

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: P584130

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

Issue Date: 10/21/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P584130  
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-HM82555830-81WWBB  
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, WHITE BAFFLE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2009.2 lumens  
Efficiency: N/A  
Efficacy: 75.0 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

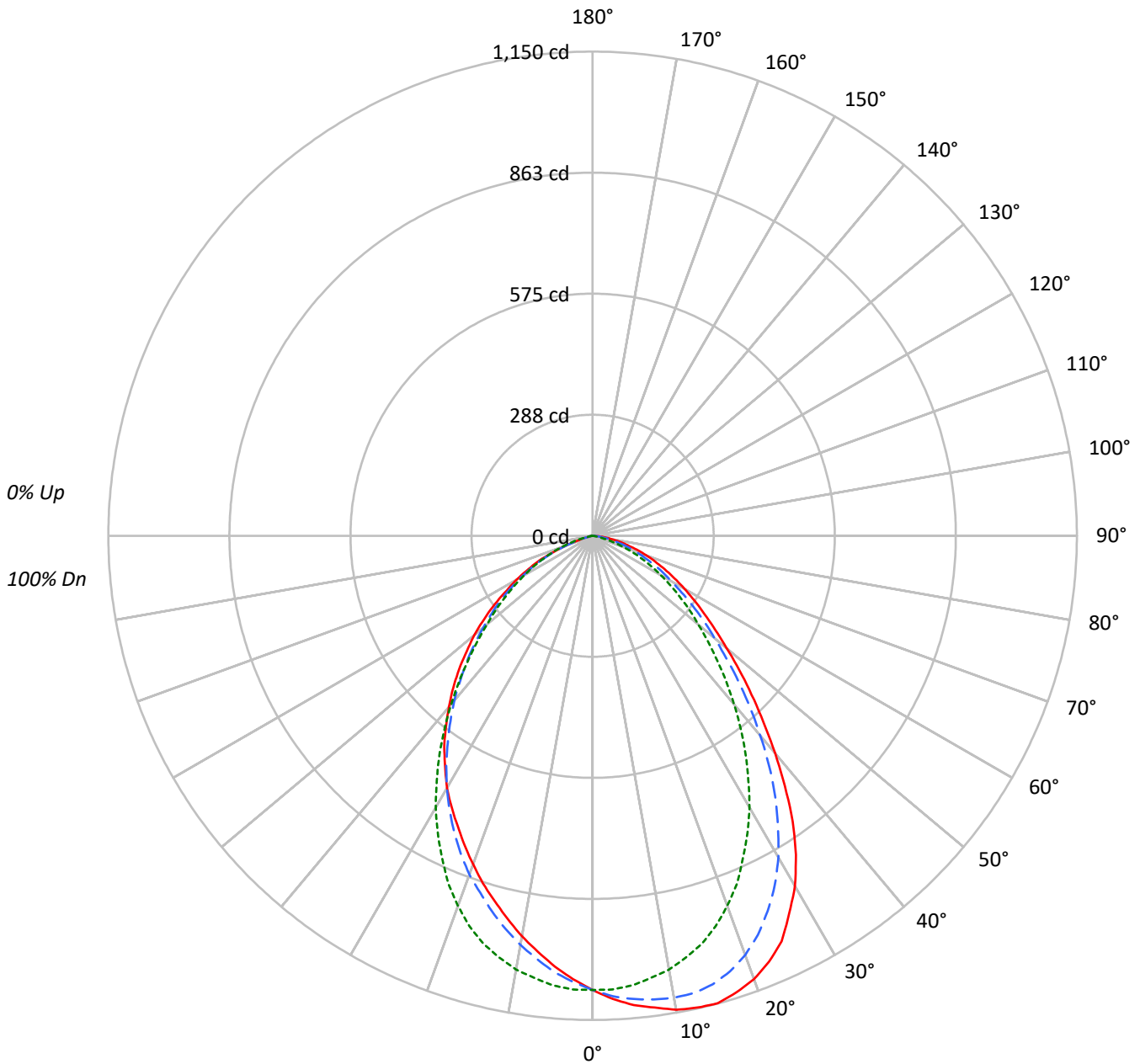
Input Watts (W): 26.8  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	33263	33263	33263
5°	34638	33189	31793
10°	35796	32765	30241
15°	36700	32017	28671
20°	36773	30689	27247
25°	36151	28747	25838
30°	34218	26523	24626
35°	31196	23855	23125
40°	27131	21029	21355
45°	23274	18211	19546
50°	19880	15701	17558
55°	17424	13526	15258
60°	15517	11533	12828
65°	13761	9405	10237
70°	12217	6978	5815
75°	10187	3646	1739
80°	8027	1137	284
85°	5732	566	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	101.6	5.1
10°-20°	284.9	14.2
20°-30°	403.2	20.1
30°-40°	421.8	21.0
40°-50°	351.8	17.5
50°-60°	249.5	12.4
60°-70°	143.7	7.2
70°-80°	46.2	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°	789.7	39.3
0°-40°	1211.6	60.3
0°-60°	1812.9	90.2
0°-90°	2009.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2009.2	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1079	1079	1079	1079	1079	
5°	1119	1104	1072	1040	1027	107
15°	1150	1103	1003	924	898	323
25°	1062	984	845	777	759	485
35°	829	756	634	600	614	514
45°	534	490	418	422	448	414
55°	324	290	252	264	284	293
65°	189	158	129	129	140	188
75°	86	63	31	15	15	93
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°	1078.7	1078.7	1078.7	1078.7	1078.7	1078.7	1078.7	1078.7	1078.7	1078.7	1078.7
2.5°	1101.2	1099.6	1098.0	1099.6	1098.0	1099.6	1098.0	1098.0	1096.4	1094.8	1094.8
5°	1119.0	1117.4	1117.4	1117.4	1115.7	1114.1	1114.1	1112.5	1109.3	1107.7	1104.5
7.5°	1130.2	1131.8	1131.8	1131.8	1128.6	1128.6	1125.4	1122.2	1119.0	1115.7	1110.9
10°	1143.2	1143.2	1141.6	1139.9	1136.7	1135.1	1133.5	1130.2	1125.4	1119.0	1114.1
12.5°	1148.0	1148.0	1146.4	1143.2	1141.6	1139.9	1138.3	1133.5	1127.0	1119.0	1112.5
