

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: P584744

Luminaire Tested: **HC845D010-HM82555930-81WWWB**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P584744
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: HC845D010-HM82555930-81WWWB
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, BLACK BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4477.3 lumens
Efficiency: N/A
Efficacy: 101.8 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

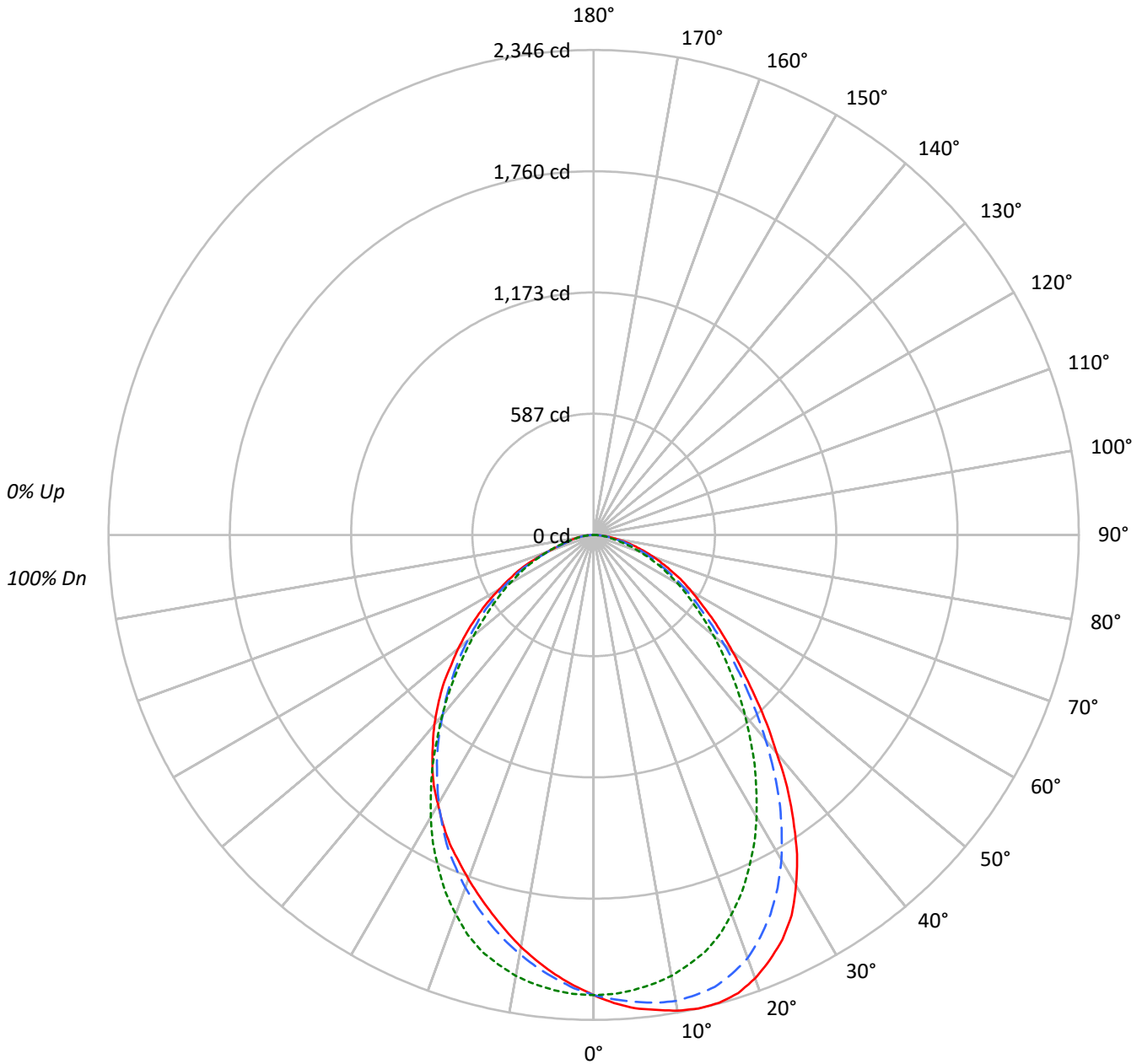
Input Watts (W): 44
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P584744

