

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: P584759

Luminaire Tested: **HC845D010-HM82555935-81WWBB**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P584759
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: HC845D010-HM82555935-81WWBB
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, WHITE BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3961.0 lumens
Efficiency: N/A
Efficacy: 90.0 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

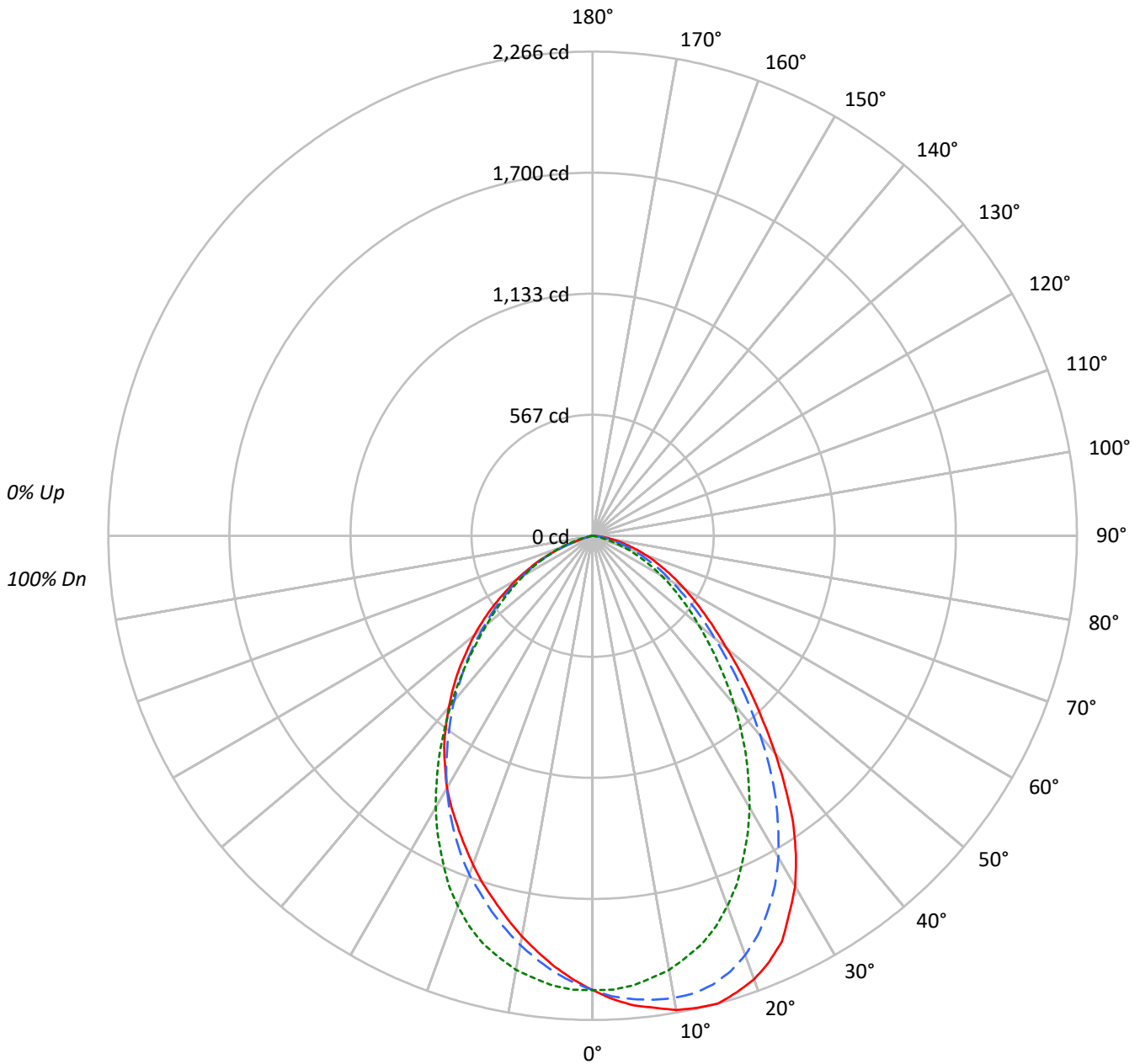
Input Watts (W): 44
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P584759

