

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: P584123

Luminaire Tested: **HC825D010-HM82555830-81RWWC**

Issue Date: 10/21/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P584123  
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-HM82555830-81RWWC  
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, SPECULAR TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2296.2 lumens  
Efficiency: N/A  
Efficacy: 85.7 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

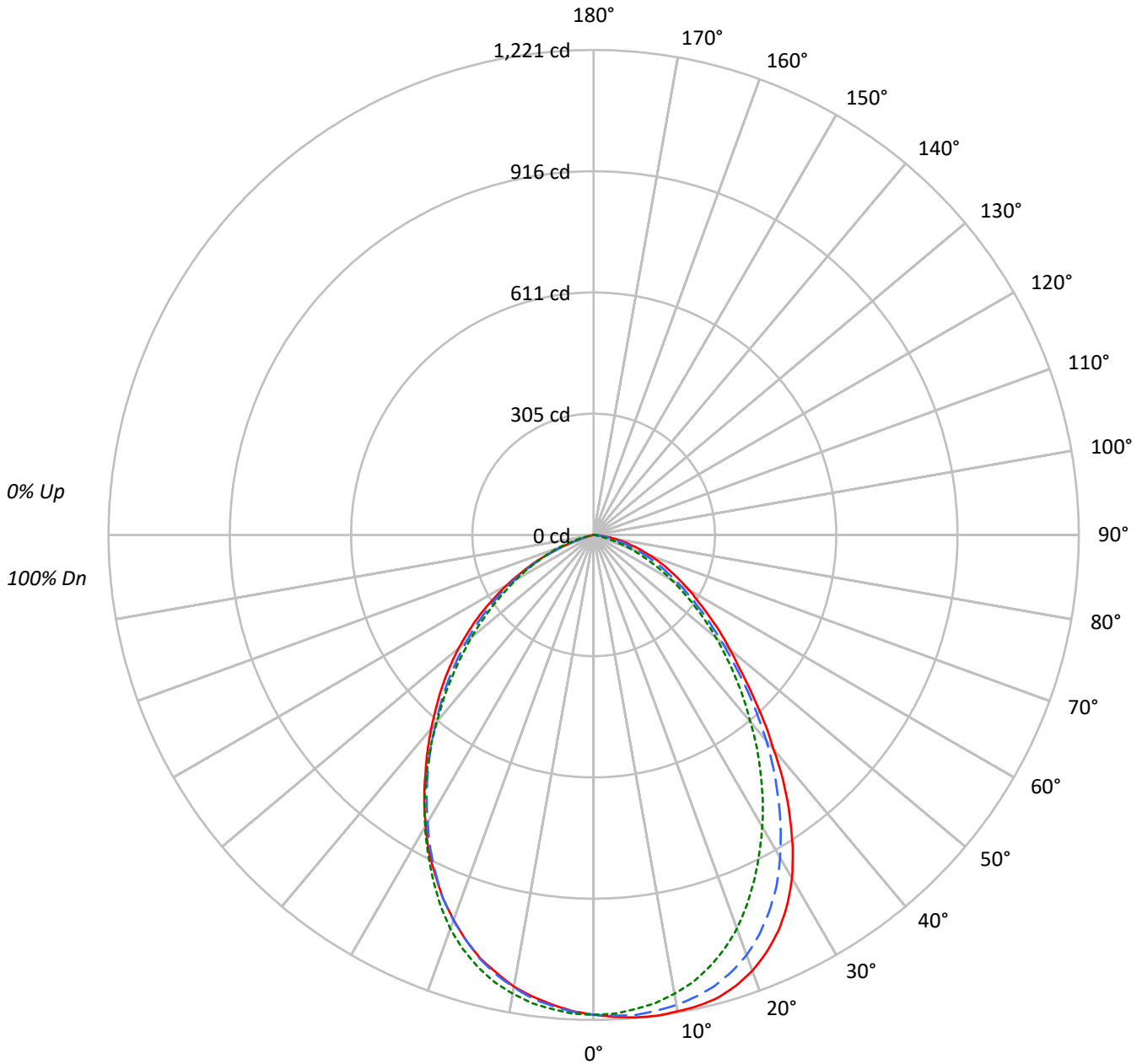
Input Watts (W): 26.8  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P584123

