.1
60°	383.5	374.7	365.9	357.1	357.1	351.2	348.3	345.4	342.5	339.5	339.5
62.5°	327.8	319.1	310.3	304.5	301.6	298.6	292.8	289.8	286.9	286.9	284.0
65°	278.1	266.4	263.5	254.7	251.7	248.8	245.9	240.0	237.1	234.2	231.2
67.5°	228.3	222.4	213.7	207.8	204.9	201.9	199.0	193.1	190.3	187.4	181.5
70°	184.5	178.6	172.8	166.9	164.0	161.0	155.2	149.3	146.4	140.5	131.7
72.5°	143.5	137.6	131.7	125.9	122.9	120.0	114.2	108.3	102.4	96.6	90.7
75°	108.3	102.4	93.6	87.8	84.9	84.9	76.1	70.2	64.3	55.7	49.8
77.5°	76.1	67.3	64.3	58.6	55.7	49.8	43.9	38.1	32.2	29.3	23.4
80°	49.8	43.9	38.1	35.2	32.2	29.3	26.4	20.5	14.6	11.7	8.8
82.5°	29.3	26.4	23.4	20.5	17.6	14.6	11.7	11.7	8.8	5.9	2.9
85°	14.6	11.7	8.8	8.8	5.9	5.9	5.9	2.9	2.9	2.9	2.9
87.5°	5.9	2.9	2.9	2.9	2.9	2.9	2.9	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°	1958.4	1958.4	1958.4	1958.4	1958.4	1958.4	1958.4	1958.4	1958.4	1958.4	1958.4
2.5°	1949.6	1946.7	1943.8	1940.8	1940.8	1935.0	1935.0	1932.0	1926.2	1923.3	1923.3
5°	1932.0	1923.3	1917.4	1914.5	1911.5	1902.7	1899.8	1894.0	1888.1	1882.2	1879.3
7.5°	1905.7	1891.0	1885.2	1882.2	1873.4	1864.7	1858.9	1850.1	1841.3	1832.5	1829.6
10°	1873.4	1858.9	1844.3	1838.4	1829.6	1823.7	1812.0	1800.3	1791.5	1782.7	1773.9
12.5°	1832.5	1815.0	1800.3	1794.4	1785.7	1773.9	1756.4	1750.5	1735.8	1730.1	1718.4
15°	1785.7	1765.1	1750.5	1741.7	1732.9	1715.5	1703.7	1692.0	1677.4	1671.5	1659.8
17.5°	1727.2	1703.7	1689.1	1680.3	1674.4	1659.8	1642.2	1627.6	1612.9	1607.0	1598.4
20°	1656.9	1642.2	1621.7	1612.9	1607.0	1589.6	1572.0	1566.1	1554.4	1542.7	1533.9
22.5°	1577.9	1563.2	1542.7	1533.9	1531.0	1516.3	1501.7	1492.9	1484.1	1475.3	1466.6
25°	1495.8	1478.2	1460.8	1454.9	1449.1	1437.3	1425.6	1419.8	1411.0	1405.1	1399.3
27.5°	1408.0	1390.5	1375.8	1367.0	1361.2	1352.4	1346.5	1340.8	1334.9	1329.0	1326.1
30°	1314.4	1296.8	1285.1	1279.2	1273.4	1270.4	1261.7	1258.7	1255.8	1249.9	1252.9
32.5°	1220.6	1206.1	1194.4	1185.6	1185.6	1179.7	1176.8	1176.8	1173.9	1173.9	1173.9
35°	1118.2	1109.4	1100.6	1097.7	1094.8	1091.8	1089.0	1091.8	1089.0	1091.8	1094.8
37.5°	1024.6	1015.8	1009.9	1007.0	1004.1	1007.0	1004.1	1004.1	1007.0	1012.8	1015.8
40°	928.0	922.1	916.3	919.2	916.3	916.3	916.3	925.1	928.0	930.9	933.8
42.5°	837.2	831.4	828.5	828.5	831.4	828.5	834.2	837.2	843.0	851.8	857.7
45°	749.4	746.4	746.4	749.4	746.4	752.3	752.3	758.2	767.0	772.8	778.7
47.5°	667.5	667.5	667.5	670.4	670.4	673.3	679.2	682.1	688.0	693.8	699.7
50°	591.3	594.2	597.1	597.1	597.1	603.0	608.9	611.8	614.7	617.6	626.4
52.5°	524.0	526.9	526.9	529.9	532.8	535.7	538.7	544.5	547.4	553.3	556.2
55°	459.5	459.5	465.4	468.3	468.3	468.3	474.2	474.2	480.1	483.0	488.8
57.5°	398.1	401.1	401.1	404.0	404.0	406.9	409.8	412.8	415.7	418.6	421.6
60°	339.5	339.5	339.5	342.5	345.4	348.3	345.4	351.2	351.2	357.1	360.0
62.5°	284.0	286.9	286.9	286.9	286.9	286.9	286.9	289.8	292.8	295.7	298.6
65°	231.2	231.2	231.2	228.3	231.2	228.3	231.2	234.2	234.2	237.1	240.0
67.5°	178.6	178.6	172.8	172.8	175.7	175.7	175.7	175.7	172.8	178.6	178.6
70°	128.8	125.9	122.9	120.0	120.0	117.1	117.1	114.2	114.2	114.2	114.2
72.5°	84.9	79.0	73.1	70.2	67.3	67.3	61.5	58.6	61.5	61.5	61.5
75°	43.9	38.1	35.2	32.2	29.3	29.3	26.4	26.4	26.4	26.4	26.4
77.5°	17.6	14.6	11.7	11.7	8.8	8.8	8.8	8.8	8.8	8.8	8.8
80°	5.9	5.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
82.5°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
85°	2.9	0.0	0.0	2.9	0.0	2.9	2.9	2.9	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: P584997

