

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: P584225

Luminaire Tested: **HC825D010-HM82555940-81RWWC**

Issue Date: 10/21/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P584225  
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: HC825D010-HM82555940-81RWWC  
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, SPECULAR TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2509.0 lumens  
Efficiency: N/A  
Efficacy: 93.6 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

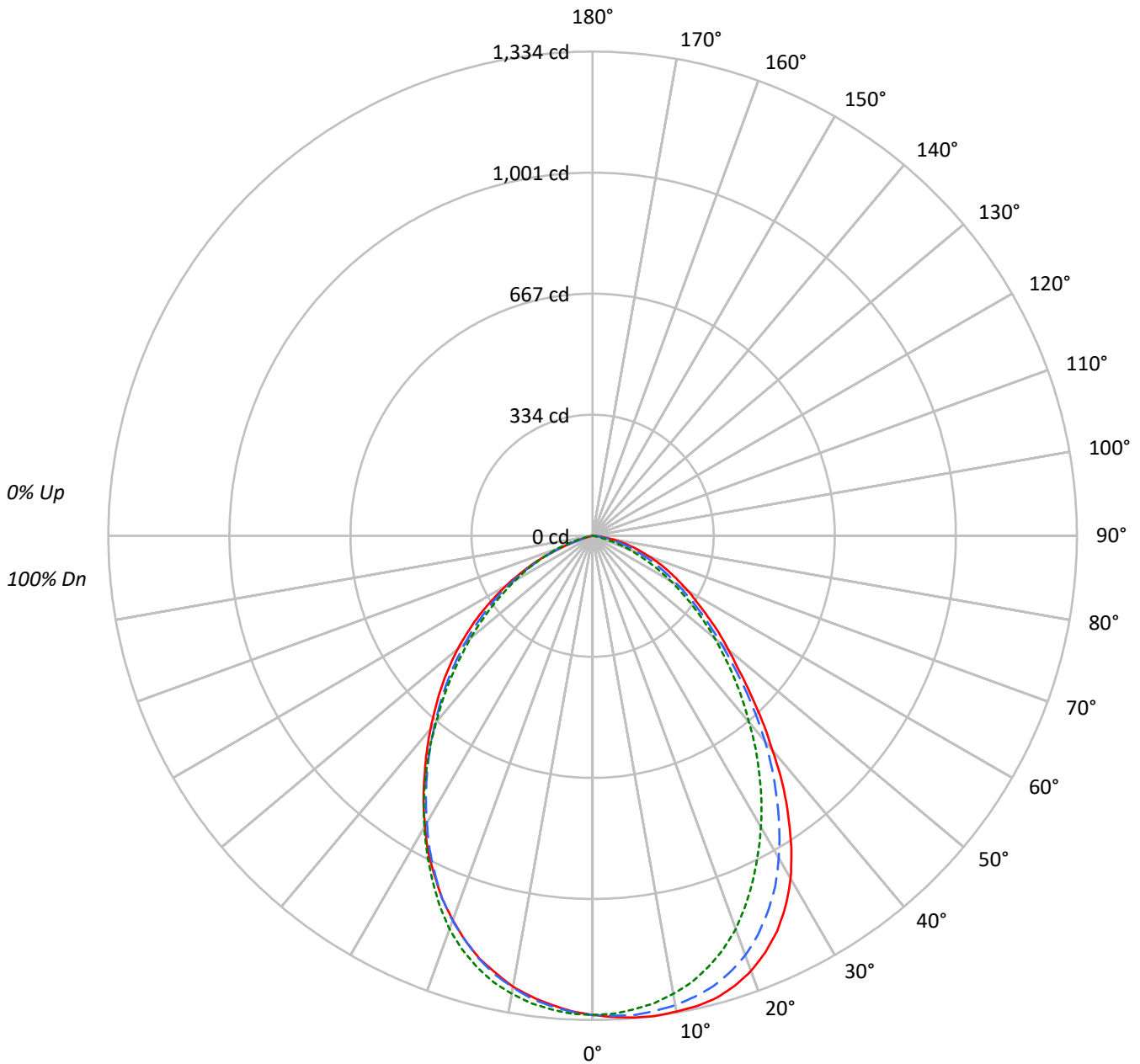
Input Watts (W): 26.8  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P584225