CATALOG NUMBER: HC845D010-HM82555935-81WWBB

Luminous Intensity Polar Plot





TEST NUMBER: P584759

CATALOG NUMBER: HC845D010-HM82555935-81WWBB

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°	65573	65573	65573
5°	68282	65428	62676
10°	70568	64597	59618
15°	72353	63117	56522
20°	72492	60498	53719
25°	71270	56667	50937
30°	67457	52288	48553
35°	61507	47025	45587
40°	53485	41458	42094
45°	45886	35899	38533
50°	39189	30957	34612
55°	34348	26655	30074
60°	30577	22739	25292
65°	27128	18555	20182
70°	24073	13758	11468
75°	20064	7196	3407
80°	15805	2255	568
85°	11251	1132	0



TEST NUMBER: P584759

CATALOG NUMBER: HC845D010-HM82555935-81WWBB

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	200.4	5.1
10°-20°	561.6	14.2
20°-30°	794.9	20.1
30°-40°	831.6	21.0
40°-50°	693.6	17.5
50°-60°	491.9	12.4
60°-70°	283.3	7.2
70°-80°	91.2	2.3
80°-90°	12.5	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°	1556.9	39.3
0°-40°	2388.5	60.3
0°-60°	3574.0	90.2
0°-90°	3961.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3961.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2126	2126	2126	2126	2126	
5°	2206	2177	2114	2050	2025	212
15°	2266	2174	1977	1821	1770	637
25°	2095	1939	1666	1532	1497	956
35°	1634	1491	1249	1182	1211	1013
45°	1052	966	823	833	884	815
55°	639	572	496	521	559	577
65°	372	312	254	254	277	372
75°	168	124	60	29	29	183
85°	32	16	3	0	0	40
90°	0	0	0	0	0	



