

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: P584140

Luminaire Tested: **HC825D010-HM82555835-81RWWC**

Issue Date: 10/21/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P584140  
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-HM82555835-81RWWC  
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, SPECULAR TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2434.0 lumens  
Efficiency: N/A  
Efficacy: 90.8 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

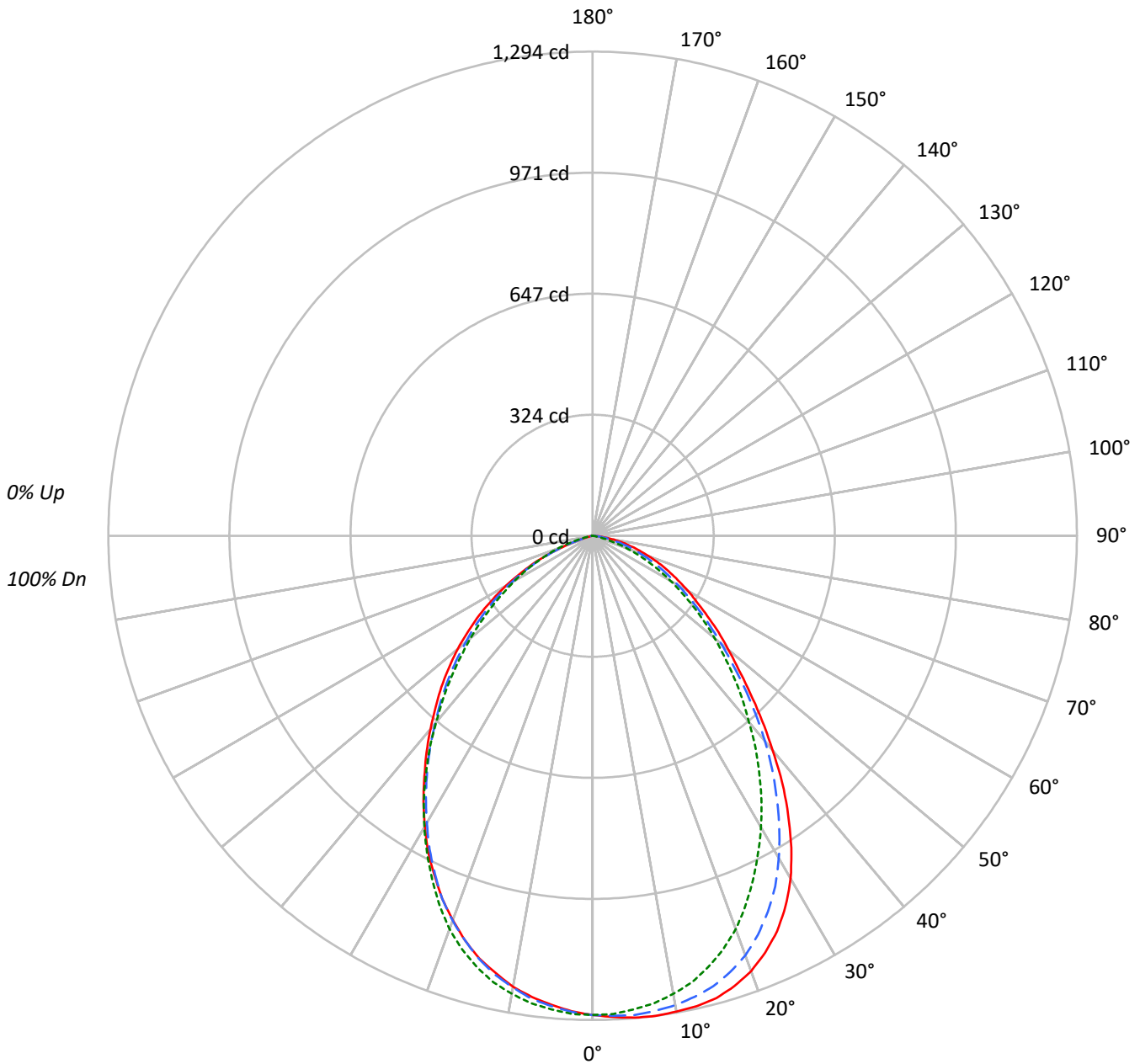
Input Watts (W): 26.8  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P584140

