

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: P584215

Luminaire Tested: **HC825D010-HM82555935-81WWBB**

Issue Date: 10/21/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P584215  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2109-368-17)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 10/21/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC825D010-HM82555935-81WWBB  
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, WHITE BAFFLE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1986.1 lumens  
Efficiency: N/A  
Efficacy: 74.1 lumens/watt  
Spacing Criteria (0/90/45): 1.15 / 1.07 / 1.16  
Luminous Opening: Circular (Dia: 0.67' x H: 0')  
CIE Type: Direct

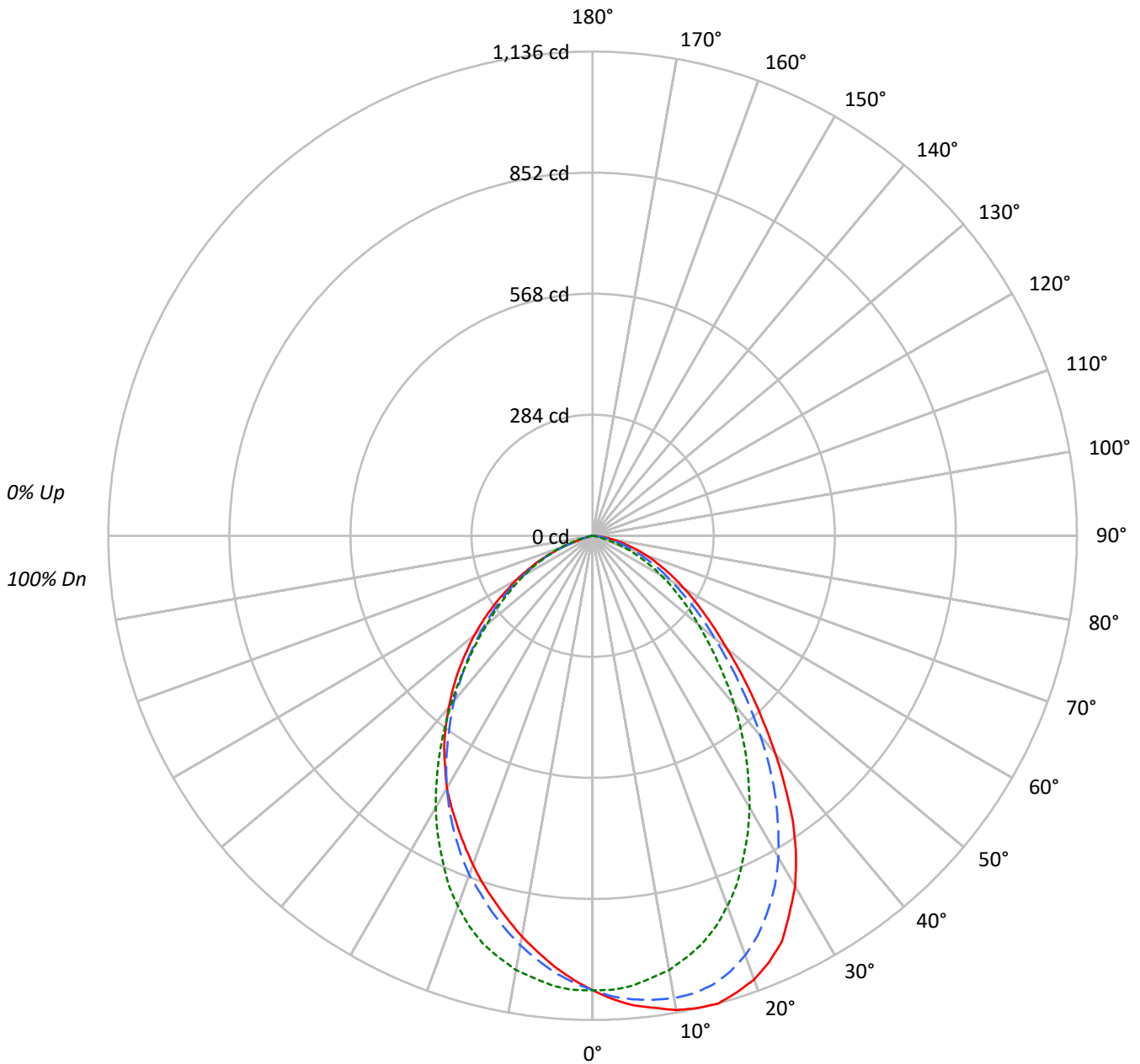
Input Watts (W): 26.8  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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