15°	1149.6	1146.4	1144.8	1143.2	1139.9	1135.1	1135.1	1128.6	1120.6	1110.9	1102.8
17.5°	1136.7	1138.3	1135.1	1131.8	1127.0	1123.8	1119.0	1114.1	1104.5	1093.1	1085.1
20°	1120.6	1119.0	1117.4	1112.5	1106.1	1104.5	1099.6	1091.5	1083.5	1070.6	1059.3
22.5°	1094.8	1093.1	1089.9	1086.7	1080.3	1077.1	1072.2	1062.5	1051.3	1038.3	1025.5
25°	1062.5	1059.3	1054.5	1048.1	1043.1	1039.9	1033.5	1023.9	1010.9	996.4	983.5
27.5°	1010.9	1015.8	1012.5	1002.9	998.0	991.6	990.0	977.1	965.8	951.2	936.8
30°	961.0	961.0	956.2	951.2	943.2	938.4	932.0	922.2	911.0	893.2	881.9
32.5°	898.1	896.4	890.0	888.4	881.9	872.3	870.7	857.7	846.5	833.5	819.1
35°	828.7	825.5	819.1	814.3	811.0	806.1	801.3	790.1	778.7	765.9	756.2
37.5°	749.7	749.7	748.1	740.0	736.8	733.6	728.8	717.5	711.0	698.2	688.4
40°	674.0	672.4	667.5	665.9	662.7	657.8	654.6	648.2	638.5	628.8	619.1
42.5°	599.8	601.4	594.9	596.5	590.1	586.9	585.3	575.6	570.7	561.1	553.1
45°	533.7	532.1	528.8	527.2	524.0	520.8	517.6	512.7	504.6	495.0	490.2
47.5°	472.4	467.6	467.6	466.0	464.4	457.9	456.2	451.4	446.6	437.0	430.5
50°	414.4	414.4	414.4	412.8	407.9	406.3	403.1	398.3	393.4	386.9	377.3
52.5°	367.7	367.7	367.7	366.0	359.5	357.9	356.3	349.9	343.5	338.5	332.1
55°	324.1	325.7	324.1	320.9	316.0	316.0	311.2	307.9	301.5	296.7	290.2
57.5°	287.0	287.0	283.8	282.2	278.9	277.3	274.1	270.9	262.8	258.0	250.0
60°	251.6	250.0	250.0	246.6	243.4	240.2	238.6	233.8	230.6	222.5	216.0
62.5°	219.2	219.2	216.0	216.0	209.6	209.6	208.0	203.2	198.3	190.2	187.0
65°	188.6	188.6	187.0	185.4	180.6	179.0	177.4	172.5	167.7	162.9	158.0
67.5°	161.2	161.2	158.0	156.4	153.2	151.5	148.3	145.1	140.3	135.5	130.6
70°	135.5	133.9	132.3	130.6	127.3	125.7	122.5	119.3	114.5	111.3	106.5
72.5°	109.7	109.7	108.1	104.8	103.1	101.5	99.9	96.7	91.9	87.1	83.9
75°	85.5	85.5	85.5	82.2	79.0	77.4	77.4	74.2	70.9	66.1	62.9
77.5°	66.1	64.5	62.9	62.9	59.7	58.0	56.4	54.8	50.0	48.4	45.2
80°	45.2	46.8	45.2	43.5	41.9	40.3	40.3	37.1	35.5	32.2	29.0
82.5°	30.6	29.0	29.0	27.4	27.4	25.8	25.8	22.6	21.0	19.4	17.8
85°	16.2	16.2	14.6	14.6	14.6	12.9	12.9	11.2	11.2	9.6	8.0
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°	1078.7	1078.7	1078.7	1078.7	1078.7	1078.7	1078.7	1078.7	1078.7	1078.7	1078.7