CATALOG NUMBER: HC845D010-HM82555930-81WWWB

Luminous Intensity Polar Plot





TEST NUMBER: P584744

CATALOG NUMBER: HC845D010-HM82555930-81WWWB

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

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	68645	68645	68645
5°	71157	68418	66068
10°	73173	67825	63369
15°	74805	66626	60570
20°	74917	64026	58109
25°	73482	60464	56055
30°	69697	56073	53595
35°	63325	51068	51185
40°	55373	45825	48244
45°	47987	40814	44952
50°	42019	36258	40959
55°	37402	32128	37063
60°	33741	28863	32569
65°	30456	25377	28383
70°	27372	21386	21097
75°	24103	16954	15822
80°	20209	14047	15165
85°	15638	12312	13409



TEST NUMBER: P584744

CATALOG NUMBER: HC845D010-HM82555930-81WWWB

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	210.0	4.7
10°-20°	591.5	13.2
20°-30°	845.4	18.9
30°-40°	898.2	20.1
40°-50°	773.3	17.3
50°-60°	578.2	12.9
60°-70°	368.8	8.2
70°-80°	167.8	3.7
80°-90°	44.0	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°	1646.9	36.8
0°-40°	2545.1	56.8
0°-60°	3896.7	87.0
0°-90°	4477.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4477.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2226	2226	2226	2226	2226	
5°	2299	2267	2210	2153	2134	220
15°	2343	2264	2087	1945	1897	660
25°	2160	2024	1777	1670	1648	989
35°	1682	1565	1357	1322	1360	1048
45°	1100	1040	936	961	1031	855
55°	696	639	598	648	689	626
65°	417	370	348	364	389	416
75°	202	174	142	130	133	215
85°	44	38	35	38	38	53
90°	0	0	0	0	0	



