

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: P584990

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

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P584990
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2109-368-14)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 10/21/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HC855D010-HM82555927-81RWWC
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, SPECULAR TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4169.0 lumens
Efficiency: N/A
Efficacy: 80.2 lumens/watt
Spacing Criteria (0/90/45): 1.15 / 1.08 / 1.17
Luminous Opening: Circular (Dia: 0.67' x H: 0')
CIE Type: Direct

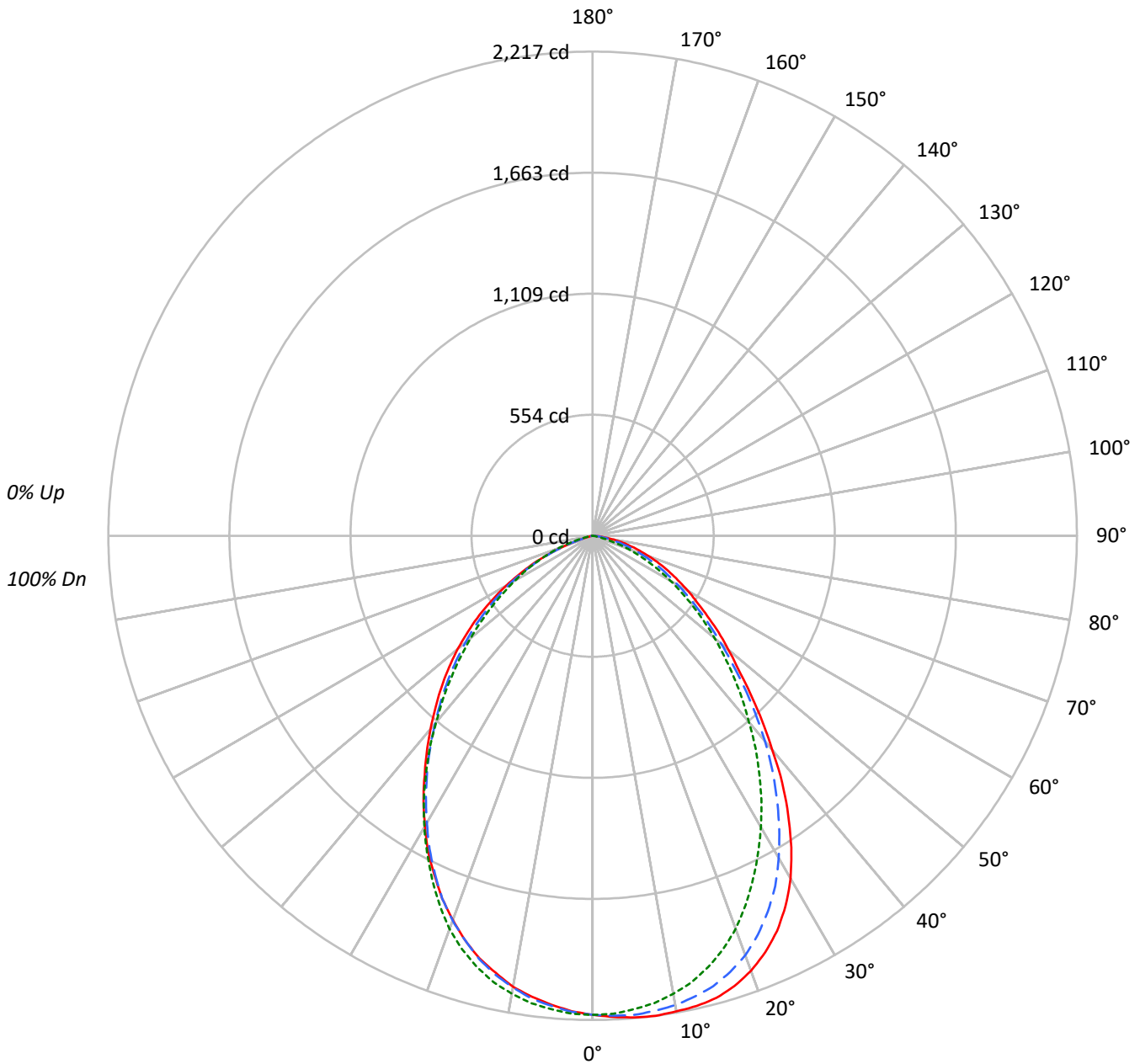
Input Watts (W): 52
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
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	111	107	104	101	108	105	102	99	101	98	96	97	95	93	93	92	90	88																			
2	103	96	90	85	100	94	89	84	91	86	82	87	84	81	84	82	79	77																			
3	95	86	79	73	93	84	78	73	82	76	72	79	74	70	76	73	69	67																			
4	88	77	70	64	86	76	69	64	74	68	63	72	66	62	69	65	61	59																			
5	81	70	62	56	80	69	62	56	67	61	56	65	59	55	63	58	54	52																			
6	76	64	56	50	74	63	55	50	61	55	50	60	54	49	58	53	49	47																			
7	71	59	51	45	69	58	50	45	56	50	45	55	49	44	54	48	44	42																			
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38																			
9	62	50	42	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35																			
10	58	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	67639	67639	67639
5°	68532	67353	66718
10°	69234	66670	65658
15°	69933	65259	63950
20°	69582	62851	61411
25°	67956	59090	58290
30°	64548	54852	54642
35°	58763	50052	50496
40°	51517	44799	46445
45°	44446	39846	42658
50°	38920	34982	38637
55°	34477	30074	34004
60°	31065	25286	28172
65°	27989	20299	21583
70°	24559	14786	11874
75°	20933	7685	3145
80°	16124	2078	515
85°	10367	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	207.0	5.0
10°-20°	581.8	14.0
20°-30°	825.8	19.8
30°-40°	869.2	20.9
40°-50°	739.5	17.7
50°-60°	534.4	12.8
60°-70°	303.9	7.3