2.5°	1093.1	1089.9	1088.3	1088.3	1086.7	1085.1	1083.5	1081.9	1078.7	1078.7	1075.5
5°	1101.2	1098.0	1096.4	1091.5	1088.3	1088.3	1081.9	1080.3	1075.5	1072.2	1068.9
7.5°	1107.7	1101.2	1096.4	1091.5	1088.3	1085.1	1078.7	1072.2	1065.7	1059.3	1056.1
10°	1107.7	1101.2	1093.1	1085.1	1081.9	1078.7	1070.6	1060.9	1052.9	1046.4	1038.3
12.5°	1104.5	1094.8	1085.1	1078.7	1072.2	1067.3	1057.7	1048.1	1038.3	1025.5	1019.0
15°	1094.8	1081.9	1072.2	1060.9	1056.1	1048.1	1039.9	1025.5	1014.1	1002.9	994.8
17.5°	1075.5	1059.3	1048.1	1036.7	1028.7	1023.9	1010.9	998.0	985.1	972.2	962.6
20°	1046.4	1031.9	1019.0	1004.5	998.0	991.6	975.4	962.6	949.6	935.2	925.4
22.5°	1010.9	996.4	978.7	967.4	957.8	949.6	935.2	920.6	907.8	894.8	881.9
25°	967.4	952.9	936.8	919.0	912.6	904.5	888.4	873.9	859.4	844.9	833.5
27.5°	920.6	901.3	888.4	869.1	862.6	854.5	836.8	820.7	807.7	796.5	783.6
30°	864.2	849.7	831.9	814.3	807.7	799.7	785.2	770.7	757.8	744.9	732.0
32.5°	802.9	788.5	770.7	757.8	748.1	741.7	727.2	714.2	701.4	688.4	677.2
35°	738.4	722.4	709.4	696.6	688.4	680.4	665.9	654.6	644.9	633.7	622.3
37.5°	672.4	661.0	648.2	633.7	625.6	619.1	607.9	594.9	586.9	577.3	569.1
40°	607.9	594.9	583.7	570.7	564.3	559.5	548.2	538.5	530.5	522.4	517.6
42.5°	541.7	530.5	519.2	511.1	506.3	501.4	493.4	482.0	477.2	469.2	464.4
45°	480.4	470.8	462.8	451.4	448.2	445.0	435.4	427.3	422.4	417.6	414.4
47.5°	422.4	416.0	406.3	399.9	395.0	391.8	385.3	378.9	374.1	370.9	367.7
50°	372.5	364.3	357.9	351.5	348.3	343.5	336.9	333.7	330.5	327.3	327.3
52.5°	325.7	317.7	311.2	306.3	303.1	299.9	295.1	293.4	290.2	290.2	288.6
55°	282.2	277.3	270.9	264.4	262.8	261.2	258.0	254.8	253.2	251.6	253.2
57.5°	245.0	240.2	233.8	229.0	227.4	225.8	224.2	220.8	219.2	219.2	219.2
60°	211.2	206.4	201.6	196.7	196.7	193.5	191.9	190.2	188.6	187.0	187.0
62.5°	180.6	175.7	170.9	167.7	166.1	164.5	161.2	159.6	158.0	158.0	156.4
65°	153.2	146.7	145.1	140.3	138.7	137.1	135.5	132.3	130.6	128.9	127.3
67.5°	125.7	122.5	117.7	114.5	112.9	111.3	109.7	106.5	104.8	103.1	99.9
70°	101.5	98.3	95.1	91.9	90.3	88.7	85.5	82.2	80.6	77.4	72.5
72.5°	79.0	75.8	72.5	69.3	67.7	66.1	62.9	59.7	56.4	53.2	50.0