TEST NUMBER: P584744

CATALOG NUMBER: HC845D010-HM82555930-81WWWB

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	2226.1	2226.1	2226.1	2226.1	2226.1	2226.1	2226.1	2226.1	2226.1	2226.1	2226.1
2.5°	2267.3	2261.0	2264.1	2261.0	2264.1	2264.1	2257.8	2257.8	2257.8	2257.8	2248.3
5°	2298.8	2295.7	2295.7	2292.5	2289.3	2292.5	2289.3	2286.2	2279.8	2276.8	2267.3
7.5°	2317.8	2317.8	2317.8	2317.8	2314.7	2311.5	2308.3	2302.0	2295.7	2289.3	2283.0
10°	2336.9	2340.0	2336.9	2333.7	2330.5	2324.2	2321.0	2314.7	2305.2	2295.7	2289.3
12.5°	2346.4	2346.4	2343.2	2343.2	2336.9	2333.7	2324.2	2314.7	2305.2	2295.7	2279.8
15°	2343.2	2343.2	2340.0	2336.9	2327.3	2324.2	2317.8	2308.3	2292.5	2279.8	2264.1
17.5°	2324.2	2321.0	2314.7	2314.7	2302.0	2298.8	2292.5	2279.8	2264.1	2245.1	2226.1
20°	2283.0	2283.0	2279.8	2276.8	2264.1	2254.6	2248.3	2232.5	2219.8	2197.7	2178.7
22.5°	2226.1	2232.5	2226.1	2219.8	2204.1	2200.9	2191.4	2172.4	2153.4	2128.2	2106.0
25°	2159.7	2156.6	2153.4	2147.1	2134.4	2128.2	2115.5	2096.5	2077.5	2049.1	2023.8
27.5°	2074.3	2061.7	2061.7	2049.1	2039.6	2030.1	2023.8	2004.8	1979.6	1957.4	1925.7
30°	1957.4	1960.6	1944.7	1941.5	1925.7	1919.4	1906.7	1887.8	1865.7	1840.3	1815.1
32.5°	1830.8	1821.4	1821.4	1808.8	1796.1	1786.6	1783.4	1761.3	1742.4	1717.0	1691.7
35°	1682.2	1682.2	1672.8	1669.6	1657.0	1650.6	1641.1	1628.5	1606.4	1584.3	1565.3
37.5°	1536.7	1530.5	1527.4	1521.0	1511.5	1502.0	1502.0	1479.9	1476.7	1451.5	1426.1
40°	1375.6	1381.9	1375.6	1366.1	1362.9	1356.6	1353.4	1340.7	1331.2	1309.1	1293.3
42.5°	1239.5	1233.2	1233.2	1230.1	1217.5	1217.5	1211.1	1204.8	1189.0	1182.6	1163.6
45°	1100.4	1106.7	1097.2	1100.4	1087.7	1087.7	1087.7	1075.2	1062.5	1053.0	1040.3
47.5°	980.3	983.4	983.4	973.9	970.8	970.8	964.4	958.1	948.6	935.9	926.6
50°	875.9	879.0	872.7	869.5	863.2	860.0	860.0	847.5	841.2	828.5	822.2
52.5°	781.1	781.1	777.9	777.9	768.4	768.4	762.1	752.6	746.3	739.9	724.1
55°	695.7	695.7	692.5	689.4	689.4	679.9	676.7	667.2	660.9	648.2	638.7
57.5°	613.5	616.6	613.5	610.3	607.1	604.0	597.6	588.1	581.8	572.3	566.0
60°	547.1	547.1	543.9	540.8	534.4	531.3	528.1	521.8	512.2	505.9	496.4
62.5°	483.9	480.7	477.5	474.4	468.0	468.0	461.7	455.4	445.9	439.5	433.2
65°	417.4	417.4	414.2	414.2	411.0	404.8	401.6	398.5	385.8	382.6	370.0
67.5°	357.3	360.5	354.1	354.1	347.8	347.8	344.6	335.2	332.1	325.7	319.4
70°	303.6	303.6	303.6	300.4	294.1	290.9	287.7	281.4	278.2	271.9	265.6
72.5°	249.8	249.8	246.7	246.7	243.5	240.3	237.2	230.8	230.8	224.5	218.2
75°	202.3	202.3	199.2	196.0	192.8	192.8	189.7	186.6	180.3	177.1	174.0
77.5°	155.0	155.0	155.0	151.8	148.6	148.6	148.6	142.3	136.0	136.0	132.8
80°	113.8	113.8	110.7	110.7	107.6	107.6	107.6	104.4	101.2	98.1	94.9
82.5°	75.9	75.9	75.9	75.9	72.7	72.7	72.7	69.6	66.4	66.4	66.4
85°	44.2	44.2	44.2	44.2	41.1	41.1	41.1	41.1	41.1	37.9	37.9
87.5°	19.0	15.8	19.0	15.8	19.0	15.8	19.0	15.8	15.8	15.8	15.8
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: P584744

