

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: P584106

Luminaire Tested: **HC825D010-HM82555827-81RWWC**

Issue Date: 10/21/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P584106  
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-HM82555827-81RWWC  
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, SPECULAR TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2351.4 lumens  
Efficiency: N/A  
Efficacy: 87.7 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

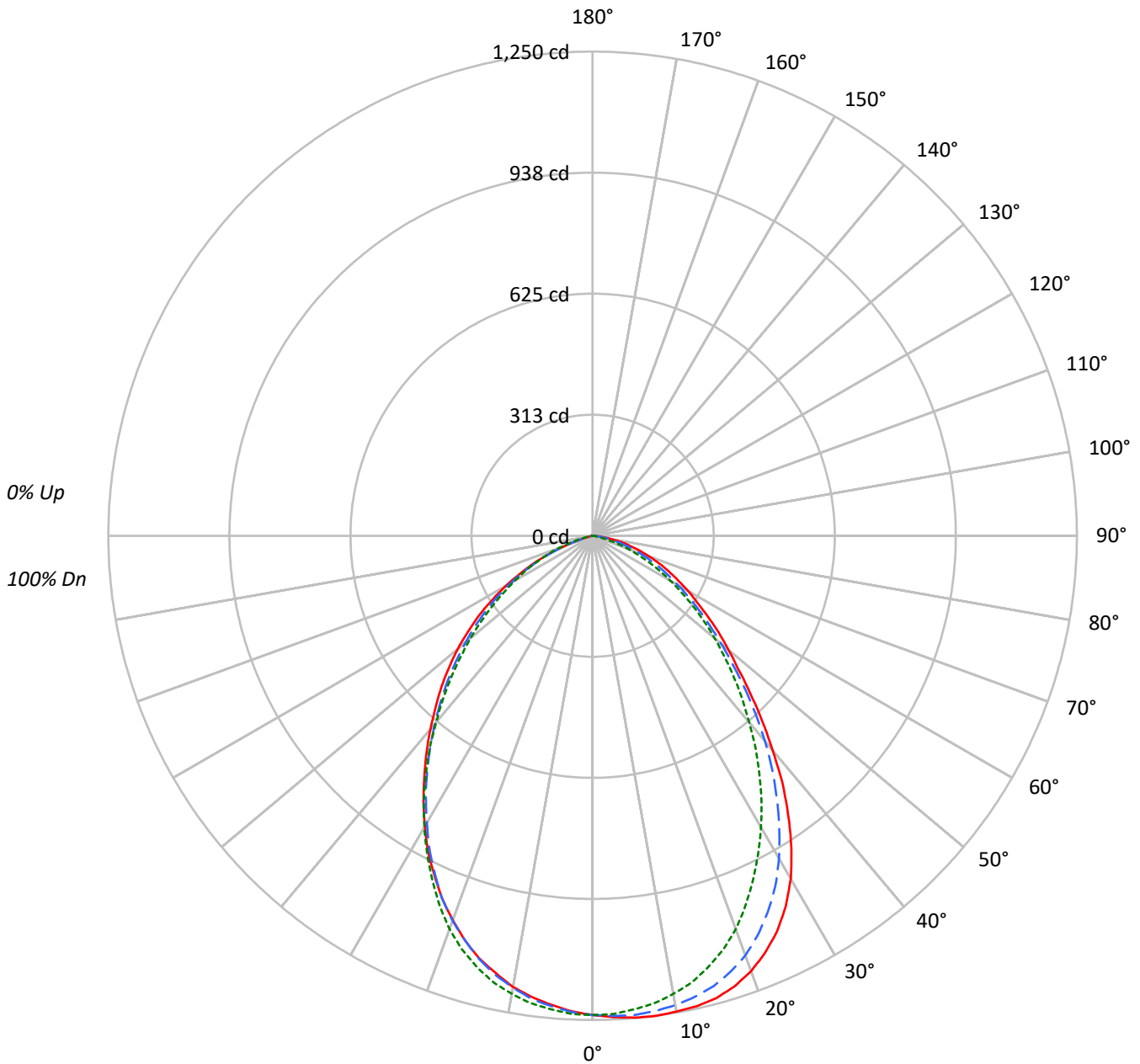
Input Watts (W): 26.8  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20									20									20									20									
RC	80									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°	38151	38151	38151
5°	38655	37990	37631
10°	39052	37603	37036
15°	39445	36808	36071
20°	39244	35450	34640
25°	38332	33330	32877
30°	36408	30935	30818
35°	33142	28233	28482
40°	29055	25267	26201
45°	25067	22476	24059
50°	21948	19731	21789
55°	19451	16962	19182
60°	17521	14259	15893
65°	15790	11455	12171
70°	13857	8349	6708
75°	11807	4337	1775
80°	9110	1172	284
85°	5838	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	116.7	5.0
10°-20°	328.2	14.0
20°-30°	465.8	19.8
30°-40°	490.3	20.9
40°-50°	417.1	17.7
50°-60°	301.4	12.8
60°-70°	171.4	7.3
70°-80°	54.0	2.3
80°-90°	6.6	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°	910.7	38.7
0°-40°	1401.0	59.6
0°-60°	2119.4	90.1
0°-90°	2351.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2351.4	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1237	1237	1237	1237	1237	
5°	1249	1242	1227	1219	1216	119
15°	1236	1204	1153	1132	1130	348
25°	1127	1070	980	963	966	516
35°	880	829	750	745	757	548
45°	575	553	515	529	552	447
55°	362	335	316	334	357	326
65°	216	187	157	155	167	215
75°	99	76	36	16	15	107
85°	16	10	0	0	0	21
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	1237.2	1237.2	1237.2	1237.2	1237.2	1237.2	1237.2	1237.2	1237.2	1237.2	1237.2
2.5°	1243.9	1245.5	1242.2	1242.2	1245.5	1242.2	1243.9	1243.9	1242.2	1242.2	1240.6
5°	1248.8	1247.2	1247.2	1247.2	1248.8	1245.5	1243.9	1245.5	1242.2	1242.2	1242.2
7.5°	1250.4	1250.4	1248.8	1247.2	1247.2	1247.2	1245.5	1243.9	1242.2	1238.8	1237.2
10°	1247.2	1247.2	1248.8	1245.5	1245.5	1242.2	1242.2	1238.8	1238.8	1235.6	1230.6
12.5°	1243.9	1242.2	1242.2	1238.8	1238.8	1235.6	1235.6	1230.6	1229.0	1224.0	1219.1