75°	59.7	56.4	51.6	48.4	46.8	46.8	41.9	38.7	35.5	30.6	27.4
77.5°	41.9	37.1	35.5	32.2	30.6	27.4	24.2	21.0	17.8	16.2	12.9
80°	27.4	24.2	21.0	19.4	17.8	16.2	14.6	11.2	8.0	6.4	4.8
82.5°	16.2	14.6	12.9	11.2	9.6	8.0	6.4	6.4	4.8	3.2	1.6
85°	8.0	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°	1078.7	1078.7	1078.7	1078.7	1078.7	1078.7	1078.7	1078.7	1078.7	1078.7	1078.7
2.5°	1073.9	1072.2	1070.6	1068.9	1068.9	1065.7	1065.7	1064.1	1060.9	1059.3	1059.3
5°	1064.1	1059.3	1056.1	1054.5	1052.9	1048.1	1046.4	1043.1	1039.9	1036.7	1035.1
7.5°	1049.7	1041.5	1038.3	1036.7	1031.9	1027.1	1023.9	1019.0	1014.1	1009.3	1007.7
10°	1031.9	1023.9	1015.8	1012.5	1007.7	1004.5	998.0	991.6	986.8	981.9	977.1
12.5°	1009.3	999.7	991.6	988.4	983.5	977.1	967.4	964.2	956.2	952.9	946.4
15°	983.5	972.2	964.2	959.4	954.5	944.8	938.4	932.0	923.8	920.6	914.2
17.5°	951.2	938.4	930.4	925.4	922.2	914.2	904.5	896.4	888.4	885.2	880.3
20°	912.6	904.5	893.2	888.4	885.2	875.5	865.8	862.6	856.1	849.7	844.9
22.5°	869.1	861.0	849.7	844.9	843.3	835.2	827.1	822.3	817.5	812.7	807.7
25°	823.9	814.3	804.5	801.3	798.1	791.7	785.2	782.0	777.1	773.9	770.7
27.5°	775.5	765.9	757.8	753.0	749.7	744.9	741.7	738.4	735.2	732.0	730.4
30°	724.0	714.2	707.8	704.6	701.4	699.8	695.0	693.3	691.6	688.4	690.0
32.5°	672.4	664.3	657.8	653.0	653.0	649.8	648.2	648.2	646.5	646.5	646.5
35°	615.9	611.1	606.3	604.7	603.1	601.4	599.8	601.4	599.8	601.4	603.1
37.5°	564.3	559.5	556.3	554.7	553.1	554.7	553.1	553.1	554.7	557.9	559.5
40°	511.1	507.9	504.6	506.3	504.6	504.6	504.6	509.5	511.1	512.7	514.3
42.5°	461.2	457.9	456.2	456.2	457.9	456.2	459.6	461.2	464.4	469.2	472.4
45°	412.8	411.1	411.1	412.8	411.1	414.4	414.4	417.6	422.4	425.6	428.9
47.5°	367.7	367.7	367.7	369.3	369.3	370.9	374.1	375.7	378.9	382.1	385.3
50°	325.7	327.3	328.9	328.9	328.9	332.1	335.3	336.9	338.5	340.2	345.1
52.5°	288.6	290.2	290.2	291.8	293.4	295.1	296.7	299.9	301.5	304.7	306.3
55°	253.2	253.2	256.4	258.0	258.0	258.0	261.2	261.2	264.4	266.0	269.2
57.5°	219.2	220.8	220.8	222.5	222.5	224.2	225.8	227.4	229.0	230.6	232.2
60°	187.0	187.0	187.0	188.6	190.2	191.9	190.2	193.5	193.5	196.7	198.3
62.5°	156.4	158.0	158.0	158.0	158.0	158.0	158.0	159.6	161.2	162.9	164.5