CATALOG NUMBER: HC825D010-HM82555830-81RWWC

### Luminous Intensity Polar Plot





TEST NUMBER: P584123

CATALOG NUMBER: HC825D010-HM82555830-81RWWC

**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°	37253	37253	37253
5°	37749	37098	36749
10°	38135	36720	36165
15°	38516	35947	35225
20°	38325	34617	33823
25°	37430	32547	32105
30°	35553	30212	30095
35°	32363	27567	27808
40°	28375	24676	25585
45°	24478	21944	23492
50°	21434	19271	21281
55°	18989	16564	18730
60°	17114	13932	15523
65°	15417	11178	11893
70°	13524	8141	6537
75°	11533	4230	1739
80°	8879	1137	284
85°	5732	0	0



TEST NUMBER: P584123

CATALOG NUMBER: HC825D010-HM82555830-81RWWC

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	114.0	5.0
10°-20°	320.5	14.0
20°-30°	454.8	19.8
30°-40°	478.8	20.9
40°-50°	407.3	17.7
50°-60°	294.3	12.8
60°-70°	167.4	7.3
70°-80°	52.7	2.3
80°-90°	6.4	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°	889.3	38.7
0°-40°	1368.0	59.6
0°-60°	2069.7	90.1
0°-90°	2296.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2296.2	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1208	1208	1208	1208	1208	
5°	1220	1213	1198	1190	1187	116
15°	1206	1176	1126	1105	1103	340
25°	1100	1045	957	940	944	504
35°	860	810	732	728	739	535
45°	561	540	503	516	539	436
55°	353	327	308	326	348	319
65°	211	182	153	152	163	210
75°	97	74	36	16	15	104
85°	16	10	0	0	0	21
90°	0	0	0	0	0	



TEST NUMBER: P584123

CATALOG NUMBER: HC825D010-HM82555830-81RWWC

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	1208.1	1208.1	1208.1	1208.1	1208.1	1208.1	1208.1	1208.1	1208.1	1208.1	1208.1
2.5°	1214.7	1216.3	1213.1	1213.1	1216.3	1213.1	1214.7	1214.7	1213.1	1213.1	1211.5
5°	1219.5	1217.9	1217.9	1217.9	1219.5	1216.3	1214.7	1216.3	1213.1	1213.1	1213.1
7.5°	1221.1	1221.1	1219.5	1217.9	1217.9	1217.9	1216.3	1214.7	1213.1	1209.7	1208.1
10°	1217.9	1217.9	1219.5	1216.3	1216.3	1213.1	1213.1	1209.7	1209.7	1206.5	1201.7
12.5°	1214.7	1213.1	1213.1	1209.7	1209.7	1206.5	1206.5	1201.7	1200.1	1195.3	1190.5
15°	1206.5	1204.9	1201.7	1200.1	1198.5	1196.9	1193.7	1192.1	1187.2	1180.7	1175.9
17.5°	1190.5	1188.8	1187.2	1184.0	1180.7	1179.1	1177.5	1172.7	1166.2	1161.4	1153.4
20°	1167.9	1166.2	1166.2	1161.4	1159.8	1155.0	1153.4	1146.9	1142.0	1132.4	1126.0
22.5°	1137.2	1138.8	1135.6	1132.4	1129.2	1124.2	1121.0	1114.6	1106.6	1096.9	1088.8
25°	1100.1	1101.7	1098.5	1095.3	1090.4	1087.2	1084.0	1074.3	1066.3	1054.9	1045.3
27.5°	1053.3	1053.3	1053.3	1050.1	1042.1	1040.5	1037.2	1027.5	1016.2	1006.5	996.9
30°	998.5	996.9	996.9	992.0	988.8	982.4	977.6	969.4	961.4	950.1	938.8
32.5°	932.4	934.0	929.1	925.9	921.1	921.1	914.6	908.1	898.5	887.1	875.9
35°	859.7	861.4	858.1	856.5	848.5	846.9	845.2	837.2	830.7	822.6	809.8
37.5°	785.6	784.0	782.4	782.4	777.5	774.3	771.0	766.2	756.5	750.1	743.7
40°	704.9	704.9	704.9	703.3	701.7	698.5	696.9	693.6	687.2	680.7	675.9
42.5°	632.4	632.4	630.7	629.1	625.8	627.4	624.2	621.0	614.6	609.7	606.5
45°	561.3	561.3	561.3	562.9	559.7	554.9	554.9	551.7	548.5	545.2	540.4
47.5°	498.4	503.2	500.0	498.4	500.0	493.6	493.6	490.4	487.2	484.0	477.4
50°	446.8	446.8	446.8	443.6	442.0	442.0	437.1	433.9	432.3	429.1	422.6
52.5°	400.1	396.9	396.9	395.2	393.5	390.3	390.3	387.1	380.7	377.5	372.6
55°	353.2	353.2	351.6	350.0	348.4	346.8	345.2	340.4	337.2	332.3	327.4
57.5°	311.4	314.6	313.0	309.7	306.4	306.4	303.2	300.0	295.2	290.4	285.5
60°	277.5	275.8	275.8	274.2	271.0	269.4	267.7	262.9	258.1	253.3	248.5
62.5°	241.9	241.9	241.9	238.7	235.5	233.9	232.3	229.1	222.6	217.7	214.5
65°	211.3	209.7	208.1	206.5	204.9	201.6	200.0	196.8	192.0	187.1	182.3
67.5°	180.6	179.0	179.0	177.4	172.6	171.0	171.0	166.2	161.4	156.4	151.6
70°	150.0	150.0	150.0	146.8	145.2	143.6	142.0	138.7	133.9	129.0	124.2
72.5°	124.2	122.6	122.6	121.0	116.1	114.5	112.9	109.7	104.9	101.6	98.4
75°	96.8	96.8	95.1	93.5	91.9	90.3	88.7	85.5	80.7	75.9	74.2
77.5°	74.2	72.5	72.5	70.9	67.7	66.1	66.1	62.9	58.1	54.9	51.6
80°	50.0	51.6	50.0	48.4	46.8	45.2	43.5	41.9	38.7	35.5	32.3
82.5°	30.6	32.3	30.6	30.6	29.0	27.4	27.4	24.2	22.6	21.0	19.4
85°	16.2	16.2	16.2	16.2	14.6	14.6	14.6	12.9	11.3	9.6	9.6
87.5°	4.8	6.4	4.8	4.8	4.8	4.8	4.8	4.8	3.2	3.2	3.2
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: P584123