CATALOG NUMBER: HC825D010-HM82555940-81RWWC

### Luminous Intensity Polar Plot





TEST NUMBER: P584225

CATALOG NUMBER: HC825D010-HM82555940-81RWWC

**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	85	100	94	89	84	91	86	82	87	84	81	85	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°	40710	40710	40710
5°	41246	40537	40157
10°	41670	40120	39516
15°	42086	39276	38488
20°	41876	37826	36960
25°	40897	35562	35082
30°	38847	33007	32886
35°	35367	30119	30386
40°	31004	26962	27952
45°	26745	23981	25673
50°	23420	21055	23252
55°	20747	18096	20467
60°	18693	15215	16960
65°	16848	12222	12988
70°	14777	8899	7150
75°	12593	4611	1882
80°	9714	1261	302
85°	6262	0	0



TEST NUMBER: P584225

CATALOG NUMBER: HC825D010-HM82555940-81RWWC

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	124.6	5.0
10°-20°	350.1	14.0
20°-30°	497.0	19.8
30°-40°	523.1	20.9
40°-50°	445.0	17.7
50°-60°	321.6	12.8
60°-70°	182.9	7.3
70°-80°	57.6	2.3
80°-90°	7.0	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°	971.7	38.7
0°-40°	1494.8	59.6
0°-60°	2261.5	90.1
0°-90°	2509.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2509.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1320	1320	1320	1320	1320	
5°	1332	1325	1310	1301	1297	127
15°	1318	1285	1230	1207	1206	371
25°	1202	1142	1045	1028	1031	551
35°	940	885	800	795	807	585
45°	613	590	550	564	589	477
55°	386	358	337	356	381	348
65°	231	199	168	166	178	229
75°	106	81	39	18	16	114
85°	18	11	0	0	0	23
90°	0	0	0	0	0	



TEST NUMBER: P584225

CATALOG NUMBER: HC825D010-HM82555940-81RWWC

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	1320.2	1320.2	1320.2	1320.2	1320.2	1320.2	1320.2	1320.2	1320.2	1320.2	1320.2
2.5°	1327.2	1328.9	1325.4	1325.4	1328.9	1325.4	1327.2	1327.2	1325.4	1325.4	1323.7
5°	1332.5	1330.8	1330.8	1330.8	1332.5	1328.9	1327.2	1328.9	1325.4	1325.4	1325.4
7.5°	1334.3	1334.3	1332.5	1330.8	1330.8	1330.8	1328.9	1327.2	1325.4	1321.9	1320.2
10°	1330.8	1330.8	1332.5	1328.9	1328.9	1325.4	1325.4	1321.9	1321.9	1318.3	1313.1
12.5°	1327.2	1325.4	1325.4	1321.9	1321.9	1318.3	1318.3	1313.1	1311.3	1306.0	1300.8
15°	1318.3	1316.6	1313.1	1311.3	1309.6	1307.9	1304.3	1302.5	1297.3	1290.2	1284.9
17.5°	1300.8	1299.0	1297.3	1293.7	1290.2	1288.4	1286.7	1281.3	1274.4	1269.0	1260.2
20°	1276.1	1274.4	1274.4	1269.0	1267.3	1262.0	1260.2	1253.2	1247.8	1237.3	1230.3
22.5°	1242.6	1244.4	1240.9	1237.3	1233.8	1228.5	1224.9	1217.9	1209.1	1198.5	1189.7
25°	1202.0	1203.9	1200.3	1196.8	1191.4	1187.9	1184.4	1173.9	1165.0	1152.7	1142.1
27.5°	1150.9	1150.9	1150.9	1147.5	1138.6	1136.9	1133.3	1122.8	1110.4	1099.9	1089.3
30°	1091.0	1089.3	1089.3	1084.0	1080.5	1073.4	1068.1	1059.3	1050.5	1038.1	1025.8
32.5°	1018.7	1020.6	1015.2	1011.7	1006.4	1006.4	999.4	992.3	981.7	969.4	957.1
35°	939.5	941.2	937.6	935.9	927.0	925.3	923.6	914.7	907.7	898.9	884.8
37.5°	858.4	856.6	854.8	854.8	849.6	846.0	842.5	837.2	826.7	819.6	812.6
40°	770.2	770.2	770.2	768.5	766.7	763.2	761.4	757.9	750.8	743.8	738.5
42.5°	690.9	690.9	689.2	687.4	683.8	685.7	682.1	678.6	671.5	666.3	662.8
45°	613.3	613.3	613.3	615.1	611.6	606.4	606.4	602.8	599.3	595.8	590.4
47.5°	544.6	549.9	546.3	544.6	546.3	539.4	539.4	535.9	532.3	528.8	521.7
50°	488.2	488.2	488.2	484.7	482.9	482.9	477.6	474.1	472.4	468.9	461.8
52.5°	437.1	433.6	433.6	431.9	430.0	426.5	426.5	423.0	415.9	412.5	407.1
55°	385.9	385.9	384.2	382.5	380.7	379.0	377.2	371.9	368.4	363.1	357.8
57.5°	340.2	343.7	342.0	338.4	334.9	334.9	331.4	327.8	322.5	317.3	312.0
60°	303.1	301.4	301.4	299.6	296.1	294.4	292.5	287.3	282.1	276.7	271.5
62.5°	264.4	264.4	264.4	260.9	257.3	255.5	253.8	250.3	243.2	238.0	234.4
65°	230.9	229.1	227.4	225.6	223.8	220.3	218.6	215.1	209.7	204.5	199.1
67.5°	197.4	195.6	195.6	193.9	188.6	186.8	186.8	181.6	176.2	171.0	165.6
70°	163.9	163.9	163.9	160.4	158.7	156.9	155.2	151.6	146.3	141.0	135.7
72.5°	135.7	134.0	134.0	132.1	126.9	125.2	123.4	119.8	114.6	111.1	107.5
75°	105.7	105.7	104.0	102.2	100.5	98.7	96.9	93.4	88.2	82.8	81.1
77.5°	81.1	79.3	79.3	77.6	74.0	72.2	72.2	68.7	63.5	59.9	56.4
80°	54.7	56.4	54.7	52.9	51.1	49.3	47.6	45.8	42.3	38.7	35.2
82.5°	33.5	35.2	33.5	33.5	31.8	30.0	30.0	26.4	24.7	22.9	21.2
85°	17.7	17.7	17.7	17.7	15.8	15.8	15.8	14.1	12.3	10.6	10.6
87.5°	5.2	7.1	5.2	5.2	5.2	5.2	5.2	5.2	3.5	3.5	3.5
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: P584225