TEST NUMBER: P584759

CATALOG NUMBER: HC845D010-HM82555935-81WWBB

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	2126.5	2126.5	2126.5	2126.5	2126.5	2126.5	2126.5	2126.5	2126.5	2126.5	2126.5
2.5°	2171.0	2167.8	2164.7	2167.8	2164.7	2167.8	2164.7	2164.7	2161.5	2158.3	2158.3
5°	2205.9	2202.8	2202.8	2202.8	2199.6	2196.4	2196.4	2193.3	2186.9	2183.8	2177.3
7.5°	2228.2	2231.4	2231.4	2231.4	2225.1	2225.1	2218.7	2212.3	2205.9	2199.6	2190.1
10°	2253.7	2253.7	2250.5	2247.2	2240.9	2237.7	2234.6	2228.2	2218.7	2205.9	2196.4
12.5°	2263.2	2263.2	2260.0	2253.7	2250.5	2247.2	2244.1	2234.6	2221.9	2205.9	2193.3
15°	2266.4	2260.0	2256.9	2253.7	2247.2	2237.7	2237.7	2225.1	2209.1	2190.1	2174.2
17.5°	2240.9	2244.1	2237.7	2231.4	2221.9	2215.4	2205.9	2196.4	2177.3	2155.2	2139.2
20°	2209.1	2205.9	2202.8	2193.3	2180.5	2177.3	2167.8	2152.0	2136.0	2110.6	2088.4
22.5°	2158.3	2155.2	2148.7	2142.4	2129.7	2123.4	2113.7	2094.7	2072.5	2047.0	2021.5
25°	2094.7	2088.4	2078.8	2066.1	2056.6	2050.2	2037.5	2018.4	1993.0	1964.4	1939.0
27.5°	1993.0	2002.5	1996.2	1977.1	1967.6	1954.8	1951.6	1926.3	1904.0	1875.4	1846.8
30°	1894.5	1894.5	1884.9	1875.4	1859.4	1849.9	1837.3	1818.2	1796.0	1760.9	1738.7
32.5°	1770.5	1767.4	1754.6	1751.4	1738.7	1719.6	1716.5	1691.0	1668.8	1643.4	1614.8
35°	1633.9	1627.4	1614.8	1605.3	1598.8	1589.3	1579.8	1557.5	1535.2	1509.9	1490.8
37.5°	1478.1	1478.1	1474.9	1459.0	1452.6	1446.3	1436.7	1414.5	1401.7	1376.4	1357.3
40°	1328.7	1325.5	1316.0	1312.8	1306.4	1296.9	1290.5	1277.9	1258.7	1239.6	1220.6
42.5°	1182.5	1185.7	1172.9	1176.0	1163.4	1157.0	1153.9	1134.8	1125.3	1106.1	1090.3
45°	1052.2	1048.9	1042.6	1039.4	1033.1	1026.7	1020.4	1010.8	994.9	975.8	966.3
47.5°	931.4	921.7	921.7	918.6	915.4	902.7	899.6	890.1	880.5	861.5	848.7
50°	816.9	816.9	816.9	813.7	804.2	801.0	794.7	785.1	775.6	762.9	743.8
52.5°	724.7	724.7	724.7	721.5	708.8	705.7	702.5	689.7	677.1	667.6	654.8
55°	638.9	642.1	638.9	632.6	623.0	623.0	613.5	607.1	594.4	584.9	572.2
57.5°	565.7	565.7	559.4	556.2	549.9	546.7	540.4	534.1	518.1	508.6	492.7
60°	495.8	492.7	492.7	486.3	480.0	473.7	470.5	460.9	454.5	438.7	425.9
62.5°	432.3	432.3	425.9	425.9	413.2	413.2	410.1	400.5	391.0	375.1	368.7
65°	371.8	371.8	368.7	365.5	356.0	352.8	349.7	340.2	330.6	321.1	311.5
67.5°	317.9	317.9	311.5	308.4	301.9	298.8	292.4	286.1	276.6	267.0	257.5
70°	267.0	263.8	260.6	257.5	251.1	248.0	241.5	235.2	225.7	219.4	209.7
72.5°	216.2	216.2	213.0	206.6	203.4	200.2	197.1	190.7	181.2	171.6	165.3
75°	168.4	168.4	168.4	162.1	155.8	152.6	152.6	146.3	139.8	130.3	124.0
77.5°	130.3	127.2	124.0	124.0	117.7	114.5	111.2	108.0	98.5	95.4	89.0
80°	89.0	92.2	89.0	85.9	82.7	79.4	79.4	73.1	69.9	63.6	57.2
82.5°	60.4	57.2	57.2	54.1	54.1	50.9	50.9	44.5	41.3	38.1	35.0
85°	31.8	31.8	28.6	28.6	28.6	25.5	25.5	22.3	22.3	19.1	15.8
87.5°	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	6.3	6.3	6.3
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: P584759