CATALOG NUMBER: HC825D010-HM82555830-81RWWC

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	1208.1	1208.1	1208.1	1208.1	1208.1	1208.1	1208.1	1208.1	1208.1	1208.1	1208.1
2.5°	1213.1	1211.5	1209.7	1209.7	1209.7	1209.7	1209.7	1208.1	1206.5	1206.5	1206.5
5°	1209.7	1209.7	1209.7	1208.1	1206.5	1206.5	1203.3	1201.7	1200.1	1198.5	1196.9
7.5°	1206.5	1203.3	1201.7	1200.1	1198.5	1198.5	1195.3	1192.1	1192.1	1188.8	1185.6
10°	1196.9	1195.3	1192.1	1188.8	1187.2	1185.6	1182.4	1177.5	1175.9	1172.7	1169.5
12.5°	1185.6	1182.4	1179.1	1172.7	1171.1	1169.5	1163.0	1158.2	1155.0	1153.4	1145.2
15°	1171.1	1164.6	1159.8	1151.7	1150.1	1146.9	1142.0	1137.2	1130.8	1126.0	1122.6
17.5°	1145.2	1138.8	1130.8	1122.6	1119.4	1119.4	1111.4	1105.0	1096.9	1093.6	1087.2
20°	1114.6	1106.6	1100.1	1090.4	1085.6	1080.7	1075.9	1066.3	1059.7	1054.9	1046.9
22.5°	1079.1	1067.9	1059.7	1050.1	1042.1	1037.2	1029.1	1021.1	1013.0	1008.2	1001.7
25°	1033.9	1024.3	1011.4	1001.7	996.9	990.4	980.8	972.6	964.6	956.6	953.3
27.5°	984.0	971.0	959.8	948.4	943.6	938.8	927.5	917.8	911.4	903.3	900.1
30°	929.1	916.2	903.3	893.7	888.7	880.7	874.3	863.0	854.9	848.5	840.4
32.5°	866.2	856.5	845.2	830.7	827.5	821.0	811.4	806.6	796.8	792.0	785.6
35°	798.4	792.0	780.7	769.4	764.6	761.4	753.3	743.7	737.1	732.3	729.1
37.5°	733.9	725.9	714.5	706.5	703.3	698.5	688.8	683.9	677.5	674.2	667.8
40°	664.6	656.6	648.4	643.6	638.8	635.6	629.1	624.2	617.8	613.0	611.4
42.5°	596.8	592.0	585.5	579.1	577.5	572.7	569.5	564.5	559.7	558.1	553.3
45°	535.5	530.7	524.2	517.8	516.2	513.0	511.4	506.5	503.2	503.2	503.2
47.5°	474.2	469.4	463.0	459.7	461.4	454.9	454.9	453.3	450.0	450.0	451.6
50°	419.4	412.9	411.3	408.1	404.9	401.7	403.3	398.5	398.5	401.7	400.1
52.5°	367.8	361.3	359.7	356.5	354.9	354.9	353.2	353.2	351.6	353.2	353.2
55°	321.0	316.2	313.0	309.7	308.1	308.1	308.1	306.4	304.8	308.1	309.7
57.5°	279.1	277.5	274.2	269.4	267.7	266.1	264.5	264.5	264.5	264.5	266.1
60°	241.9	238.7	235.5	230.7	230.7	229.1	227.5	225.9	225.9	225.9	225.9
62.5°	209.7	204.9	200.0	196.8	195.2	193.6	192.0	188.7	188.7	188.7	188.7
65°	177.4	172.6	169.4	166.2	163.0	163.0	159.6	158.0	154.8	153.2	150.0
67.5°	146.8	143.6	140.4	135.5	133.9	132.3	129.0	127.4	122.6	121.0	119.4
70°	119.4	114.5	111.3	108.1	106.5	103.3	100.0	96.8	93.5	90.3	87.1
72.5°	93.5	88.7	85.5	82.3	79.1	79.1	74.2	70.9	66.1	62.9	58.1
75°	69.3	64.5	61.3	56.5	54.9	53.2	48.4	45.2	40.3	35.5	32.3
77.5°	46.8	43.5	40.3	35.5	32.3	32.3	27.4	24.2	21.0	16.2	14.6
80°	29.0	25.8	22.6	19.4	19.4	16.2	14.6	11.3	8.0	6.4	4.8
82.5°	16.2	14.6	12.9	9.6	9.6	8.0	6.4	4.8	3.2	1.6	1.6
85°	8.0	6.4	4.8	4.8	3.2	3.2	3.2	1.6	1.6	0.0	0.0
87.5°	3.2	1.6	1.6	1.6	1.6	1.6	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: P584123