CATALOG NUMBER: HC825D010-HM82555940-81RWWC

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	1320.2	1320.2	1320.2	1320.2	1320.2	1320.2	1320.2	1320.2	1320.2	1320.2	1320.2
2.5°	1325.4	1323.7	1321.9	1321.9	1321.9	1321.9	1321.9	1320.2	1318.3	1318.3	1318.3
5°	1321.9	1321.9	1321.9	1320.2	1318.3	1318.3	1314.8	1313.1	1311.3	1309.6	1307.9
7.5°	1318.3	1314.8	1313.1	1311.3	1309.6	1309.6	1306.0	1302.5	1302.5	1299.0	1295.4
10°	1307.9	1306.0	1302.5	1299.0	1297.3	1295.4	1291.9	1286.7	1284.9	1281.3	1277.8
12.5°	1295.4	1291.9	1288.4	1281.3	1279.6	1277.8	1270.8	1265.5	1262.0	1260.2	1251.4
15°	1279.6	1272.6	1267.3	1258.4	1256.7	1253.2	1247.8	1242.6	1235.5	1230.3	1226.8
17.5°	1251.4	1244.4	1235.5	1226.8	1223.2	1223.2	1214.3	1207.4	1198.5	1195.0	1187.9
20°	1217.9	1209.1	1202.0	1191.4	1186.2	1181.0	1175.6	1165.0	1158.0	1152.7	1143.9
22.5°	1179.1	1166.8	1158.0	1147.5	1138.6	1133.3	1124.5	1115.7	1106.9	1101.6	1094.5
25°	1129.8	1119.2	1105.1	1094.5	1089.3	1082.2	1071.6	1062.8	1054.0	1045.2	1041.6
27.5°	1075.1	1061.0	1048.7	1036.4	1031.1	1025.8	1013.5	1002.9	995.8	987.1	983.5
30°	1015.2	1001.1	987.1	976.5	971.1	962.4	955.3	943.0	934.1	927.0	918.3
32.5°	946.5	935.9	923.6	907.7	904.2	897.1	886.6	881.3	870.7	865.4	858.4
35°	872.5	865.4	853.1	840.7	835.5	831.9	823.2	812.6	805.5	800.1	796.7
37.5°	802.0	793.2	780.8	772.0	768.5	763.2	752.6	747.3	740.2	736.7	729.7
40°	726.2	717.3	708.6	703.2	698.0	694.4	687.4	682.1	675.1	669.8	668.0
42.5°	652.2	646.8	639.8	632.8	631.0	625.7	622.2	616.9	611.6	609.8	604.6
45°	585.2	579.8	572.9	565.8	564.0	560.5	558.8	553.4	549.9	549.9	549.9
47.5°	518.2	512.9	505.9	502.4	504.1	497.0	497.0	495.3	491.8	491.8	493.5
50°	458.3	451.2	449.4	446.0	442.4	438.9	440.6	435.4	435.4	438.9	437.1
52.5°	401.9	394.8	393.0	389.5	387.8	387.8	385.9	385.9	384.2	385.9	385.9
55°	350.7	345.5	342.0	338.4	336.6	336.6	336.6	334.9	333.1	336.6	338.4
57.5°	305.0	303.1	299.6	294.4	292.5	290.8	289.0	289.0	289.0	289.0	290.8
60°	264.4	260.9	257.3	252.1	252.1	250.3	248.6	246.7	246.7	246.7	246.7
62.5°	229.1	223.8	218.6	215.1	213.3	211.5	209.7	206.2	206.2	206.2	206.2
65°	193.9	188.6	185.1	181.6	178.0	178.0	174.5	172.7	169.2	167.5	163.9
67.5°	160.4	156.9	153.3	148.1	146.3	144.6	141.0	139.2	134.0	132.1	130.4
70°	130.4	125.2	121.7	118.1	116.3	112.8	109.2	105.7	102.2	98.7	95.2
72.5°	102.2	96.9	93.4	89.9	86.3	86.3	81.1	77.6	72.2	68.7	63.5
75°	75.8	70.5	67.0	61.7	59.9	58.2	52.9	49.3	44.1	38.7	35.2
77.5°	51.1	47.6	44.1	38.7	35.2	35.2	30.0	26.4	22.9	17.7	15.8
80°	31.8	28.2	24.7	21.2	21.2	17.7	15.8	12.3	8.8	7.1	5.2
82.5°	17.7	15.8	14.1	10.6	10.6	8.8	7.1	5.2	3.5	1.7	1.7
85°	8.8	7.1	5.2	5.2	3.5	3.5	3.5	1.7	1.7	0.0	0.0
87.5°	3.5	1.7	1.7	1.7	1.7	1.7	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: P584225