RF	20					20					20					20					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	86	100	94	89	85	91	86	83	88	84	81	85	82	79	77								
3	95	86	79	74	93	85	78	73	82	76	72	79	74	71	77	73	69	67								
4	88	78	70	64	86	76	69	64	74	68	63	72	66	62	70	65	61	59								
5	82	70	63	57	80	69	62	56	67	61	56	65	60	55	64	59	55	53								
6	76	64	56	51	74	63	56	50	62	55	50	60	54	50	58	53	49	47								
7	71	59	51	45	69	58	51	45	57	50	45	55	49	45	54	49	44	43								
8	66	54	46	41	65	53	46	41	52	46	41	51	45	41	50	44	40	39								
9	62	50	43	37	61	50	42	37	48	42	37	47	41	37	46	41	37	35								
10	59	47	39	34	57	46	39	34	45	39	34	44	38	34	43	38	34	32								

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°
0°	32881	32881	32881
5°	34241	32808	31428
10°	35383	32389	29894
15°	36279	31650	28342
20°	36350	30334	26935
25°	35736	28414	25542
30°	33823	26221	24344
35°	30838	23580	22858
40°	26817	20787	21109
45°	23004	18002	19323
50°	19650	15524	17357
55°	17225	13370	15085
60°	15338	11403	12686
65°	13608	9303	10120
70°	12072	6897	5752
75°	10056	3610	1704
80°	7920	1137	284
85°	5626	566	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	100.5	5.1
10°-20°	281.6	14.2
20°-30°	398.6	20.1
30°-40°	417.0	21.0
40°-50°	347.8	17.5
50°-60°	246.6	12.4
60°-70°	142.1	7.2
70°-80°	45.7	2.3
80°-90°	6.3	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°	780.7	39.3
0°-40°	1197.6	60.3
0°-60°	1792.1	90.2
0°-90°	1986.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1986.1	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1066	1066	1066	1066	1066	
5°	1106	1092	1060	1028	1015	106
15°	1136	1090	991	913	888	320
25°	1050	972	835	768	751	479
35°	819	748	626	593	607	508
45°	528	484	413	418	443	409
55°	320	287	249	261	281	289
65°	186	156	128	128	139	186
75°	84	62	30	14	14	92
85°	16	8	2	0	0	20
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°	1066.3	1066.3	1066.3	1066.3	1066.3	1066.3	1066.3	1066.3	1066.3	1066.3	1066.3
2.5°	1088.6	1087.0	1085.4	1087.0	1085.4	1087.0	1085.4	1085.4	1083.8	1082.2	1082.2
5°	1106.2	1104.6	1104.6	1104.6	1103.0	1101.4	1101.4	1099.7	1096.5	1094.9	1091.8
7.5°	1117.3	1118.9	1118.9	1118.9	1115.7	1115.7	1112.5	1109.3	1106.2	1103.0	1098.1
10°	1130.0	1130.0	1128.4	1126.8	1123.6	1122.1	1120.5	1117.3	1112.5	1106.2	1101.4
12.5°	1134.8	1134.8	1133.2	1130.0	1128.4	1126.8	1125.2	1120.5	1114.1	1106.2	1099.7
15°	1136.4	1133.2	1131.6	1130.0	1126.8	1122.1	1122.1	1115.7	1107.7	1098.1	1090.2
17.5°	1123.6	1125.2	1122.1	1118.9	1114.1	1110.9	1106.2	1101.4	1091.8	1080.6	1072.7
20°	1107.7	1106.2	1104.6	1099.7	1093.3	1091.8	1087.0	1079.0	1071.1	1058.3	1047.1
22.5°	1082.2	1080.6	1077.4	1074.3	1067.9	1064.6	1059.9	1050.3	1039.2	1026.5	1013.7
25°	1050.3	1047.1	1042.4	1036.0	1031.2	1028.1	1021.6	1012.1	999.4	985.0	972.2
27.5°	999.4	1004.1	1000.9	991.4	986.5	980.2	978.6	965.9	954.7	940.3	926.0
30°	949.9	949.9	945.1	940.3	932.4	927.6	921.3	911.6	900.5	883.0	871.8
32.5°	887.8	886.2	879.8	878.3	871.8	862.3	860.7	847.9	836.7	824.0	809.7
35°	819.2	816.1	809.7	804.9	801.8	796.9	792.1	781.0	769.9	757.0	747.5
37.5°	741.1	741.1	739.6	731.6	728.3	725.2	720.4	709.3	702.9	690.2	680.5
40°	666.2	664.6	659.9	658.3	655.1	650.2	647.1	640.7	631.2	621.6	612.0
42.5°	592.9	594.5	588.1	589.7	583.4	580.2	578.5	569.0	564.2	554.7	546.7
45°	527.5	526.0	522.8	521.2	518.0	514.8	511.7	506.9	498.8	489.3	484.5
47.5°	466.9	462.2	462.2	460.6	459.0	452.6	451.0	446.3	441.5	432.0	425.5
50°	409.6	409.6	409.6	408.0	403.3	401.7	398.5	393.7	388.9	382.5	373.0
52.5°	363.4	363.4	363.4	361.8	355.5	353.8	352.2	345.8	339.5	334.7	328.4
55°	320.4	322.0	320.4	317.1	312.4	312.4	307.6	304.4	298.0	293.3	286.9
57.5°	283.7	283.7	280.6	278.9	275.7	274.1	270.9	267.7	259.8	255.0	247.1
60°	248.7	247.1	247.1	243.9	240.6	237.4	235.9	231.1	227.9	220.0	213.6
62.5°	216.8	216.8	213.6	213.6	207.2	207.2	205.7	200.8	196.0	188.1	184.9
65°	186.5	186.5	184.9	183.3	178.5	176.9	175.4	170.6	165.7	160.9	156.2
67.5°	159.4	159.4	156.2	154.6	151.4	149.8	146.6	143.5	138.7	133.9	129.1
70°	133.9	132.3	130.6	129.1	125.9	124.3	121.1	117.9	113.2	110.0	105.2
72.5°	108.4	108.4	106.8	103.6	102.0	100.4	98.9	95.7	90.8	86.0	82.9
75°	84.4	84.4	84.4	81.3	78.1	76.5	76.5	73.3	70.1	65.4	62.2
77.5°	65.4	63.8	62.2	62.2	59.0	57.4	55.7	54.1	49.4	47.8	44.6
80°	44.6	46.2	44.6	43.0	41.4	39.8	39.8	36.7	35.1	31.9	28.7
82.5°	30.3	28.7	28.7	27.1	27.1	25.5	25.5	22.4	20.8	19.2	17.5
85°	15.9	15.9	14.3	14.3	14.3	12.7	12.7	11.1	11.1	9.5	7.9
87.5°	4.8	4.8	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