CATALOG NUMBER: HC825D010-HM82555830-81RWWC

**CANDELA DISTRIBUTION (continued):**

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	1208.1	1208.1	1208.1	1208.1	1208.1	1208.1	1208.1	1208.1	1208.1	1208.1	1208.1
2.5°	1204.9	1204.9	1203.3	1203.3	1203.3	1201.7	1203.3	1201.7	1201.7	1201.7	1203.3
5°	1198.5	1195.3	1195.3	1193.7	1193.7	1192.1	1193.7	1192.1	1190.5	1188.8	1190.5
7.5°	1185.6	1182.4	1180.7	1179.1	1179.1	1179.1	1177.5	1175.9	1177.5	1172.7	1175.9
10°	1167.9	1166.2	1163.0	1161.4	1159.8	1161.4	1159.8	1156.6	1156.6	1156.6	1155.0
12.5°	1145.2	1142.0	1140.4	1138.8	1135.6	1135.6	1137.2	1134.0	1134.0	1130.8	1130.8
15°	1117.8	1114.6	1111.4	1111.4	1108.2	1108.2	1106.6	1106.6	1105.0	1103.4	1103.4
17.5°	1084.0	1079.1	1075.9	1077.5	1075.9	1074.3	1074.3	1071.1	1069.5	1071.1	1071.1
20°	1043.7	1040.5	1037.2	1038.8	1035.5	1033.9	1035.5	1030.7	1032.3	1032.3	1032.3
22.5°	998.5	996.9	992.0	992.0	988.8	987.2	988.8	988.8	990.4	988.8	988.8
25°	948.4	945.2	942.0	942.0	940.4	938.8	940.4	942.0	940.4	942.0	942.0
27.5°	895.3	890.5	890.5	887.1	887.1	888.7	887.1	888.7	890.5	890.5	893.7
30°	837.2	835.6	834.0	832.4	832.4	834.0	834.0	834.0	835.6	838.8	838.8
32.5°	782.4	779.1	775.9	775.9	779.1	777.5	779.1	779.1	782.4	782.4	785.6
35°	722.7	722.7	719.5	721.1	721.1	721.1	721.1	724.3	727.5	729.1	732.3
37.5°	667.8	663.0	664.6	664.6	666.2	664.6	669.4	669.4	672.6	672.6	675.9
40°	608.1	608.1	609.7	608.1	609.7	609.7	613.0	616.2	617.8	621.0	622.6
42.5°	551.7	554.9	551.7	553.3	554.9	556.5	558.1	559.7	566.1	569.5	574.3
45°	500.0	501.6	503.2	504.9	503.2	506.5	508.1	511.4	516.2	517.8	519.4
47.5°	450.0	451.6	453.3	454.9	454.9	458.1	459.7	463.0	466.2	467.8	469.4
50°	401.7	404.9	406.5	406.5	408.1	411.3	414.5	414.5	417.8	422.6	424.3
52.5°	358.1	358.1	361.3	362.9	364.5	364.5	369.4	371.0	372.6	375.9	379.1
55°	309.7	314.6	316.2	316.2	319.4	322.6	324.2	325.8	325.8	332.3	332.3
57.5°	267.7	269.4	272.6	272.6	272.6	277.5	277.5	280.7	282.3	283.9	287.1
60°	225.9	229.1	229.1	230.7	229.1	232.3	233.9	237.1	238.7	240.3	241.9
62.5°	187.1	187.1	188.7	188.7	188.7	188.7	192.0	192.0	195.2	196.8	198.4
65°	150.0	150.0	150.0	150.0	150.0	150.0	150.0	150.0	151.6	151.6	154.8
67.5°	116.1	114.5	111.3	112.9	111.3	111.3	109.7	109.7	111.3	111.3	114.5
70°	83.9	82.3	79.1	79.1	77.5	75.9	74.2	72.5	70.9	70.9	70.9
72.5°	54.9	51.6	46.8	45.2	45.2	41.9	38.7	37.1	37.1	37.1	37.1
75°	27.4	24.2	21.0	19.4	19.4	16.2	17.8	16.2	16.2	16.2	16.2
77.5°	11.3	8.0	6.4	6.4	6.4	4.8	4.8	4.8	4.8	4.8	4.8
80°	3.2	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
82.5°	1.6	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: P584123