15°	1235.6	1233.9	1230.6	1229.0	1227.3	1225.7	1222.4	1220.8	1215.7	1209.2	1204.2
17.5°	1219.1	1217.4	1215.7	1212.4	1209.2	1207.5	1205.9	1200.9	1194.3	1189.3	1181.1
20°	1195.9	1194.3	1194.3	1189.3	1187.7	1182.8	1181.1	1174.4	1169.5	1159.6	1153.0
22.5°	1164.6	1166.2	1162.9	1159.6	1156.3	1151.3	1148.0	1141.5	1133.1	1123.3	1115.0
25°	1126.6	1128.2	1124.9	1121.6	1116.7	1113.3	1110.0	1100.2	1091.8	1080.3	1070.4
27.5°	1078.7	1078.7	1078.7	1075.4	1067.1	1065.4	1062.2	1052.2	1040.7	1030.7	1020.9
30°	1022.5	1020.9	1020.9	1015.9	1012.5	1006.0	1001.0	992.7	984.5	973.0	961.4
32.5°	954.8	956.5	951.4	948.1	943.2	943.2	936.6	930.0	920.1	908.5	897.0
35°	880.4	882.1	878.8	877.2	868.8	867.2	865.5	857.3	850.8	842.4	829.2
37.5°	804.4	802.8	801.1	801.1	796.2	792.9	789.6	784.6	774.7	768.2	761.5
40°	721.8	721.8	721.8	720.2	718.5	715.3	713.6	710.3	703.7	697.1	692.1
42.5°	647.6	647.6	645.9	644.2	640.9	642.5	639.2	636.0	629.4	624.5	621.1
45°	574.8	574.8	574.8	576.5	573.2	568.3	568.3	565.0	561.6	558.3	553.4
47.5°	510.4	515.4	512.1	510.4	512.1	505.5	505.5	502.2	498.8	495.5	489.0
50°	457.5	457.5	457.5	454.2	452.6	452.6	447.7	444.4	442.7	439.3	432.8
52.5°	409.7	406.4	406.4	404.7	403.1	399.8	399.8	396.4	389.8	386.5	381.6
55°	361.8	361.8	360.1	358.5	356.8	355.1	353.5	348.5	345.3	340.3	335.3
57.5°	318.9	322.1	320.5	317.1	313.8	313.8	310.5	307.2	302.3	297.4	292.4
60°	284.1	282.5	282.5	280.8	277.6	275.8	274.2	269.2	264.3	259.4	254.3
62.5°	247.8	247.8	247.8	244.5	241.2	239.5	237.9	234.5	227.9	223.0	219.7
65°	216.4	214.7	213.0	211.4	209.8	206.5	204.8	201.5	196.6	191.6	186.6
67.5°	185.0	183.4	183.4	181.7	176.8	175.1	175.1	170.1	165.2	160.2	155.3
70°	153.7	153.7	153.7	150.3	148.6	147.0	145.4	142.1	137.1	132.1	127.2
72.5°	127.2	125.5	125.5	123.9	119.0	117.3	115.7	112.4	107.3	104.1	100.8
75°	99.1	99.1	97.5	95.8	94.2	92.6	90.8	87.5	82.6	77.7	76.0
77.5°	76.0	74.4	74.4	72.7	69.3	67.7	67.7	64.4	59.5	56.2	52.9
80°	51.3	52.9	51.3	49.5	47.9	46.2	44.6	42.9	39.7	36.4	33.1
82.5°	31.4	33.1	31.4	31.4	29.7	28.0	28.0	24.8	23.1	21.5	19.8
85°	16.5	16.5	16.5	16.5	14.9	14.9	14.9	13.3	11.6	10.0	10.0
87.5°	4.9	6.6	4.9	4.9	4.9	4.9	4.9	4.9	3.3	3.3	3.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	1237.2	1237.2	1237.2	1237.2	1237.2	1237.2	1237.2	1237.2	1237.2	1237.2	1237.2