CATALOG NUMBER: HC825D010-HM82555835-81RWWC

### Luminous Intensity Polar Plot





TEST NUMBER: P584140

CATALOG NUMBER: HC825D010-HM82555835-81RWWC

**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	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°	39492	39492	39492
5°	40014	39324	38953
10°	40424	38924	38335
15°	40831	38101	37335
20°	40625	36697	35854
25°	39676	34497	34031
30°	37686	32025	31904
35°	34305	29223	29479
40°	30078	26153	27119
45°	25947	23265	24905
50°	22720	20427	22562
55°	20134	17558	19859
60°	18138	14764	16454
65°	16344	11850	12601
70°	14335	8637	6933
75°	12224	4492	1835
80°	9412	1208	302
85°	6050	0	0



TEST NUMBER: P584140

CATALOG NUMBER: HC825D010-HM82555835-81RWWC

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	120.8	5.0
10°-20°	339.7	14.0
20°-30°	482.1	19.8
30°-40°	507.5	20.9
40°-50°	431.7	17.7
50°-60°	312.0	12.8
60°-70°	177.5	7.3
70°-80°	55.9	2.3
80°-90°	6.8	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°	942.6	38.7
0°-40°	1450.1	59.6
0°-60°	2193.9	90.1
0°-90°	2434.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2434.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1281	1281	1281	1281	1281	
5°	1293	1286	1270	1262	1258	123
15°	1279	1246	1194	1171	1170	360
25°	1166	1108	1014	997	1000	534
35°	911	858	776	771	783	567
45°	595	573	534	547	571	463
55°	374	347	327	345	369	338
65°	224	193	162	161	173	222
75°	103	79	38	17	15	110
85°	17	10	0	0	0	22
90°	0	0	0	0	0	



TEST NUMBER: P584140

CATALOG NUMBER: HC825D010-HM82555835-81RWWC

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	1280.7	1280.7	1280.7	1280.7	1280.7	1280.7	1280.7	1280.7	1280.7	1280.7	1280.7
2.5°	1287.5	1289.2	1285.8	1285.8	1289.2	1285.8	1287.5	1287.5	1285.8	1285.8	1284.1
5°	1292.7	1291.0	1291.0	1291.0	1292.7	1289.2	1287.5	1289.2	1285.8	1285.8	1285.8
7.5°	1294.4	1294.4	1292.7	1291.0	1291.0	1291.0	1289.2	1287.5	1285.8	1282.4	1280.7
10°	1291.0	1291.0	1292.7	1289.2	1289.2	1285.8	1285.8	1282.4	1282.4	1279.0	1273.8
12.5°	1287.5	1285.8	1285.8	1282.4	1282.4	1279.0	1279.0	1273.8	1272.1	1267.0	1261.9
15°	1279.0	1277.3	1273.8	1272.1	1270.4	1268.7	1265.3	1263.6	1258.4	1251.6	1246.4
17.5°	1261.9	1260.1	1258.4	1255.0	1251.6	1249.9	1248.2	1243.1	1236.3	1231.1	1222.6
20°	1238.0	1236.3	1236.3	1231.1	1229.4	1224.3	1222.6	1215.7	1210.6	1200.3	1193.5
22.5°	1205.5	1207.2	1203.8	1200.3	1196.9	1191.8	1188.3	1181.5	1172.9	1162.7	1154.2
25°	1166.1	1167.8	1164.4	1161.0	1155.9	1152.5	1149.1	1138.8	1130.2	1118.3	1108.0
27.5°	1116.5	1116.5	1116.5	1113.1	1104.6	1102.8	1099.4	1089.2	1077.2	1067.0	1056.7
30°	1058.4	1056.7	1056.7	1051.6	1048.2	1041.3	1036.2	1027.6	1019.1	1007.1	995.1
32.5°	988.3	990.0	984.9	981.5	976.4	976.4	969.5	962.7	952.4	940.4	928.4
35°	911.3	913.0	909.6	907.9	899.4	897.7	896.0	887.5	880.6	872.0	858.4
37.5°	832.7	831.0	829.2	829.2	824.1	820.7	817.3	812.2	802.0	795.1	788.3
40°	747.2	747.2	747.2	745.5	743.8	740.3	738.6	735.2	728.5	721.6	716.5
42.5°	670.2	670.2	668.5	666.8	663.4	665.1	661.7	658.3	651.4	646.3	643.0
45°	595.0	595.0	595.0	596.7	593.3	588.2	588.2	584.8	581.3	577.9	572.8
47.5°	528.4	533.5	530.1	528.4	530.1	523.2	523.2	519.8	516.4	513.0	506.1
50°	473.6	473.6	473.6	470.3	468.6	468.6	463.4	460.0	458.3	454.9	448.0
52.5°	424.0	420.6	420.6	418.9	417.2	413.8	413.8	410.3	403.5	400.1	394.9
55°	374.5	374.5	372.8	371.1	369.4	367.7	365.9	360.8	357.4	352.2	347.1
57.5°	330.0	333.4	331.7	328.3	324.9	324.9	321.4	318.0	312.9	307.7	302.6
60°	294.1	292.4	292.4	290.7	287.3	285.6	283.9	278.7	273.6	268.5	263.3
62.5°	256.5	256.5	256.5	253.1	249.6	247.9	246.2	242.8	235.9	230.8	227.4
65°	224.0	222.2	220.5	218.8	217.1	213.8	212.1	208.6	203.5	198.4	193.2
67.5°	191.5	189.8	189.8	188.1	183.0	181.3	181.3	176.1	171.0	165.9	160.7
70°	159.0	159.0	159.0	155.6	153.9	152.2	150.4	147.0	141.9	136.7	131.6
72.5°	131.6	129.9	129.9	128.3	123.2	121.4	119.7	116.3	111.2	107.7	104.3
75°	102.6	102.6	100.9	99.2	97.5	95.8	94.1	90.6	85.5	80.4	78.6
77.5°	78.6	76.9	76.9	75.2	71.8	70.1	70.1	66.7	61.5	58.1	54.7
80°	53.0	54.7	53.0	51.3	49.5	47.8	46.1	44.4	41.1	37.7	34.2
82.5°	32.5	34.2	32.5	32.5	30.8	29.1	29.1	25.7	24.0	22.3	20.5
85°	17.1	17.1	17.1	17.1	15.4	15.4	15.4	13.7	12.0	10.3	10.3
87.5°	5.1	6.8	5.1	5.1	5.1	5.1	5.1	5.1	3.4	3.4	3.4
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: P584140