CATALOG NUMBER: HC845D010-HM82555935-81WWBB

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	2126.5	2126.5	2126.5	2126.5	2126.5	2126.5	2126.5	2126.5	2126.5	2126.5	2126.5
2.5°	2155.2	2148.7	2145.5	2145.5	2142.4	2139.2	2136.0	2132.9	2126.5	2126.5	2120.2
5°	2171.0	2164.7	2161.5	2152.0	2145.5	2145.5	2132.9	2129.7	2120.2	2113.7	2107.4
7.5°	2183.8	2171.0	2161.5	2152.0	2145.5	2139.2	2126.5	2113.7	2101.1	2088.4	2082.0
10°	2183.8	2171.0	2155.2	2139.2	2132.9	2126.5	2110.6	2091.6	2075.6	2063.0	2047.0
12.5°	2177.3	2158.3	2139.2	2126.5	2113.7	2104.2	2085.1	2066.1	2047.0	2021.5	2008.9
15°	2158.3	2132.9	2113.7	2091.6	2082.0	2066.1	2050.2	2021.5	1999.4	1977.1	1961.3
17.5°	2120.2	2088.4	2066.1	2043.8	2028.0	2018.4	1993.0	1967.6	1942.1	1916.7	1897.7
20°	2063.0	2034.3	2008.9	1980.3	1967.6	1954.8	1923.0	1897.7	1872.2	1843.6	1824.5
22.5°	1993.0	1964.4	1929.5	1907.2	1888.1	1872.2	1843.6	1815.0	1789.5	1764.2	1738.7
25°	1907.2	1878.6	1846.8	1811.8	1799.1	1783.2	1751.4	1722.8	1694.2	1665.5	1643.4
27.5°	1815.0	1776.9	1751.4	1713.3	1700.6	1684.7	1649.7	1617.9	1592.5	1570.3	1544.8
30°	1703.8	1675.2	1640.2	1605.3	1592.5	1576.6	1548.0	1519.4	1493.9	1468.5	1443.1
32.5°	1583.0	1554.3	1519.4	1493.9	1474.9	1462.1	1433.5	1408.2	1382.7	1357.3	1335.0
35°	1455.8	1424.0	1398.6	1373.1	1357.3	1341.3	1312.8	1290.5	1271.4	1249.2	1227.0
37.5°	1325.5	1303.2	1277.9	1249.2	1233.3	1220.6	1198.3	1172.9	1157.0	1137.9	1122.1
40°	1198.3	1172.9	1150.7	1125.3	1112.5	1103.0	1080.7	1061.7	1045.7	1029.9	1020.4
42.5°	1068.0	1045.7	1023.6	1007.6	998.1	988.6	972.7	950.4	940.9	925.0	915.4
45°	947.2	928.2	912.2	890.1	883.6	877.3	858.3	842.3	832.8	823.2	816.9
47.5°	832.8	820.0	801.0	788.3	778.8	772.4	759.6	747.0	737.5	731.1	724.7
50°	734.3	718.3	705.7	692.9	686.6	677.1	664.4	657.9	651.6	645.3	645.3
52.5°	642.1	626.1	613.5	604.0	597.5	591.2	581.7	578.5	572.2	572.2	569.0
55°	556.2	546.7	534.1	521.3	518.1	514.9	508.6	502.3	499.0	495.8	499.0
57.5°	483.2	473.7	460.9	451.4	448.2	445.0	441.9	435.4	432.3	432.3	432.3
60°	416.4	406.9	397.3	387.8	387.8	381.5	378.3	375.1	371.8	368.7	368.7
62.5°	356.0	346.5	336.9	330.6	327.4	324.2	317.9	314.7	311.5	311.5	308.4
65°	301.9	289.3	286.1	276.6	273.3	270.1	267.0	260.6	257.5	254.3	251.1
67.5°	248.0	241.5	232.0	225.7	222.5	219.4	216.2	209.7	206.6	203.4	197.1
70°	200.2	193.9	187.6	181.2	178.1	174.8	168.4	162.1	158.9	152.6	143.0
72.5°	155.8	149.4	143.0	136.7	133.5	130.3	124.0	117.7	111.2	104.9	98.5
75°	117.7	111.2	101.7	95.4	92.2	92.2	82.7	76.2	69.9	60.4	54.1
77.5°	82.7	73.1	69.9	63.6	60.4	54.1	47.6	41.3	35.0	31.8	25.5
80°	54.1	47.6	41.3	38.1	35.0	31.8	28.6	22.3	15.8	12.7	9.5
82.5°	31.8	28.6	25.5	22.3	19.1	15.8	12.7	12.7	9.5	6.3	3.2
85°	15.8	12.7	9.5	9.5	6.3	6.3	6.3	3.2	3.2	3.2	3.2
87.5°	6.3	3.2	3.2	3.2	3.2	3.2	3.2	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: P584759