2.5°	1242.2	1240.6	1238.8	1238.8	1238.8	1238.8	1238.8	1237.2	1235.6	1235.6	1235.6
5°	1238.8	1238.8	1238.8	1237.2	1235.6	1235.6	1232.3	1230.6	1229.0	1227.3	1225.7
7.5°	1235.6	1232.3	1230.6	1229.0	1227.3	1227.3	1224.0	1220.8	1220.8	1217.4	1214.1
10°	1225.7	1224.0	1220.8	1217.4	1215.7	1214.1	1210.8	1205.9	1204.2	1200.9	1197.5
12.5°	1214.1	1210.8	1207.5	1200.9	1199.3	1197.5	1191.0	1186.0	1182.8	1181.1	1172.8
15°	1199.3	1192.6	1187.7	1179.5	1177.7	1174.4	1169.5	1164.6	1158.0	1153.0	1149.7
17.5°	1172.8	1166.2	1158.0	1149.7	1146.4	1146.4	1138.2	1131.5	1123.3	1120.0	1113.3
20°	1141.5	1133.1	1126.6	1116.7	1111.7	1106.7	1101.8	1091.8	1085.3	1080.3	1072.0
22.5°	1105.1	1093.5	1085.3	1075.4	1067.1	1062.2	1053.8	1045.6	1037.4	1032.4	1025.8
25°	1058.9	1048.9	1035.8	1025.8	1020.9	1014.3	1004.3	996.1	987.8	979.6	976.3
27.5°	1007.6	994.5	982.9	971.2	966.3	961.4	949.8	939.9	933.3	925.0	921.7
30°	951.4	938.3	925.0	915.2	910.1	901.9	895.3	883.7	875.5	868.8	860.6
32.5°	887.0	877.2	865.5	850.8	847.4	840.8	830.9	825.9	816.0	811.1	804.4
35°	817.7	811.1	799.5	787.9	783.0	779.7	771.4	761.5	754.9	750.0	746.6
37.5°	751.6	743.3	731.8	723.5	720.2	715.3	705.3	700.4	693.8	690.5	683.8
40°	680.5	672.3	664.0	659.1	654.1	650.9	644.2	639.2	632.7	627.7	626.1
42.5°	611.2	606.3	599.6	593.0	591.4	586.4	583.2	578.1	573.2	571.6	566.6
45°	548.4	543.5	536.8	530.3	528.6	525.3	523.7	518.6	515.4	515.4	515.4
47.5°	485.7	480.6	474.1	470.8	472.4	465.8	465.8	464.2	460.8	460.8	462.6
50°	429.5	422.9	421.3	417.9	414.6	411.3	412.9	408.0	408.0	411.3	409.7
52.5°	376.6	370.0	368.4	365.1	363.4	363.4	361.8	361.8	360.1	361.8	361.8
55°	328.7	323.8	320.5	317.1	315.5	315.5	315.5	313.8	312.2	315.5	317.1
57.5°	285.8	284.1	280.8	275.8	274.2	272.5	270.9	270.9	270.9	270.9	272.5
60°	247.8	244.5	241.2	236.3	236.3	234.5	232.9	231.2	231.2	231.2	231.2
62.5°	214.7	209.8	204.8	201.5	199.9	198.3	196.6	193.2	193.2	193.2	193.2
65°	181.7	176.8	173.4	170.1	166.8	166.8	163.5	161.9	158.6	157.0	153.7
67.5°	150.3	147.0	143.7	138.8	137.1	135.5	132.1	130.5	125.5	123.9	122.2
70°	122.2	117.3	114.0	110.6	109.0	105.7	102.4	99.1	95.8	92.6	89.2
72.5°	95.8	90.8	87.5	84.2	80.9	80.9	76.0	72.7	67.7	64.4	59.5
75°	71.0	66.1	62.8	57.8	56.2	54.5	49.5	46.2	41.3	36.4	33.1
77.5°	47.9	44.6	41.3	36.4	33.1	33.1	28.0	24.8	21.5	16.5	14.9
80°	29.7	26.4	23.1	19.8	19.8	16.5	14.9	11.6	8.2	6.6	4.9