70°-80°	95.8	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°	1614.5	38.7
0°-40°	2483.8	59.6
0°-60°	3757.6	90.1
0°-90°	4169.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4169.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2194	2194	2194	2194	2194	
5°	2214	2202	2176	2161	2155	211
15°	2191	2135	2044	2006	2003	617
25°	1997	1898	1737	1707	1713	915
35°	1561	1470	1330	1321	1341	971
45°	1019	981	914	937	978	792
55°	641	595	559	592	632	578
65°	384	331	278	275	296	380
75°	176	135	64	29	26	189
85°	29	18	0	0	0	38
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°	2193.5	2193.5	2193.5	2193.5	2193.5	2193.5	2193.5	2193.5	2193.5	2193.5	2193.5
2.5°	2205.2	2208.2	2202.3	2202.3	2208.2	2202.3	2205.2	2205.2	2202.3	2202.3	2199.4
5°	2214.0	2211.1	2211.1	2211.1	2214.0	2208.2	2205.2	2208.2	2202.3	2202.3	2202.3
7.5°	2217.0	2217.0	2214.0	2211.1	2211.1	2211.1	2208.2	2205.2	2202.3	2196.4	2193.5
10°	2211.1	2211.1	2214.0	2208.2	2208.2	2202.3	2202.3	2196.4	2196.4	2190.6	2181.8
12.5°	2205.2	2202.3	2202.3	2196.4	2196.4	2190.6	2190.6	2181.8	2178.9	2170.1	2161.3
15°	2190.6	2187.7	2181.8	2178.9	2175.9	2173.0	2167.1	2164.2	2155.4	2143.7	2135.0
17.5°	2161.3	2158.4	2155.4	2149.6	2143.7	2140.8	2137.8	2129.2	2117.5	2108.7	2094.0
20°	2120.4	2117.5	2117.5	2108.7	2105.7	2096.9	2094.0	2082.3	2073.5	2055.9	2044.2
22.5°	2064.7	2067.6	2061.8	2055.9	2050.1	2041.3	2035.4	2023.7	2009.0	1991.5	1976.8
25°	1997.3	2000.3	1994.4	1988.5	1979.7	1973.9	1968.0	1950.4	1935.8	1915.3	1897.7
27.5°	1912.4	1912.4	1912.4	1906.5	1891.8	1888.9	1883.2	1865.6	1845.1	1827.5	1809.9
30°	1812.8	1809.9	1809.9	1801.1	1795.3	1783.5	1774.8	1760.1	1745.5	1724.9	1704.4
32.5°	1692.7	1695.6	1686.9	1681.0	1672.2	1672.2	1660.5	1648.8	1631.3	1610.8	1590.3
35°	1561.0	1563.9	1558.1	1555.1	1540.5	1537.5	1534.6	1520.0	1508.2	1493.6	1470.2
37.5°	1426.2	1423.3	1420.3	1420.3	1411.6	1405.7	1399.8	1391.0	1373.6	1361.9	1350.1
40°	1279.8	1279.8	1279.8	1276.9	1274.0	1268.1	1265.2	1259.3	1247.6	1235.9	1227.1
42.5°	1148.0	1148.0	1145.0	1142.1	1136.3	1139.2	1133.3	1127.6	1115.9	1107.1	1101.2
45°	1019.2	1019.2	1019.2	1022.1	1016.2	1007.5	1007.5	1001.6	995.7	989.9	981.1
47.5°	904.9	913.7	907.8	904.9	907.8	896.1	896.1	890.3	884.4	878.6	866.9