CATALOG NUMBER: HC845D010-HM82555935-81WWBB

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	2126.5	2126.5	2126.5	2126.5	2126.5	2126.5	2126.5	2126.5	2126.5	2126.5	2126.5
2.5°	2116.9	2113.7	2110.6	2107.4	2107.4	2101.1	2101.1	2097.9	2091.6	2088.4	2088.4
5°	2097.9	2088.4	2082.0	2078.8	2075.6	2066.1	2063.0	2056.6	2050.2	2043.8	2040.7
7.5°	2069.3	2053.3	2047.0	2043.8	2034.3	2024.8	2018.4	2008.9	1999.4	1989.9	1986.6
10°	2034.3	2018.4	2002.5	1996.2	1986.6	1980.3	1967.6	1954.8	1945.3	1935.8	1926.3
12.5°	1989.9	1970.8	1954.8	1948.5	1939.0	1926.3	1907.2	1900.8	1884.9	1878.6	1865.9
15°	1939.0	1916.7	1900.8	1891.2	1881.7	1862.7	1849.9	1837.3	1821.3	1815.0	1802.3
17.5°	1875.4	1849.9	1834.1	1824.5	1818.2	1802.3	1783.2	1767.4	1751.4	1745.1	1735.6
20°	1799.1	1783.2	1760.9	1751.4	1745.1	1726.0	1706.9	1700.6	1687.8	1675.2	1665.5
22.5°	1713.3	1697.3	1675.2	1665.5	1662.4	1646.5	1630.6	1621.1	1611.6	1602.1	1592.5
25°	1624.3	1605.3	1586.1	1579.8	1573.5	1560.7	1548.0	1541.7	1532.1	1525.7	1519.4
27.5°	1528.9	1509.9	1493.9	1484.4	1478.1	1468.5	1462.1	1455.8	1449.5	1443.1	1440.0
30°	1427.2	1408.2	1395.4	1389.1	1382.7	1379.6	1369.9	1366.8	1363.6	1357.3	1360.4
32.5°	1325.5	1309.5	1296.9	1287.4	1287.4	1281.0	1277.9	1277.9	1274.6	1274.6	1274.6
35°	1214.3	1204.7	1195.2	1192.0	1188.8	1185.7	1182.5	1185.7	1182.5	1185.7	1188.8
37.5°	1112.5	1103.0	1096.6	1093.5	1090.3	1093.5	1090.3	1090.3	1093.5	1099.8	1103.0
40°	1007.6	1001.3	994.9	998.1	994.9	994.9	994.9	1004.4	1007.6	1010.8	1013.9
42.5°	909.1	902.7	899.6	899.6	902.7	899.6	905.9	909.1	915.4	925.0	931.4
45°	813.7	810.5	810.5	813.7	810.5	816.9	816.9	823.2	832.8	839.2	845.5
47.5°	724.7	724.7	724.7	728.0	728.0	731.1	737.5	740.6	747.0	753.3	759.6
50°	642.1	645.3	648.4	648.4	648.4	654.8	661.1	664.4	667.6	670.7	680.2
52.5°	569.0	572.2	572.2	575.4	578.5	581.7	584.9	591.2	594.4	600.8	604.0
55°	499.0	499.0	505.4	508.6	508.6	508.6	514.9	514.9	521.3	524.4	530.8
57.5°	432.3	435.4	435.4	438.7	438.7	441.9	445.0	448.2	451.4	454.5	457.7
60°	368.7	368.7	368.7	371.8	375.1	378.3	375.1	381.5	381.5	387.8	391.0
62.5°	308.4	311.5	311.5	311.5	311.5	311.5	311.5	314.7	317.9	321.1	324.2
65°	251.1	251.1	251.1	248.0	251.1	248.0	251.1	254.3	254.3	257.5	260.6
67.5°	193.9	193.9	187.6	187.6	190.7	190.7	190.7	190.7	187.6	193.9	193.9
70°	139.8	136.7	133.5	130.3	130.3	127.2	127.2	124.0	124.0	124.0	124.0
72.5°	92.2	85.9	79.4	76.2	73.1	73.1	66.7	63.6	66.7	66.7	66.7
75°	47.6	41.3	38.1	35.0	31.8	31.8	28.6	28.6	28.6	28.6	28.6
77.5°	19.1	15.8	12.7	12.7	9.5	9.5	9.5	9.5	9.5	9.5	9.5
80°	6.3	6.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
82.5°	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
85°	3.2	0.0	0.0	3.2	0.0	3.2	3.2	3.2	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: P584759