CATALOG NUMBER: HC825D010-HM82555940-81RWWC

**CANDELA DISTRIBUTION (continued):**

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	1320.2	1320.2	1320.2	1320.2	1320.2	1320.2	1320.2	1320.2	1320.2	1320.2	1320.2
2.5°	1316.6	1316.6	1314.8	1314.8	1314.8	1313.1	1314.8	1313.1	1313.1	1313.1	1314.8
5°	1309.6	1306.0	1306.0	1304.3	1304.3	1302.5	1304.3	1302.5	1300.8	1299.0	1300.8
7.5°	1295.4	1291.9	1290.2	1288.4	1288.4	1288.4	1286.7	1284.9	1286.7	1281.3	1284.9
10°	1276.1	1274.4	1270.8	1269.0	1267.3	1269.0	1267.3	1263.8	1263.8	1263.8	1262.0
12.5°	1251.4	1247.8	1246.1	1244.4	1240.9	1240.9	1242.6	1239.1	1239.1	1235.5	1235.5
15°	1221.4	1217.9	1214.3	1214.3	1210.9	1210.9	1209.1	1209.1	1207.4	1205.6	1205.6
17.5°	1184.4	1179.1	1175.6	1177.4	1175.6	1173.9	1173.9	1170.4	1168.5	1170.4	1170.4
20°	1140.4	1136.9	1133.3	1135.1	1131.5	1129.8	1131.5	1126.3	1128.0	1128.0	1128.0
22.5°	1091.0	1089.3	1084.0	1084.0	1080.5	1078.7	1080.5	1080.5	1082.2	1080.5	1080.5
25°	1036.4	1032.9	1029.3	1029.3	1027.5	1025.8	1027.5	1029.3	1027.5	1029.3	1029.3
27.5°	978.2	973.0	973.0	969.4	969.4	971.1	969.4	971.1	973.0	973.0	976.5
30°	914.7	913.0	911.2	909.5	909.5	911.2	911.2	911.2	913.0	916.6	916.6
32.5°	854.8	851.3	847.8	847.8	851.3	849.6	851.3	851.3	854.8	854.8	858.4
35°	789.7	789.7	786.1	787.8	787.8	787.8	787.8	791.4	794.9	796.7	800.1
37.5°	729.7	724.4	726.2	726.2	727.9	726.2	731.5	731.5	735.0	735.0	738.5
40°	664.5	664.5	666.3	664.5	666.3	666.3	669.8	673.2	675.1	678.6	680.3
42.5°	602.8	606.4	602.8	604.6	606.4	608.1	609.8	611.6	618.7	622.2	627.4
45°	546.3	548.2	549.9	551.7	549.9	553.4	555.2	558.8	564.0	565.8	567.5
47.5°	491.8	493.5	495.3	497.0	497.0	500.5	502.4	505.9	509.4	511.1	512.9
50°	438.9	442.4	444.2	444.2	446.0	449.4	452.9	452.9	456.5	461.8	463.5
52.5°	391.3	391.3	394.8	396.5	398.4	398.4	403.6	405.4	407.1	410.7	414.2
55°	338.4	343.7	345.5	345.5	349.0	352.5	354.3	356.0	356.0	363.1	363.1
57.5°	292.5	294.4	297.9	297.9	297.9	303.1	303.1	306.7	308.5	310.2	313.7
60°	246.7	250.3	250.3	252.1	250.3	253.8	255.5	259.0	260.9	262.6	264.4
62.5°	204.5	204.5	206.2	206.2	206.2	206.2	209.7	209.7	213.3	215.1	216.8
65°	163.9	163.9	163.9	163.9	163.9	163.9	163.9	163.9	165.6	165.6	169.2
67.5°	126.9	125.2	121.7	123.4	121.7	121.7	119.8	119.8	121.7	121.7	125.2
70°	91.7	89.9	86.3	86.3	84.6	82.8	81.1	79.3	77.6	77.6	77.6
72.5°	59.9	56.4	51.1	49.3	49.3	45.8	42.3	40.6	40.6	40.6	40.6
75°	30.0	26.4	22.9	21.2	21.2	17.7	19.4	17.7	17.7	17.7	17.7
77.5°	12.3	8.8	7.1	7.1	7.1	5.2	5.2	5.2	5.2	5.2	5.2
80°	3.5	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
82.5°	1.7	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: P584225