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**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	1066.3	1066.3	1066.3	1066.3	1066.3	1066.3	1066.3	1066.3	1066.3	1066.3	1066.3
2.5°	1080.6	1077.4	1075.9	1075.9	1074.3	1072.7	1071.1	1069.5	1066.3	1066.3	1063.0
5°	1088.6	1085.4	1083.8	1079.0	1075.9	1075.9	1069.5	1067.9	1063.0	1059.9	1056.7
7.5°	1094.9	1088.6	1083.8	1079.0	1075.9	1072.7	1066.3	1059.9	1053.5	1047.1	1044.0
10°	1094.9	1088.6	1080.6	1072.7	1069.5	1066.3	1058.3	1048.7	1040.8	1034.4	1026.5
12.5°	1091.8	1082.2	1072.7	1066.3	1059.9	1055.1	1045.6	1036.0	1026.5	1013.7	1007.3
15°	1082.2	1069.5	1059.9	1048.7	1044.0	1036.0	1028.1	1013.7	1002.5	991.4	983.4
17.5°	1063.0	1047.1	1036.0	1024.8	1016.8	1012.1	999.4	986.5	973.8	961.1	951.6
20°	1034.4	1020.0	1007.3	993.0	986.5	980.2	964.3	951.6	938.8	924.4	914.8
22.5°	999.4	985.0	967.5	956.3	946.7	938.8	924.4	910.0	897.3	884.6	871.8
25°	956.3	941.9	926.0	908.5	902.1	894.1	878.3	863.8	849.5	835.1	824.0
27.5°	910.0	891.0	878.3	859.1	852.7	844.8	827.2	811.3	798.5	787.3	774.6
30°	854.3	840.0	822.4	804.9	798.5	790.5	776.2	761.8	749.1	736.4	723.6
32.5°	793.7	779.4	761.8	749.1	739.6	733.2	718.8	706.1	693.4	680.5	669.4
35°	730.0	714.0	701.3	688.5	680.5	672.6	658.3	647.1	637.5	626.4	615.2
37.5°	664.6	653.4	640.7	626.4	618.5	612.0	600.9	588.1	580.2	570.6	562.6
40°	600.9	588.1	576.9	564.2	557.8	553.1	542.0	532.3	524.4	516.4	511.7
42.5°	535.5	524.4	513.2	505.3	500.4	495.7	487.7	476.6	471.8	463.8	459.0
45°	475.0	465.4	457.4	446.3	443.1	439.9	430.4	422.3	417.6	412.8	409.6
47.5°	417.6	411.2	401.7	395.3	390.4	387.3	380.9	374.5	369.8	366.6	363.4
50°	368.2	360.2	353.8	347.4	344.2	339.5	333.1	329.9	326.8	323.6	323.6
52.5°	322.0	313.9	307.6	302.8	299.6	296.5	291.7	290.1	286.9	286.9	285.3
55°	278.9	274.1	267.7	261.4	259.8	258.2	255.0	251.9	250.3	248.7	250.3
57.5°	242.2	237.4	231.1	226.3	224.7	223.1	221.5	218.4	216.8	216.8	216.8
60°	208.8	204.0	199.2	194.4	194.4	191.2	189.7	188.1	186.5	184.9	184.9
62.5°	178.5	173.8	169.0	165.7	164.1	162.5	159.4	157.8	156.2	156.2	154.6
65°	151.4	145.1	143.5	138.7	137.1	135.5	133.9	130.6	129.1	127.5	125.9
67.5°	124.3	121.1	116.3	113.2	111.6	110.0	108.4	105.2	103.6	102.0	98.9
70°	100.4	97.3	94.1	90.8	89.2	87.6	84.4	81.3	79.7	76.5	71.7
72.5°	78.1	74.9	71.7	68.6	67.0	65.4	62.2	59.0	55.7	52.6	49.4
75°	59.0	55.7	51.0	47.8	46.2	46.2	41.4	38.2	35.1	30.3	27.1
77.5°	41.4	36.7	35.1	31.9	30.3	27.1	23.9	20.8	17.5	15.9	12.7
80°	27.1	23.9	20.8	19.2	17.5	15.9	14.3	11.1	7.9	6.4	4.8
82.5°	15.9	14.3	12.7	11.1	9.5	7.9	6.4	6.4	4.8	3.2	1.6
85°	7.9	6.4	4.8	4.8	3.2	3.2	3.2	1.6	1.6	1.6	1.6