CATALOG NUMBER: HC825D010-HM82555830-81RWWC

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1208.1	1208.1	1208.1	1208.1	1208.1	1208.1	1208.1	1208.1
2.5°	1201.7	1201.7	1198.5	1200.1	1200.1	1200.1	1200.1	1200.1
5°	1187.2	1188.8	1187.2	1188.8	1188.8	1187.2	1187.2	1187.2
7.5°	1172.7	1174.3	1172.7	1174.3	1174.3	1174.3	1172.7	1172.7
10°	1155.0	1155.0	1155.0	1155.0	1155.0	1153.4	1155.0	1155.0
12.5°	1130.8	1130.8	1130.8	1132.4	1132.4	1130.8	1130.8	1129.2
15°	1105.0	1101.7	1103.4	1105.0	1103.4	1103.4	1103.4	1103.4
17.5°	1069.5	1071.1	1069.5	1069.5	1069.5	1069.5	1071.1	1069.5
20°	1032.3	1032.3	1033.9	1032.3	1032.3	1032.3	1032.3	1030.7
22.5°	990.4	988.8	988.8	990.4	990.4	988.8	990.4	990.4
25°	943.6	945.2	943.6	943.6	945.2	945.2	945.2	943.6
27.5°	893.7	895.3	896.9	895.3	895.3	895.3	896.9	898.5
30°	842.0	845.2	842.0	842.0	845.2	843.6	845.2	845.2
32.5°	787.2	792.0	788.8	792.0	792.0	793.6	792.0	793.6
35°	732.3	737.1	737.1	737.1	738.7	740.4	740.4	738.7
37.5°	680.7	682.3	682.3	685.5	687.2	688.8	688.8	687.2
40°	627.4	630.7	632.4	632.4	632.4	635.6	638.8	635.6
42.5°	575.9	577.5	579.1	579.1	582.3	583.9	585.5	585.5
45°	525.9	529.1	530.7	532.3	533.9	537.1	535.5	538.7
47.5°	474.2	479.0	480.6	482.4	485.6	487.2	488.8	490.4
50°	427.5	430.7	430.7	433.9	438.7	438.7	442.0	443.6
52.5°	380.7	382.3	383.9	385.5	388.7	391.9	391.9	395.2
55°	335.6	337.2	337.2	338.8	340.4	346.8	348.4	348.4
57.5°	288.7	288.7	292.0	293.6	295.2	298.4	298.4	298.4
60°	243.5	245.1	245.1	246.8	248.5	251.7	253.3	251.7
62.5°	198.4	200.0	200.0	201.6	204.9	206.5	204.9	204.9
65°	156.4	158.0	158.0	159.6	163.0	163.0	161.4	163.0
67.5°	114.5	114.5	114.5	114.5	114.5	114.5	114.5	114.5
70°	72.5	70.9	69.3	70.9	70.9	70.9	69.3	72.5
72.5°	35.5	37.1	37.1	37.1	37.1	37.1	37.1	35.5
75°	16.2	16.2	14.6	14.6	14.6	16.2	16.2	14.6
77.5°	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
80°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
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)