50°	811.3	811.3	811.3	805.4	802.5	802.5	793.7	787.8	784.9	779.0	767.3
52.5°	726.3	720.4	720.4	717.5	714.6	708.7	708.7	702.8	691.1	685.3	676.5
55°	641.3	641.3	638.4	635.5	632.5	629.6	626.8	618.0	612.1	603.3	594.6
57.5°	565.3	571.1	568.2	562.3	556.5	556.5	550.6	544.7	536.0	527.2	518.4
60°	503.7	500.8	500.8	497.9	492.0	489.1	486.1	477.4	468.6	459.8	451.0
62.5°	439.3	439.3	439.3	433.4	427.5	424.6	421.7	415.8	404.1	395.3	389.5
65°	383.6	380.7	377.7	374.9	372.0	366.1	363.2	357.3	348.6	339.8	331.0
67.5°	328.0	325.1	325.1	322.2	313.4	310.5	310.5	301.7	292.9	284.1	275.3
70°	272.4	272.4	272.4	266.5	263.6	260.7	257.7	251.9	243.1	234.3	225.5
72.5°	225.5	222.6	222.6	219.6	210.8	207.9	205.0	199.1	190.3	184.5	178.6
75°	175.7	175.7	172.8	169.8	166.9	164.0	161.0	155.2	146.4	137.6	134.7
77.5°	134.7	131.7	131.7	128.8	123.1	120.1	120.1	114.3	105.5	99.6	93.8
80°	90.8	93.8	90.8	87.9	85.0	82.0	79.1	76.2	70.3	64.5	58.6
82.5°	55.7	58.6	55.7	55.7	52.7	49.8	49.8	43.9	41.0	38.1	35.2
85°	29.3	29.3	29.3	29.3	26.4	26.4	26.4	23.4	20.5	17.6	17.6
87.5°	8.8	11.7	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°	2193.5	2193.5	2193.5	2193.5	2193.5	2193.5	2193.5	2193.5	2193.5	2193.5	2193.5
2.5°	2202.3	2199.4	2196.4	2196.4	2196.4	2196.4	2196.4	2193.5	2190.6	2190.6	2190.6
5°	2196.4	2196.4	2196.4	2193.5	2190.6	2190.6	2184.7	2181.8	2178.9	2175.9	2173.0
7.5°	2190.6	2184.7	2181.8	2178.9	2175.9	2175.9	2170.1	2164.2	2164.2	2158.4	2152.5
10°	2173.0	2170.1	2164.2	2158.4	2155.4	2152.5	2146.6	2137.8	2135.0	2129.2	2123.3
12.5°	2152.5	2146.6	2140.8	2129.2	2126.2	2123.3	2111.6	2102.8	2096.9	2094.0	2079.4
15°	2126.2	2114.5	2105.7	2091.1	2088.2	2082.3	2073.5	2064.7	2053.0	2044.2	2038.3
17.5°	2079.4	2067.6	2053.0	2038.3	2032.5	2032.5	2017.8	2006.1	1991.5	1985.6	1973.9
20°	2023.7	2009.0	1997.3	1979.7	1971.0	1962.2	1953.4	1935.8	1924.1	1915.3	1900.6
22.5°	1959.2	1938.7	1924.1	1906.5	1891.8	1883.2	1868.5	1853.9	1839.2	1830.4	1818.7
25°	1877.3	1859.7	1836.3	1818.7	1809.9	1798.2	1780.6	1766.0	1751.3	1736.7	1730.8
27.5°	1786.5	1763.0	1742.5	1722.0	1713.2	1704.4	1683.9	1666.3	1654.6	1640.0	1634.1
30°	1686.9	1663.4	1640.0	1622.5	1613.7	1599.1	1587.4	1566.8	1552.2	1540.5	1525.8