CATALOG NUMBER: HC825D010-HM82555940-81RWWC

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1320.2	1320.2	1320.2	1320.2	1320.2	1320.2	1320.2	1320.2
2.5°	1313.1	1313.1	1309.6	1311.3	1311.3	1311.3	1311.3	1311.3
5°	1297.3	1299.0	1297.3	1299.0	1299.0	1297.3	1297.3	1297.3
7.5°	1281.3	1283.1	1281.3	1283.1	1283.1	1283.1	1281.3	1281.3
10°	1262.0	1262.0	1262.0	1262.0	1262.0	1260.2	1262.0	1262.0
12.5°	1235.5	1235.5	1235.5	1237.3	1237.3	1235.5	1235.5	1233.8
15°	1207.4	1203.9	1205.6	1207.4	1205.6	1205.6	1205.6	1205.6
17.5°	1168.5	1170.4	1168.5	1168.5	1168.5	1168.5	1170.4	1168.5
20°	1128.0	1128.0	1129.8	1128.0	1128.0	1128.0	1128.0	1126.3
22.5°	1082.2	1080.5	1080.5	1082.2	1082.2	1080.5	1082.2	1082.2
25°	1031.1	1032.9	1031.1	1031.1	1032.9	1032.9	1032.9	1031.1
27.5°	976.5	978.2	980.0	978.2	978.2	978.2	980.0	981.7
30°	920.1	923.6	920.1	920.1	923.6	921.8	923.6	923.6
32.5°	860.2	865.4	861.9	865.4	865.4	867.1	865.4	867.1
35°	800.1	805.5	805.5	805.5	807.2	809.0	809.0	807.2
37.5°	743.8	745.6	745.6	749.1	750.8	752.6	752.6	750.8
40°	685.7	689.2	690.9	690.9	690.9	694.4	698.0	694.4
42.5°	629.3	631.0	632.8	632.8	636.3	638.0	639.8	639.8
45°	574.6	578.1	579.8	581.7	583.4	586.9	585.2	588.7
47.5°	518.2	523.4	525.3	527.0	530.5	532.3	534.0	535.9
50°	467.1	470.6	470.6	474.1	479.4	479.4	482.9	484.7
52.5°	415.9	417.7	419.4	421.3	424.8	428.3	428.3	431.9
55°	366.6	368.4	368.4	370.1	371.9	379.0	380.7	380.7
57.5°	315.5	315.5	319.1	320.8	322.5	326.0	326.0	326.0
60°	266.1	267.9	267.9	269.6	271.5	275.0	276.7	275.0
62.5°	216.8	218.6	218.6	220.3	223.8	225.6	223.8	223.8
65°	171.0	172.7	172.7	174.5	178.0	178.0	176.2	178.0
67.5°	125.2	125.2	125.2	125.2	125.2	125.2	125.2	125.2
70°	79.3	77.6	75.8	77.6	77.6	77.6	75.8	79.3
72.5°	38.7	40.6	40.6	40.6	40.6	40.6	40.6	38.7
75°	17.7	17.7	15.8	15.8	15.8	17.7	17.7	15.8
77.5°	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
80°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
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)