CATALOG NUMBER: HC845D010-HM82555935-81WWBB

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	2126.5	2126.5	2126.5	2126.5	2126.5	2126.5	2126.5	2126.5
2.5°	2085.1	2085.1	2082.0	2085.1	2078.8	2082.0	2078.8	2078.8
5°	2037.5	2031.2	2031.2	2031.2	2028.0	2028.0	2024.8	2024.8
7.5°	1980.3	1977.1	1973.9	1970.8	1967.6	1964.4	1964.4	1964.4
10°	1923.0	1916.7	1916.7	1913.5	1907.2	1904.0	1904.0	1904.0
12.5°	1856.3	1853.1	1849.9	1849.9	1837.3	1840.4	1837.3	1837.3
15°	1792.7	1789.5	1789.5	1780.0	1773.7	1773.7	1773.7	1770.5
17.5°	1726.0	1722.8	1719.6	1713.3	1706.9	1706.9	1703.8	1706.9
20°	1656.0	1652.9	1646.5	1646.5	1643.4	1640.2	1633.9	1637.0
22.5°	1586.1	1579.8	1576.6	1576.6	1573.5	1573.5	1567.0	1567.0
25°	1513.1	1509.9	1506.7	1509.9	1503.4	1503.4	1497.1	1497.1
27.5°	1436.7	1433.5	1433.5	1433.5	1430.4	1433.5	1430.4	1430.4
30°	1360.4	1360.4	1357.3	1357.3	1360.4	1357.3	1360.4	1363.6
32.5°	1277.9	1277.9	1281.0	1281.0	1284.2	1284.2	1284.2	1284.2
35°	1192.0	1198.3	1198.3	1201.5	1204.7	1207.8	1207.8	1211.0
37.5°	1112.5	1115.6	1118.9	1122.1	1128.4	1128.4	1128.4	1128.4
40°	1026.7	1029.9	1036.2	1033.1	1045.7	1048.9	1045.7	1045.7
42.5°	937.7	944.0	947.2	953.5	956.8	963.2	966.3	966.3
45°	855.0	858.3	864.6	871.0	874.1	883.6	883.6	883.6
47.5°	769.3	775.6	778.8	785.1	788.3	797.9	801.0	797.9
50°	686.6	692.9	699.3	699.3	708.8	712.0	718.3	721.5
52.5°	607.1	610.3	616.6	619.8	626.1	632.6	635.8	638.9
55°	530.8	534.1	540.4	540.4	549.9	553.1	559.4	559.4
57.5°	460.9	464.0	470.5	467.2	473.7	480.0	480.0	476.8
60°	394.1	394.1	394.1	400.5	403.6	406.9	410.1	410.1
62.5°	324.2	330.6	333.7	333.7	336.9	340.2	340.2	336.9
65°	260.6	267.0	270.1	270.1	273.3	273.3	273.3	276.6
67.5°	197.1	197.1	197.1	200.2	197.1	197.1	197.1	197.1
70°	124.0	124.0	124.0	124.0	120.8	124.0	124.0	127.2
72.5°	66.7	66.7	66.7	66.7	66.7	66.7	66.7	66.7
75°	28.6	28.6	28.6	31.8	28.6	28.6	28.6	28.6
77.5°	12.7	9.5	12.7	12.7	9.5	9.5	9.5	9.5
80°	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
82.5°	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
85°	0.0	3.2	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)