32.5°	1572.7	1555.1	1534.6	1508.2	1502.4	1490.7	1473.1	1464.3	1446.7	1437.9	1426.2
35°	1449.6	1437.9	1417.4	1396.9	1388.1	1382.4	1367.7	1350.1	1338.4	1329.6	1323.8
37.5°	1332.6	1317.9	1297.4	1282.8	1276.9	1268.1	1250.5	1241.7	1230.0	1224.2	1212.4
40°	1206.6	1191.9	1177.3	1168.5	1159.7	1153.8	1142.1	1133.3	1121.7	1112.9	1110.0
42.5°	1083.6	1074.8	1063.1	1051.4	1048.5	1039.7	1033.8	1025.0	1016.2	1013.3	1004.5
45°	972.3	963.5	951.8	940.1	937.1	931.3	928.3	919.6	913.7	913.7	913.7
47.5°	861.1	852.3	840.6	834.7	837.6	825.9	825.9	823.0	817.1	817.1	820.0
50°	761.4	749.7	746.8	740.9	735.1	729.2	732.1	723.4	723.4	729.2	726.3
52.5°	667.7	656.0	653.0	647.2	644.2	644.2	641.3	641.3	638.4	641.3	641.3
55°	582.8	574.0	568.2	562.3	559.4	559.4	559.4	556.5	553.5	559.4	562.3
57.5°	506.7	503.7	497.9	489.1	486.1	483.2	480.3	480.3	480.3	480.3	483.2
60°	439.3	433.4	427.5	418.8	418.8	415.8	412.9	410.0	410.0	410.0	410.0
62.5°	380.7	372.0	363.2	357.3	354.4	351.5	348.6	342.7	342.7	342.7	342.7
65°	322.2	313.4	307.5	301.7	295.8	295.8	290.0	287.0	281.2	278.2	272.4
67.5°	266.5	260.7	254.8	246.0	243.1	240.1	234.3	231.4	222.6	219.6	216.7
70°	216.7	207.9	202.1	196.2	193.3	187.4	181.5	175.7	169.8	164.0	158.1
72.5°	169.8	161.0	155.2	149.3	143.5	143.5	134.7	128.8	120.1	114.3	105.5
75°	125.9	117.2	111.3	102.6	99.6	96.7	87.9	82.0	73.2	64.5	58.6
77.5°	85.0	79.1	73.2	64.5	58.6	58.6	49.8	43.9	38.1	29.3	26.4
80°	52.7	46.9	41.0	35.2	35.2	29.3	26.4	20.5	14.6	11.7	8.8
82.5°	29.3	26.4	23.4	17.6	17.6	14.6	11.7	8.8	5.9	2.9	2.9
85°	14.6	11.7	8.8	8.8	5.9	5.9	5.9	2.9	2.9	0.0	0.0
87.5°	5.9	2.9	2.9	2.9	2.9	2.9	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



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CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	2193.5	2193.5	2193.5	2193.5	2193.5	2193.5	2193.5	2193.5	2193.5	2193.5	2193.5
2.5°	2187.7	2187.7	2184.7	2184.7	2184.7	2181.8	2184.7	2181.8	2181.8	2181.8	2184.7
5°	2175.9	2170.1	2170.1	2167.1	2167.1	2164.2	2167.1	2164.2	2161.3	2158.4	2161.3
7.5°	2152.5	2146.6	2143.7	2140.8	2140.8	2140.8	2137.8	2135.0	2137.8	2129.2	2135.0
10°	2120.4	2117.5	2111.6	2108.7	2105.7	2108.7	2105.7	2099.9	2099.9	2099.9	2096.9