CATALOG NUMBER: HC845D010-HM82555930-81WWWB

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	2226.1	2226.1	2226.1	2226.1	2226.1	2226.1	2226.1	2226.1	2226.1	2226.1	2226.1
2.5°	2251.5	2248.3	2245.1	2242.0	2242.0	2238.8	2232.5	2229.3	2226.1	2223.0	2223.0
5°	2264.1	2261.0	2254.6	2248.3	2245.1	2238.8	2232.5	2226.1	2219.8	2210.3	2207.1
7.5°	2273.6	2264.1	2257.8	2245.1	2242.0	2235.6	2226.1	2216.6	2204.1	2191.4	2181.9
10°	2273.6	2261.0	2251.5	2235.6	2229.3	2223.0	2210.3	2194.6	2178.7	2166.1	2150.2
12.5°	2267.3	2251.5	2235.6	2219.8	2210.3	2200.9	2181.9	2166.1	2147.1	2128.2	2115.5
15°	2245.1	2226.1	2207.1	2188.2	2178.7	2166.1	2147.1	2125.0	2106.0	2087.0	2064.8
17.5°	2204.1	2185.1	2162.9	2140.7	2128.2	2118.7	2090.2	2074.3	2045.9	2026.9	2007.9
20°	2150.2	2128.2	2099.7	2077.5	2061.7	2052.3	2030.1	2001.6	1979.6	1951.1	1932.0
22.5°	2080.7	2052.3	2023.8	2001.6	1985.8	1973.2	1944.7	1916.2	1897.3	1872.0	1849.8
25°	1998.4	1970.1	1941.5	1909.9	1894.2	1881.5	1856.2	1830.8	1805.6	1777.1	1758.1
27.5°	1900.5	1868.8	1843.5	1815.1	1799.3	1780.3	1751.9	1726.5	1701.2	1682.2	1657.0
30°	1792.9	1758.1	1732.9	1704.4	1688.5	1672.8	1644.3	1619.0	1596.9	1574.8	1562.1
32.5°	1663.3	1638.0	1612.6	1584.3	1571.6	1562.1	1533.6	1508.4	1483.0	1464.0	1454.6
35°	1539.9	1511.5	1489.4	1464.0	1448.3	1438.8	1413.5	1391.3	1378.7	1356.6	1343.9
37.5°	1410.3	1388.1	1362.9	1337.6	1328.1	1318.6	1299.7	1277.5	1258.5	1242.7	1236.3
40°	1274.3	1255.3	1233.2	1217.5	1208.0	1198.5	1182.6	1166.8	1154.2	1138.4	1132.1
42.5°	1144.7	1132.1	1113.1	1094.1	1084.6	1081.5	1062.5	1049.8	1043.5	1037.2	1030.8
45°	1027.7	1008.8	996.1	983.4	973.9	967.6	958.1	948.6	942.3	935.9	929.7
47.5°	913.9	898.0	885.4	875.9	866.4	863.2	857.0	847.5	841.2	841.2	841.2
50°	809.5	796.8	784.3	777.9	774.8	768.4	762.1	758.9	755.8	755.8	755.8
52.5°	717.8	705.2	695.7	689.4	689.4	683.0	676.7	673.5	673.5	673.5	673.5
55°	632.5	623.0	616.6	610.3	604.0	600.8	600.8	600.8	597.6	597.6	600.8
57.5°	556.6	550.3	540.8	534.4	531.3	531.3	528.1	524.9	528.1	531.3	534.4
60°	486.9	480.7	477.5	468.0	468.0	468.0	464.9	464.9	464.9	468.0	471.2
62.5°	423.7	420.5	414.2	411.0	408.0	408.0	404.8	404.8	404.8	404.8	408.0
65°	366.8	360.5	354.1	354.1	354.1	351.0	351.0	344.6	347.8	347.8	344.6
67.5°	313.1	306.7	303.6	300.4	297.2	297.2	294.1	290.9	287.7	287.7	287.7
70°	262.4	256.2	256.2	249.8	249.8	246.7	243.5	243.5	240.3	237.2	234.0
72.5°	211.8	208.7	205.5	202.3	202.3	202.3	199.2	196.0	192.8	189.7	183.5
75°	167.6	167.6	161.3	158.1	158.1	155.0	151.8	148.6	145.5	142.3	139.1
77.5°	129.6	126.4	120.1	116.9	116.9	116.9	113.8	110.7	107.6	104.4	101.2
80°	94.9	91.7	88.6	85.4	85.4	85.4	82.2	82.2	79.1	79.1	79.1
82.5°	63.2	63.2	60.1	60.1	60.1	60.1	56.9	56.9	56.9	56.9	56.9
85°	37.9	37.9	34.8	34.8	34.8	34.8	34.8	34.8	34.8	34.8	34.8
87.5°	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8
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: P584744