CATALOG NUMBER: HC825D010-HM82555835-81RWWC

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	1280.7	1280.7	1280.7	1280.7	1280.7	1280.7	1280.7	1280.7	1280.7	1280.7	1280.7
2.5°	1285.8	1284.1	1282.4	1282.4	1282.4	1282.4	1282.4	1280.7	1279.0	1279.0	1279.0
5°	1282.4	1282.4	1282.4	1280.7	1279.0	1279.0	1275.5	1273.8	1272.1	1270.4	1268.7
7.5°	1279.0	1275.5	1273.8	1272.1	1270.4	1270.4	1267.0	1263.6	1263.6	1260.1	1256.7
10°	1268.7	1267.0	1263.6	1260.1	1258.4	1256.7	1253.3	1248.2	1246.4	1243.1	1239.7
12.5°	1256.7	1253.3	1249.9	1243.1	1241.4	1239.7	1232.9	1227.7	1224.3	1222.6	1214.0
15°	1241.4	1234.6	1229.4	1220.9	1219.2	1215.7	1210.6	1205.5	1198.6	1193.5	1190.1
17.5°	1214.0	1207.2	1198.6	1190.1	1186.6	1186.6	1178.1	1171.2	1162.7	1159.2	1152.5
20°	1181.5	1172.9	1166.1	1155.9	1150.8	1145.6	1140.5	1130.2	1123.4	1118.3	1109.7
22.5°	1143.9	1132.0	1123.4	1113.1	1104.6	1099.4	1090.9	1082.3	1073.7	1068.7	1061.9
25°	1096.0	1085.7	1072.1	1061.9	1056.7	1049.9	1039.6	1031.1	1022.5	1013.9	1010.5
27.5°	1043.0	1029.3	1017.4	1005.4	1000.2	995.1	983.2	973.0	966.1	957.5	954.1
30°	984.9	971.2	957.5	947.3	942.1	933.6	926.7	914.7	906.2	899.4	890.9
32.5°	918.2	907.9	896.0	880.6	877.2	870.3	860.1	854.9	844.7	839.5	832.7
35°	846.4	839.5	827.5	815.6	810.5	807.1	798.5	788.3	781.4	776.3	772.9
37.5°	778.0	769.4	757.5	748.9	745.5	740.3	730.1	725.0	718.2	714.8	707.9
40°	704.5	695.9	687.4	682.2	677.1	673.7	666.8	661.7	654.8	649.7	648.0
42.5°	632.7	627.6	620.7	613.9	612.1	607.0	603.6	598.5	593.3	591.6	586.5
45°	567.6	562.5	555.8	548.9	547.2	543.8	542.1	536.9	533.5	533.5	533.5
47.5°	502.7	497.6	490.7	487.3	489.0	482.1	482.1	480.4	477.0	477.0	478.7
50°	444.6	437.7	436.0	432.6	429.2	425.8	427.5	422.3	422.3	425.8	424.0
52.5°	389.8	383.1	381.3	377.9	376.2	376.2	374.5	374.5	372.8	374.5	374.5
55°	340.3	335.1	331.7	328.3	326.6	326.6	326.6	324.9	323.1	326.6	328.3
57.5°	295.9	294.1	290.7	285.6	283.9	282.2	280.4	280.4	280.4	280.4	282.2
60°	256.5	253.1	249.6	244.5	244.5	242.8	241.1	239.4	239.4	239.4	239.4
62.5°	222.2	217.1	212.1	208.6	206.9	205.2	203.5	200.1	200.1	200.1	200.1
65°	188.1	183.0	179.5	176.1	172.7	172.7	169.3	167.6	164.1	162.4	159.0
67.5°	155.6	152.2	148.7	143.6	141.9	140.2	136.7	135.0	129.9	128.3	126.6
70°	126.6	121.4	118.0	114.6	112.9	109.5	106.0	102.6	99.2	95.8	92.3
72.5°	99.2	94.1	90.6	87.2	83.8	83.8	78.6	75.2	70.1	66.7	61.5
75°	73.5	68.4	64.9	59.8	58.1	56.4	51.3	47.8	42.8	37.7	34.2
77.5°	49.5	46.1	42.8	37.7	34.2	34.2	29.1	25.7	22.3	17.1	15.4
80°	30.8	27.4	24.0	20.5	20.5	17.1	15.4	12.0	8.6	6.8	5.1
82.5°	17.1	15.4	13.7	10.3	10.3	8.6	6.8	5.1	3.4	1.7	1.7
85°	8.6	6.8	5.1	5.1	3.4	3.4	3.4	1.7	1.7	0.0	0.0
87.5°	3.4	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: P584140