12.5°	2079.4	2073.5	2070.6	2067.6	2061.8	2061.8	2064.7	2058.9	2058.9	2053.0	2053.0
15°	2029.6	2023.7	2017.8	2017.8	2012.0	2012.0	2009.0	2009.0	2006.1	2003.2	2003.2
17.5°	1968.0	1959.2	1953.4	1956.3	1953.4	1950.4	1950.4	1944.6	1941.7	1944.6	1944.6
20°	1894.8	1888.9	1883.2	1886.0	1880.2	1877.3	1880.2	1871.4	1874.4	1874.4	1874.4
22.5°	1812.8	1809.9	1801.1	1801.1	1795.3	1792.3	1795.3	1795.3	1798.2	1795.3	1795.3
25°	1722.0	1716.2	1710.3	1710.3	1707.4	1704.4	1707.4	1710.3	1707.4	1710.3	1710.3
27.5°	1625.4	1616.7	1616.7	1610.8	1610.8	1613.7	1610.8	1613.7	1616.7	1616.7	1622.5
30°	1520.0	1517.0	1514.1	1511.2	1511.2	1514.1	1514.1	1514.1	1517.0	1522.9	1522.9
32.5°	1420.3	1414.5	1408.6	1408.6	1414.5	1411.6	1414.5	1414.5	1420.3	1420.3	1426.2
35°	1312.1	1312.1	1306.2	1309.1	1309.1	1309.1	1309.1	1315.0	1320.8	1323.8	1329.6
37.5°	1212.4	1203.6	1206.6	1206.6	1209.5	1206.6	1215.4	1215.4	1221.2	1221.2	1227.1
40°	1104.1	1104.1	1107.1	1104.1	1107.1	1107.1	1112.9	1118.8	1121.7	1127.6	1130.5
42.5°	1001.6	1007.5	1001.6	1004.5	1007.5	1010.4	1013.3	1016.2	1028.0	1033.8	1042.6
45°	907.8	910.8	913.7	916.6	913.7	919.6	922.5	928.3	937.1	940.1	943.0
47.5°	817.1	820.0	823.0	825.9	825.9	831.8	834.7	840.6	846.4	849.3	852.3
50°	729.2	735.1	738.0	738.0	740.9	746.8	752.7	752.7	758.5	767.3	770.2
52.5°	650.1	650.1	656.0	658.9	661.8	661.8	670.6	673.5	676.5	682.3	688.2
55°	562.3	571.1	574.0	574.0	579.9	585.8	588.7	591.6	591.6	603.3	603.3
57.5°	486.1	489.1	494.9	494.9	494.9	503.7	503.7	509.6	512.5	515.4	521.3
60°	410.0	415.8	415.8	418.8	415.8	421.7	424.6	430.5	433.4	436.3	439.3
62.5°	339.8	339.8	342.7	342.7	342.7	342.7	348.6	348.6	354.4	357.3	360.3
65°	272.4	272.4	272.4	272.4	272.4	272.4	272.4	272.4	275.3	275.3	281.2
67.5°	210.8	207.9	202.1	205.0	202.1	202.1	199.1	199.1	202.1	202.1	207.9
70°	152.2	149.3	143.5	143.5	140.5	137.6	134.7	131.7	128.8	128.8	128.8
72.5°	99.6	93.8	85.0	82.0	82.0	76.2	70.3	67.4	67.4	67.4	67.4
75°	49.8	43.9	38.1	35.2	35.2	29.3	32.2	29.3	29.3	29.3	29.3
77.5°	20.5	14.6	11.7	11.7	11.7	8.8	8.8	8.8	8.8	8.8	8.8
80°	5.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