CATALOG NUMBER: HC855D010-HM82555927-81WWBB

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1958.4	1958.4	1958.4	1958.4	1958.4	1958.4	1958.4	1958.4
2.5°	1920.3	1920.3	1917.4	1920.3	1914.5	1917.4	1914.5	1914.5
5°	1876.4	1870.5	1870.5	1870.5	1867.6	1867.6	1864.7	1864.7
7.5°	1823.7	1820.8	1817.9	1815.0	1812.0	1809.1	1809.1	1809.1
10°	1771.0	1765.1	1765.1	1762.2	1756.4	1753.4	1753.4	1753.4
12.5°	1709.6	1706.7	1703.7	1703.7	1692.0	1694.9	1692.0	1692.0
15°	1651.0	1648.1	1648.1	1639.3	1633.4	1633.4	1633.4	1630.5
17.5°	1589.6	1586.7	1583.7	1577.9	1572.0	1572.0	1569.1	1572.0
20°	1525.1	1522.2	1516.3	1516.3	1513.4	1510.5	1504.6	1507.5
22.5°	1460.8	1454.9	1452.0	1452.0	1449.1	1449.1	1443.2	1443.2
25°	1393.4	1390.5	1387.5	1390.5	1384.6	1384.6	1378.7	1378.7
27.5°	1323.2	1320.3	1320.3	1320.3	1317.3	1320.3	1317.3	1317.3
30°	1252.9	1252.9	1249.9	1249.9	1252.9	1249.9	1252.9	1255.8
32.5°	1176.8	1176.8	1179.7	1179.7	1182.7	1182.7	1182.7	1182.7
35°	1097.7	1103.6	1103.6	1106.5	1109.4	1112.3	1112.3	1115.3
37.5°	1024.6	1027.5	1030.4	1033.4	1039.2	1039.2	1039.2	1039.2
40°	945.6	948.5	954.4	951.4	963.0	966.0	963.0	963.0
42.5°	863.5	869.4	872.3	878.2	881.1	887.0	889.9	889.9
45°	787.5	790.4	796.3	802.1	805.0	813.8	813.8	813.8
47.5°	708.4	714.2	717.1	723.0	725.9	734.7	737.7	734.7
50°	632.3	638.2	644.0	644.0	652.8	655.7	661.6	664.5
52.5°	559.2	562.1	568.0	570.9	576.7	582.5	585.4	588.3
55°	488.8	491.8	497.6	497.6	506.4	509.4	515.2	515.2
57.5°	424.5	427.4	433.3	430.4	436.2	442.1	442.1	439.1
60°	363.0	363.0	363.0	368.8	371.8	374.7	377.6	377.6
62.5°	298.6	304.5	307.4	307.4	310.3	313.3	313.3	310.3
65°	240.0	245.9	248.8	248.8	251.7	251.7	251.7	254.7
67.5°	181.5	181.5	181.5	184.5	181.5	181.5	181.5	181.5
70°	114.2	114.2	114.2	114.2	111.2	114.2	114.2	117.1
72.5°	61.5	61.5	61.5	61.5	61.5	61.5	61.5	61.5
75°	26.4	26.4	26.4	29.3	26.4	26.4	26.4	26.4
77.5°	11.7	8.8	11.7	11.7	8.8	8.8	8.8	8.8
80°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
82.5°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
85°	0.0	2.9	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



Report Generated By 670245859 / DESKTOP-HRDQ47P





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













(END OF REPORT)