65°	127.3	127.3	127.3	125.7	127.3	125.7	127.3	128.9	128.9	130.6	132.3
67.5°	98.3	98.3	95.1	95.1	96.7	96.7	96.7	96.7	95.1	98.3	98.3
70°	70.9	69.3	67.7	66.1	66.1	64.5	64.5	62.9	62.9	62.9	62.9
72.5°	46.8	43.5	40.3	38.7	37.1	37.1	33.8	32.2	33.8	33.8	33.8
75°	24.2	21.0	19.4	17.8	16.2	16.2	14.6	14.6	14.6	14.6	14.6
77.5°	9.6	8.0	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: P584130

CATALOG NUMBER: HC825D010-HM82555830-81WWBB

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1078.7	1078.7	1078.7	1078.7	1078.7	1078.7	1078.7	1078.7
2.5°	1057.7	1057.7	1056.1	1057.7	1054.5	1056.1	1054.5	1054.5
5°	1033.5	1030.3	1030.3	1030.3	1028.7	1028.7	1027.1	1027.1
7.5°	1004.5	1002.9	1001.3	999.7	998.0	996.4	996.4	996.4
10°	975.4	972.2	972.2	970.6	967.4	965.8	965.8	965.8
12.5°	941.6	940.0	938.4	938.4	932.0	933.6	932.0	932.0
15°	909.4	907.8	907.8	902.9	899.7	899.7	899.7	898.1
17.5°	875.5	873.9	872.3	869.1	865.8	865.8	864.2	865.8
20°	840.1	838.5	835.2	835.2	833.5	831.9	828.7	830.3
22.5°	804.5	801.3	799.7	799.7	798.1	798.1	794.9	794.9
25°	767.5	765.9	764.2	765.9	762.6	762.6	759.4	759.4
27.5°	728.8	727.2	727.2	727.2	725.6	727.2	725.6	725.6
30°	690.0	690.0	688.4	688.4	690.0	688.4	690.0	691.6
32.5°	648.2	648.2	649.8	649.8	651.4	651.4	651.4	651.4
35°	604.7	607.9	607.9	609.5	611.1	612.7	612.7	614.3
37.5°	564.3	565.9	567.5	569.1	572.3	572.3	572.3	572.3
40°	520.8	522.4	525.6	524.0	530.5	532.1	530.5	530.5
42.5°	475.6	478.8	480.4	483.7	485.4	488.6	490.2	490.2
45°	433.7	435.4	438.6	441.8	443.4	448.2	448.2	448.2
47.5°	390.2	393.4	395.0	398.3	399.9	404.7	406.3	404.7
50°	348.3	351.5	354.7	354.7	359.5	361.1	364.3	366.0
52.5°	307.9	309.6	312.8	314.4	317.7	320.9	322.5	324.1
55°	269.2	270.9	274.1	274.1	278.9	280.6	283.8	283.8
57.5°	233.8	235.4	238.6	237.0	240.2	243.4	243.4	241.8
60°	200.0	200.0	200.0	203.2	204.8	206.4	208.0	208.0
62.5°	164.5	167.7	169.3	169.3	170.9	172.5	172.5	170.9
65°	132.3	135.5	137.1	137.1	138.7	138.7	138.7	140.3
67.5°	99.9	99.9	99.9	101.5	99.9	99.9	99.9	99.9
70°	62.9	62.9	62.9	62.9	61.3	62.9	62.9	64.5
72.5°	33.8	33.8	33.8	33.8	33.8	33.8	33.8	33.8
75°	14.6	14.6	14.6	16.2	14.6	14.6	14.6	14.6
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)