82.5°	16.5	14.9	13.3	10.0	10.0	8.2	6.6	4.9	3.3	1.6	1.6
85°	8.2	6.6	4.9	4.9	3.3	3.3	3.3	1.6	1.6	0.0	0.0
87.5°	3.3	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



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**CANDELA DISTRIBUTION (continued):**

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	1237.2	1237.2	1237.2	1237.2	1237.2	1237.2	1237.2	1237.2	1237.2	1237.2	1237.2
2.5°	1233.9	1233.9	1232.3	1232.3	1232.3	1230.6	1232.3	1230.6	1230.6	1230.6	1232.3
5°	1227.3	1224.0	1224.0	1222.4	1222.4	1220.8	1222.4	1220.8	1219.1	1217.4	1219.1
7.5°	1214.1	1210.8	1209.2	1207.5	1207.5	1207.5	1205.9	1204.2	1205.9	1200.9	1204.2
10°	1195.9	1194.3	1191.0	1189.3	1187.7	1189.3	1187.7	1184.4	1184.4	1184.4	1182.8
12.5°	1172.8	1169.5	1167.9	1166.2	1162.9	1162.9	1164.6	1161.3	1161.3	1158.0	1158.0
15°	1144.7	1141.5	1138.2	1138.2	1134.8	1134.8	1133.1	1133.1	1131.5	1129.9	1129.9
17.5°	1110.0	1105.1	1101.8	1103.5	1101.8	1100.2	1100.2	1096.9	1095.1	1096.9	1096.9
20°	1068.7	1065.4	1062.2	1063.8	1060.5	1058.9	1060.5	1055.6	1057.2	1057.2	1057.2
22.5°	1022.5	1020.9	1015.9	1015.9	1012.5	1010.9	1012.5	1012.5	1014.3	1012.5	1012.5
25°	971.2	968.0	964.7	964.7	963.0	961.4	963.0	964.7	963.0	964.7	964.7
27.5°	916.8	911.9	911.9	908.5	908.5	910.1	908.5	910.1	911.9	911.9	915.2
30°	857.3	855.7	854.0	852.4	852.4	854.0	854.0	854.0	855.7	859.0	859.0
32.5°	801.1	797.8	794.6	794.6	797.8	796.2	797.8	797.8	801.1	801.1	804.4
35°	740.0	740.0	736.7	738.4	738.4	738.4	738.4	741.7	744.9	746.6	750.0
37.5°	683.8	678.9	680.5	680.5	682.2	680.5	685.5	685.5	688.9	688.9	692.1
40°	622.7	622.7	624.5	622.7	624.5	624.5	627.7	631.0	632.7	636.0	637.6
42.5°	565.0	568.3	565.0	566.6	568.3	569.9	571.6	573.2	579.8	583.2	588.1
45°	512.1	513.7	515.4	517.0	515.4	518.6	520.3	523.7	528.6	530.3	531.9
47.5°	460.8	462.6	464.2	465.8	465.8	469.1	470.8	474.1	477.4	479.0	480.6
50°	411.3	414.6	416.2	416.2	417.9	421.3	424.6	424.6	427.8	432.8	434.4
52.5°	366.7	366.7	370.0	371.7	373.3	373.3	378.2	380.0	381.6	384.9	388.2
55°	317.1	322.1	323.8	323.8	327.1	330.4	332.0	333.6	333.6	340.3	340.3
57.5°	274.2	275.8	279.2	279.2	279.2	284.1	284.1	287.4	289.1	290.7	294.0
60°	231.2	234.5	234.5	236.3	234.5	237.9	239.5	242.8	244.5	246.1	247.8
62.5°	191.6	191.6	193.2	193.2	193.2	193.2	196.6	196.6	199.9	201.5	203.2
65°	153.7	153.7	153.7	153.7	153.7	153.7	153.7	153.7	155.3	155.3	158.6