CATALOG NUMBER: HC845D010-HM82555930-81WWWB

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	2226.1	2226.1	2226.1	2226.1	2226.1	2226.1	2226.1	2226.1	2226.1	2226.1	2226.1
2.5°	2216.6	2216.6	2210.3	2207.1	2204.1	2207.1	2200.9	2197.7	2194.6	2194.6	2191.4
5°	2197.7	2194.6	2181.9	2178.7	2175.6	2172.4	2166.1	2159.7	2153.4	2150.2	2147.1
7.5°	2172.4	2162.9	2150.2	2147.1	2143.9	2134.4	2125.0	2118.7	2109.2	2106.0	2099.7
10°	2137.6	2125.0	2115.5	2106.0	2099.7	2090.2	2080.7	2071.2	2058.5	2055.3	2045.9
12.5°	2096.5	2080.7	2061.7	2058.5	2049.1	2036.4	2023.8	2014.3	2004.8	1998.4	1988.9
15°	2045.9	2030.1	2011.1	2001.6	1992.1	1982.6	1966.9	1954.2	1944.7	1935.2	1925.7
17.5°	1985.8	1966.9	1951.1	1941.5	1935.2	1919.4	1906.7	1891.0	1881.5	1872.0	1862.5
20°	1913.0	1897.3	1875.2	1865.7	1862.5	1849.8	1834.0	1827.8	1815.1	1805.6	1799.3
22.5°	1830.8	1815.1	1796.1	1789.8	1777.1	1770.8	1755.0	1748.7	1742.4	1732.9	1729.7
25°	1739.2	1723.4	1707.5	1704.4	1694.9	1688.5	1679.1	1669.6	1669.6	1660.1	1660.1
27.5°	1644.3	1628.5	1615.8	1609.5	1606.4	1600.1	1590.6	1587.4	1584.3	1581.1	1581.1
30°	1543.1	1524.2	1517.9	1514.7	1511.5	1505.2	1502.0	1495.7	1498.9	1502.0	1498.9
32.5°	1435.6	1429.3	1416.6	1410.3	1413.5	1410.3	1404.0	1410.3	1407.1	1413.5	1416.6
35°	1331.2	1324.9	1318.6	1318.6	1312.2	1312.2	1312.2	1315.4	1321.7	1324.9	1331.2
37.5°	1230.1	1220.6	1217.5	1214.3	1217.5	1217.5	1217.5	1223.8	1230.1	1236.3	1245.8
40°	1122.6	1116.2	1116.2	1116.2	1116.2	1125.7	1122.6	1128.9	1135.2	1144.7	1154.2
42.5°	1021.3	1021.3	1024.5	1024.5	1024.5	1024.5	1030.8	1040.3	1049.8	1059.3	1068.8
45°	926.6	926.6	926.6	932.9	932.9	935.9	948.6	954.9	961.3	970.8	980.3
47.5°	838.0	838.0	841.2	844.3	847.5	853.8	860.0	869.5	879.0	885.4	894.9
50°	755.8	758.9	765.3	771.6	771.6	774.8	784.3	790.5	796.8	806.3	809.5
52.5°	676.7	683.0	689.4	692.5	695.7	702.0	705.2	714.6	717.8	727.3	730.4
55°	604.0	607.1	616.6	619.8	619.8	626.1	632.5	638.7	648.2	648.2	654.5
57.5°	537.6	540.8	547.1	550.3	547.1	556.6	559.8	566.0	569.1	575.5	578.6
60°	471.2	477.5	480.7	480.7	483.9	486.9	493.2	493.2	499.6	505.9	505.9
62.5°	408.0	411.0	414.2	417.4	420.5	417.4	426.9	426.9	433.2	436.4	442.7
65°	347.8	351.0	351.0	354.1	354.1	357.3	357.3	360.5	363.6	370.0	373.1
67.5°	287.7	287.7	287.7	290.9	287.7	290.9	290.9	294.1	294.1	300.4	303.6
70°	234.0	230.8	227.7	227.7	227.7	227.7	224.5	227.7	227.7	230.8	230.8
72.5°	180.3	177.1	174.0	170.8	170.8	167.6	164.5	167.6	167.6	170.8	170.8
75°	136.0	129.6	129.6	129.6	126.4	126.4	126.4	129.6	129.6	129.6	132.8
77.5°	101.2	101.2	98.1	98.1	98.1	101.2	101.2	104.4	104.4	104.4	104.4
80°	75.9	79.1	79.1	79.1	79.1	82.2	82.2	82.2	82.2	85.4	85.4
82.5°	56.9	56.9	56.9	56.9	60.1	60.1	60.1	60.1	60.1	60.1	60.1
85°	34.8	37.9	37.9	34.8	37.9	37.9	37.9	37.9	37.9	37.9	37.9
87.5°	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8
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: P584744