82.5°	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	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	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: P584990

CATALOG NUMBER: HC855D010-HM82555927-81RWWC

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	2193.5	2193.5	2193.5	2193.5	2193.5	2193.5	2193.5	2193.5
2.5°	2181.8	2181.8	2175.9	2178.9	2178.9	2178.9	2178.9	2178.9
5°	2155.4	2158.4	2155.4	2158.4	2158.4	2155.4	2155.4	2155.4
7.5°	2129.2	2132.1	2129.2	2132.1	2132.1	2132.1	2129.2	2129.2
10°	2096.9	2096.9	2096.9	2096.9	2096.9	2094.0	2096.9	2096.9
12.5°	2053.0	2053.0	2053.0	2055.9	2055.9	2053.0	2053.0	2050.1
15°	2006.1	2000.3	2003.2	2006.1	2003.2	2003.2	2003.2	2003.2
17.5°	1941.7	1944.6	1941.7	1941.7	1941.7	1941.7	1944.6	1941.7
20°	1874.4	1874.4	1877.3	1874.4	1874.4	1874.4	1874.4	1871.4
22.5°	1798.2	1795.3	1795.3	1798.2	1798.2	1795.3	1798.2	1798.2
25°	1713.2	1716.2	1713.2	1713.2	1716.2	1716.2	1716.2	1713.2
27.5°	1622.5	1625.4	1628.4	1625.4	1625.4	1625.4	1628.4	1631.3
30°	1528.8	1534.6	1528.8	1528.8	1534.6	1531.7	1534.6	1534.6
32.5°	1429.1	1437.9	1432.1	1437.9	1437.9	1440.9	1437.9	1440.9
35°	1329.6	1338.4	1338.4	1338.4	1341.4	1344.3	1344.3	1341.4
37.5°	1235.9	1238.8	1238.8	1244.7	1247.6	1250.5	1250.5	1247.6
40°	1139.2	1145.0	1148.0	1148.0	1148.0	1153.8	1159.7	1153.8
42.5°	1045.5	1048.5	1051.4	1051.4	1057.3	1060.2	1063.1	1063.1
45°	954.7	960.6	963.5	966.4	969.4	975.2	972.3	978.2
47.5°	861.1	869.9	872.8	875.7	881.5	884.4	887.3	890.3
50°	776.1	782.0	782.0	787.8	796.6	796.6	802.5	805.4
52.5°	691.1	694.1	697.0	699.9	705.8	711.6	711.6	717.5
55°	609.2	612.1	612.1	615.1	618.0	629.6	632.5	632.5
57.5°	524.2	524.2	530.1	533.0	536.0	541.8	541.8	541.8
60°	442.2	445.1	445.1	448.1	451.0	456.8	459.8	456.8
62.5°	360.3	363.2	363.2	366.1	372.0	374.9	372.0	372.0
65°	284.1	287.0	287.0	290.0	295.8	295.8	292.9	295.8
67.5°	207.9	207.9	207.9	207.9	207.9	207.9	207.9	207.9
70°	131.7	128.8	125.9	128.8	128.8	128.8	125.9	131.7
72.5°	64.5	67.4	67.4	67.4	67.4	67.4	67.4	64.5
75°	29.3	29.3	26.4	26.4	26.4	29.3	29.3	26.4
77.5°	8.8	8.8	8.8	8.8	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°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	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)