87.5°	3.2	1.6	1.6	1.6	1.6	1.6	1.6	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°	1066.3	1066.3	1066.3	1066.3	1066.3	1066.3	1066.3	1066.3	1066.3	1066.3	1066.3
2.5°	1061.5	1059.9	1058.3	1056.7	1056.7	1053.5	1053.5	1051.9	1048.7	1047.1	1047.1
5°	1051.9	1047.1	1044.0	1042.4	1040.8	1036.0	1034.4	1031.2	1028.1	1024.8	1023.2
7.5°	1037.6	1029.7	1026.5	1024.8	1020.0	1015.3	1012.1	1007.3	1002.5	997.8	996.2
10°	1020.0	1012.1	1004.1	1000.9	996.2	993.0	986.5	980.2	975.4	970.6	965.9
12.5°	997.8	988.1	980.2	977.0	972.2	965.9	956.3	953.2	945.1	941.9	935.6
15°	972.2	961.1	953.2	948.3	943.5	934.0	927.6	921.3	913.2	910.0	903.7
17.5°	940.3	927.6	919.7	914.8	911.6	903.7	894.1	886.2	878.3	875.0	870.2
20°	902.1	894.1	883.0	878.3	875.0	865.4	855.9	852.7	846.4	840.0	835.1
22.5°	859.1	851.1	840.0	835.1	833.5	825.6	817.6	812.9	808.1	803.2	798.5
25°	814.5	804.9	795.3	792.1	788.9	782.6	776.2	773.0	768.3	765.1	761.8
27.5°	766.7	757.0	749.1	744.3	741.1	736.4	733.2	730.0	726.7	723.6	722.0
30°	715.6	706.1	699.7	696.5	693.4	691.8	686.9	685.3	683.7	680.5	682.1
32.5°	664.6	656.7	650.2	645.5	645.5	642.3	640.7	640.7	639.1	639.1	639.1
35°	608.8	604.0	599.3	597.7	596.1	594.5	592.9	594.5	592.9	594.5	596.1
37.5°	557.8	553.1	549.9	548.3	546.7	548.3	546.7	546.7	548.3	551.5	553.1
40°	505.3	502.0	498.8	500.4	498.8	498.8	498.8	503.6	505.3	506.9	508.5
42.5°	455.8	452.6	451.0	451.0	452.6	451.0	454.2	455.8	459.0	463.8	466.9
45°	408.0	406.4	406.4	408.0	406.4	409.6	409.6	412.8	417.6	420.7	423.9
47.5°	363.4	363.4	363.4	365.0	365.0	366.6	369.8	371.4	374.5	377.7	380.9
50°	322.0	323.6	325.2	325.2	325.2	328.4	331.5	333.1	334.7	336.3	341.1
52.5°	285.3	286.9	286.9	288.5	290.1	291.7	293.3	296.5	298.0	301.2	302.8
55°	250.3	250.3	253.4	255.0	255.0	255.0	258.2	258.2	261.4	263.0	266.2
57.5°	216.8	218.4	218.4	220.0	220.0	221.5	223.1	224.7	226.3	227.9	229.5
60°	184.9	184.9	184.9	186.5	188.1	189.7	188.1	191.2	191.2	194.4	196.0
62.5°	154.6	156.2	156.2	156.2	156.2	156.2	156.2	157.8	159.4	160.9	162.5
65°	125.9	125.9	125.9	124.3	125.9	124.3	125.9	127.5	127.5	129.1	130.6
67.5°	97.3	97.3	94.1	94.1	95.7	95.7	95.7	95.7	94.1	97.3	97.3
70°	70.1	68.6	67.0	65.4	65.4	63.8	63.8	62.2	62.2	62.2	62.2
72.5°	46.2	43.0	39.8	38.2	36.7	36.7	33.5	31.9	33.5	33.5	33.5
75°	23.9	20.8	19.2	17.5	15.9	15.9	14.3	14.3	14.3	14.3	14.3
77.5°	9.5	7.9	6.4	6.4	4.8	4.8	4.8	4.8	4.8	4.8	4.8
80°	3.2	3.2	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
82.5°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
85°	1.6	0.0	0.0	1.6	0.0	1.6	1.6	1.6	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: P584215