67.5°	119.0	117.3	114.0	115.7	114.0	114.0	112.4	112.4	114.0	114.0	117.3
70°	85.9	84.2	80.9	80.9	79.3	77.7	76.0	74.4	72.7	72.7	72.7
72.5°	56.2	52.9	47.9	46.2	46.2	42.9	39.7	38.0	38.0	38.0	38.0
75°	28.0	24.8	21.5	19.8	19.8	16.5	18.2	16.5	16.5	16.5	16.5
77.5°	11.6	8.2	6.6	6.6	6.6	4.9	4.9	4.9	4.9	4.9	4.9
80°	3.3	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: P584106

CATALOG NUMBER: HC825D010-HM82555827-81RWWC

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1237.2	1237.2	1237.2	1237.2	1237.2	1237.2	1237.2	1237.2
2.5°	1230.6	1230.6	1227.3	1229.0	1229.0	1229.0	1229.0	1229.0
5°	1215.7	1217.4	1215.7	1217.4	1217.4	1215.7	1215.7	1215.7
7.5°	1200.9	1202.6	1200.9	1202.6	1202.6	1202.6	1200.9	1200.9
10°	1182.8	1182.8	1182.8	1182.8	1182.8	1181.1	1182.8	1182.8
12.5°	1158.0	1158.0	1158.0	1159.6	1159.6	1158.0	1158.0	1156.3
15°	1131.5	1128.2	1129.9	1131.5	1129.9	1129.9	1129.9	1129.9
17.5°	1095.1	1096.9	1095.1	1095.1	1095.1	1095.1	1096.9	1095.1
20°	1057.2	1057.2	1058.9	1057.2	1057.2	1057.2	1057.2	1055.6
22.5°	1014.3	1012.5	1012.5	1014.3	1014.3	1012.5	1014.3	1014.3
25°	966.3	968.0	966.3	966.3	968.0	968.0	968.0	966.3
27.5°	915.2	916.8	918.4	916.8	916.8	916.8	918.4	920.1
30°	862.3	865.5	862.3	862.3	865.5	863.9	865.5	865.5
32.5°	806.1	811.1	807.7	811.1	811.1	812.7	811.1	812.7
35°	750.0	754.9	754.9	754.9	756.6	758.2	758.2	756.6
37.5°	697.1	698.7	698.7	702.0	703.7	705.3	705.3	703.7
40°	642.5	645.9	647.6	647.6	647.6	650.9	654.1	650.9
42.5°	589.7	591.4	593.0	593.0	596.3	598.0	599.6	599.6
45°	538.5	541.8	543.5	545.1	546.8	550.1	548.4	551.7
47.5°	485.7	490.6	492.2	493.9	497.2	498.8	500.5	502.2
50°	437.7	441.1	441.1	444.4	449.3	449.3	452.6	454.2
52.5°	389.8	391.5	393.1	394.8	398.1	401.4	401.4	404.7
55°	343.6	345.3	345.3	346.9	348.5	355.1	356.8	356.8
57.5°	295.6	295.6	299.0	300.7	302.3	305.6	305.6	305.6
60°	249.4	251.1	251.1	252.7	254.3	257.7	259.4	257.7
62.5°	203.2	204.8	204.8	206.5	209.8	211.4	209.8	209.8
65°	160.2	161.9	161.9	163.5	166.8	166.8	165.2	166.8
67.5°	117.3	117.3	117.3	117.3	117.3	117.3	117.3	117.3
70°	74.4	72.7	71.0	72.7	72.7	72.7	71.0	74.4
72.5°	36.4	38.0	38.0	38.0	38.0	38.0	38.0	36.4
75°	16.5	16.5	14.9	14.9	14.9	16.5	16.5	14.9
77.5°	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
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)