CATALOG NUMBER: HC825D010-HM82555835-81RWWC

**CANDELA DISTRIBUTION (continued):**

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	1280.7	1280.7	1280.7	1280.7	1280.7	1280.7	1280.7	1280.7	1280.7	1280.7	1280.7
2.5°	1277.3	1277.3	1275.5	1275.5	1275.5	1273.8	1275.5	1273.8	1273.8	1273.8	1275.5
5°	1270.4	1267.0	1267.0	1265.3	1265.3	1263.6	1265.3	1263.6	1261.9	1260.1	1261.9
7.5°	1256.7	1253.3	1251.6	1249.9	1249.9	1249.9	1248.2	1246.4	1248.2	1243.1	1246.4
10°	1238.0	1236.3	1232.9	1231.1	1229.4	1231.1	1229.4	1226.0	1226.0	1226.0	1224.3
12.5°	1214.0	1210.6	1208.9	1207.2	1203.8	1203.8	1205.5	1202.0	1202.0	1198.6	1198.6
15°	1184.9	1181.5	1178.1	1178.1	1174.6	1174.6	1172.9	1172.9	1171.2	1169.5	1169.5
17.5°	1149.1	1143.9	1140.5	1142.2	1140.5	1138.8	1138.8	1135.4	1133.7	1135.4	1135.4
20°	1106.3	1102.8	1099.4	1101.1	1097.7	1096.0	1097.7	1092.6	1094.3	1094.3	1094.3
22.5°	1058.4	1056.7	1051.6	1051.6	1048.2	1046.5	1048.2	1048.2	1049.9	1048.2	1048.2
25°	1005.4	1001.9	998.5	998.5	996.8	995.1	996.8	998.5	996.8	998.5	998.5
27.5°	949.0	943.8	943.8	940.4	940.4	942.1	940.4	942.1	943.8	943.8	947.3
30°	887.5	885.7	884.0	882.3	882.3	884.0	884.0	884.0	885.7	889.2	889.2
32.5°	829.2	825.8	822.4	822.4	825.8	824.1	825.8	825.8	829.2	829.2	832.7
35°	766.0	766.0	762.6	764.3	764.3	764.3	764.3	767.7	771.1	772.9	776.3
37.5°	707.9	702.8	704.5	704.5	706.2	704.5	709.6	709.6	713.0	713.0	716.5
40°	644.6	644.6	646.3	644.6	646.3	646.3	649.7	653.1	654.8	658.3	660.0
42.5°	584.8	588.2	584.8	586.5	588.2	589.9	591.6	593.3	600.2	603.6	608.7
45°	530.1	531.8	533.5	535.2	533.5	536.9	538.6	542.1	547.2	548.9	550.6
47.5°	477.0	478.7	480.4	482.1	482.1	485.6	487.3	490.7	494.1	495.8	497.6
50°	425.8	429.2	430.9	430.9	432.6	436.0	439.4	439.4	442.9	448.0	449.7
52.5°	379.6	379.6	383.1	384.8	386.4	386.4	391.5	393.2	394.9	398.4	401.8
55°	328.3	333.4	335.1	335.1	338.5	342.0	343.7	345.4	345.4	352.2	352.2
57.5°	283.9	285.6	289.0	289.0	289.0	294.1	294.1	297.6	299.3	300.9	304.3
60°	239.4	242.8	242.8	244.5	242.8	246.2	247.9	251.3	253.1	254.8	256.5
62.5°	198.4	198.4	200.1	200.1	200.1	200.1	203.5	203.5	206.9	208.6	210.4
65°	159.0	159.0	159.0	159.0	159.0	159.0	159.0	159.0	160.7	160.7	164.1
67.5°	123.2	121.4	118.0	119.7	118.0	118.0	116.3	116.3	118.0	118.0	121.4
70°	88.9	87.2	83.8	83.8	82.1	80.4	78.6	76.9	75.2	75.2	75.2
72.5°	58.1	54.7	49.5	47.8	47.8	44.4	41.1	39.4	39.4	39.4	39.4
75°	29.1	25.7	22.3	20.5	20.5	17.1	18.8	17.1	17.1	17.1	17.1
77.5°	12.0	8.6	6.8	6.8	6.8	5.1	5.1	5.1	5.1	5.1	5.1
80°	3.4	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: P584140