CATALOG NUMBER: HC845D010-HM82555930-81WWWB

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	2226.1	2226.1	2226.1	2226.1	2226.1	2226.1	2226.1	2226.1
2.5°	2188.2	2188.2	2188.2	2188.2	2185.1	2185.1	2185.1	2181.9
5°	2140.7	2140.7	2140.7	2134.4	2137.6	2137.6	2131.2	2134.4
7.5°	2093.3	2090.2	2087.0	2087.0	2083.8	2080.7	2077.5	2080.7
10°	2039.6	2030.1	2030.1	2026.9	2026.9	2020.6	2020.6	2023.8
12.5°	1979.6	1973.2	1973.2	1970.1	1966.9	1963.7	1960.6	1960.6
15°	1919.4	1913.0	1909.9	1906.7	1903.7	1897.3	1900.5	1897.3
17.5°	1859.3	1849.8	1849.8	1846.7	1843.5	1837.2	1837.2	1834.0
20°	1789.8	1786.6	1780.3	1783.4	1780.3	1773.9	1770.8	1770.8
22.5°	1720.2	1720.2	1717.0	1717.0	1713.9	1710.7	1707.5	1707.5
25°	1653.8	1650.6	1653.8	1653.8	1644.3	1644.3	1644.3	1647.5
27.5°	1577.9	1581.1	1577.9	1577.9	1577.9	1577.9	1581.1	1577.9
30°	1502.0	1502.0	1502.0	1505.2	1511.5	1508.4	1508.4	1505.2
32.5°	1419.8	1423.0	1423.0	1426.1	1429.3	1435.6	1435.6	1438.8
35°	1337.6	1343.9	1347.1	1343.9	1353.4	1353.4	1359.7	1359.7
37.5°	1252.2	1255.3	1261.7	1264.8	1271.2	1274.3	1277.5	1277.5
40°	1160.4	1173.1	1176.3	1179.5	1189.0	1189.0	1192.1	1198.5
42.5°	1075.2	1087.7	1090.9	1094.1	1100.4	1109.9	1106.7	1113.1
45°	992.9	1002.4	1005.6	1008.8	1018.2	1021.3	1021.3	1030.8
47.5°	904.4	910.7	913.9	920.2	926.6	932.9	939.1	935.9
50°	815.8	825.3	831.7	834.8	844.3	847.5	850.7	853.8
52.5°	736.8	743.1	746.3	749.4	758.9	762.1	765.3	771.6
55°	660.9	664.0	670.4	667.2	676.7	679.9	683.0	689.4
57.5°	585.0	588.1	591.3	591.3	597.6	604.0	607.1	610.3
60°	512.2	518.6	521.8	521.8	521.8	528.1	528.1	528.1
62.5°	445.9	445.9	449.0	449.0	455.4	455.4	455.4	455.4
65°	376.3	379.5	382.6	382.6	389.0	385.8	392.1	389.0
67.5°	303.6	303.6	309.9	309.9	306.7	309.9	309.9	309.9
70°	230.8	230.8	234.0	234.0	234.0	234.0	234.0	234.0
72.5°	170.8	170.8	170.8	174.0	170.8	170.8	174.0	170.8
75°	132.8	132.8	132.8	132.8	132.8	132.8	132.8	132.8
77.5°	104.4	104.4	107.6	107.6	107.6	107.6	107.6	107.6
80°	85.4	85.4	85.4	85.4	88.6	85.4	85.4	85.4
82.5°	63.2	60.1	63.2	60.1	63.2	63.2	63.2	63.2
85°	37.9	37.9	37.9	37.9	37.9	37.9	37.9	37.9
87.5°	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8
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)