CATALOG NUMBER: HC825D010-HM82555935-81WWBB

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1066.3	1066.3	1066.3	1066.3	1066.3	1066.3	1066.3	1066.3
2.5°	1045.6	1045.6	1044.0	1045.6	1042.4	1044.0	1042.4	1042.4
5°	1021.6	1018.4	1018.4	1018.4	1016.8	1016.8	1015.3	1015.3
7.5°	993.0	991.4	989.8	988.1	986.5	985.0	985.0	985.0
10°	964.3	961.1	961.1	959.5	956.3	954.7	954.7	954.7
12.5°	930.8	929.2	927.6	927.6	921.3	922.9	921.3	921.3
15°	898.9	897.3	897.3	892.6	889.4	889.4	889.4	887.8
17.5°	865.4	863.8	862.3	859.1	855.9	855.9	854.3	855.9
20°	830.4	828.8	825.6	825.6	824.0	822.4	819.2	820.8
22.5°	795.3	792.1	790.5	790.5	788.9	788.9	785.8	785.8
25°	758.6	757.0	755.5	757.0	753.9	753.9	750.7	750.7
27.5°	720.4	718.8	718.8	718.8	717.2	718.8	717.2	717.2
30°	682.1	682.1	680.5	680.5	682.1	680.5	682.1	683.7
32.5°	640.7	640.7	642.3	642.3	643.9	643.9	643.9	643.9
35°	597.7	600.9	600.9	602.5	604.0	605.6	605.6	607.2
37.5°	557.8	559.4	561.0	562.6	565.8	565.8	565.8	565.8
40°	514.8	516.4	519.6	518.0	524.4	526.0	524.4	524.4
42.5°	470.2	473.4	475.0	478.2	479.8	482.9	484.5	484.5
45°	428.7	430.4	433.6	436.7	438.3	443.1	443.1	443.1
47.5°	385.7	388.9	390.4	393.7	395.3	400.1	401.7	400.1
50°	344.2	347.4	350.6	350.6	355.5	357.1	360.2	361.8
52.5°	304.4	306.0	309.2	310.8	313.9	317.1	318.8	320.4
55°	266.2	267.7	270.9	270.9	275.7	277.3	280.6	280.6
57.5°	231.1	232.7	235.9	234.3	237.4	240.6	240.6	239.0
60°	197.6	197.6	197.6	200.8	202.4	204.0	205.7	205.7
62.5°	162.5	165.7	167.3	167.3	169.0	170.6	170.6	169.0
65°	130.6	133.9	135.5	135.5	137.1	137.1	137.1	138.7
67.5°	98.9	98.9	98.9	100.4	98.9	98.9	98.9	98.9
70°	62.2	62.2	62.2	62.2	60.6	62.2	62.2	63.8
72.5°	33.5	33.5	33.5	33.5	33.5	33.5	33.5	33.5
75°	14.3	14.3	14.3	15.9	14.3	14.3	14.3	14.3
77.5°	6.4	4.8	6.4	6.4	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°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
85°	0.0	1.6	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)