CATALOG NUMBER: HC825D010-HM82555835-81RWWC

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1280.7	1280.7	1280.7	1280.7	1280.7	1280.7	1280.7	1280.7
2.5°	1273.8	1273.8	1270.4	1272.1	1272.1	1272.1	1272.1	1272.1
5°	1258.4	1260.1	1258.4	1260.1	1260.1	1258.4	1258.4	1258.4
7.5°	1243.1	1244.7	1243.1	1244.7	1244.7	1244.7	1243.1	1243.1
10°	1224.3	1224.3	1224.3	1224.3	1224.3	1222.6	1224.3	1224.3
12.5°	1198.6	1198.6	1198.6	1200.3	1200.3	1198.6	1198.6	1196.9
15°	1171.2	1167.8	1169.5	1171.2	1169.5	1169.5	1169.5	1169.5
17.5°	1133.7	1135.4	1133.7	1133.7	1133.7	1133.7	1135.4	1133.7
20°	1094.3	1094.3	1096.0	1094.3	1094.3	1094.3	1094.3	1092.6
22.5°	1049.9	1048.2	1048.2	1049.9	1049.9	1048.2	1049.9	1049.9
25°	1000.2	1001.9	1000.2	1000.2	1001.9	1001.9	1001.9	1000.2
27.5°	947.3	949.0	950.7	949.0	949.0	949.0	950.7	952.4
30°	892.6	896.0	892.6	892.6	896.0	894.3	896.0	896.0
32.5°	834.4	839.5	836.1	839.5	839.5	841.2	839.5	841.2
35°	776.3	781.4	781.4	781.4	783.1	784.8	784.8	783.1
37.5°	721.6	723.3	723.3	726.7	728.5	730.1	730.1	728.5
40°	665.1	668.5	670.2	670.2	670.2	673.7	677.1	673.7
42.5°	610.4	612.1	613.9	613.9	617.3	619.0	620.7	620.7
45°	557.5	560.8	562.5	564.2	565.9	569.3	567.6	571.1
47.5°	502.7	507.8	509.5	511.2	514.7	516.4	518.1	519.8
50°	453.1	456.6	456.6	460.0	465.1	465.1	468.6	470.3
52.5°	403.5	405.2	406.9	408.6	412.1	415.5	415.5	418.9
55°	355.7	357.4	357.4	359.1	360.8	367.7	369.4	369.4
57.5°	306.0	306.0	309.4	311.2	312.9	316.3	316.3	316.3
60°	258.2	259.9	259.9	261.6	263.3	266.8	268.5	266.8
62.5°	210.4	212.1	212.1	213.8	217.1	218.8	217.1	217.1
65°	165.9	167.6	167.6	169.3	172.7	172.7	171.0	172.7
67.5°	121.4	121.4	121.4	121.4	121.4	121.4	121.4	121.4
70°	76.9	75.2	73.5	75.2	75.2	75.2	73.5	76.9
72.5°	37.7	39.4	39.4	39.4	39.4	39.4	39.4	37.7
75°	17.1	17.1	15.4	15.4	15.4	17.1	17.1	15.4
77.5°	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
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)