

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: P584216

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

Issue Date: 10/21/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P584216  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2109-368-16)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 10/21/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC825D010-HM82555935-81WWW  
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, WHITE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2167.8 lumens  
Efficiency: N/A  
Efficacy: 80.9 lumens/watt  
Spacing Criteria (0/90/45): 1.09 / 1.04 / 1.13  
Luminous Opening: Circular (Dia: 0.67' x H: 0')  
CIE Type: Direct

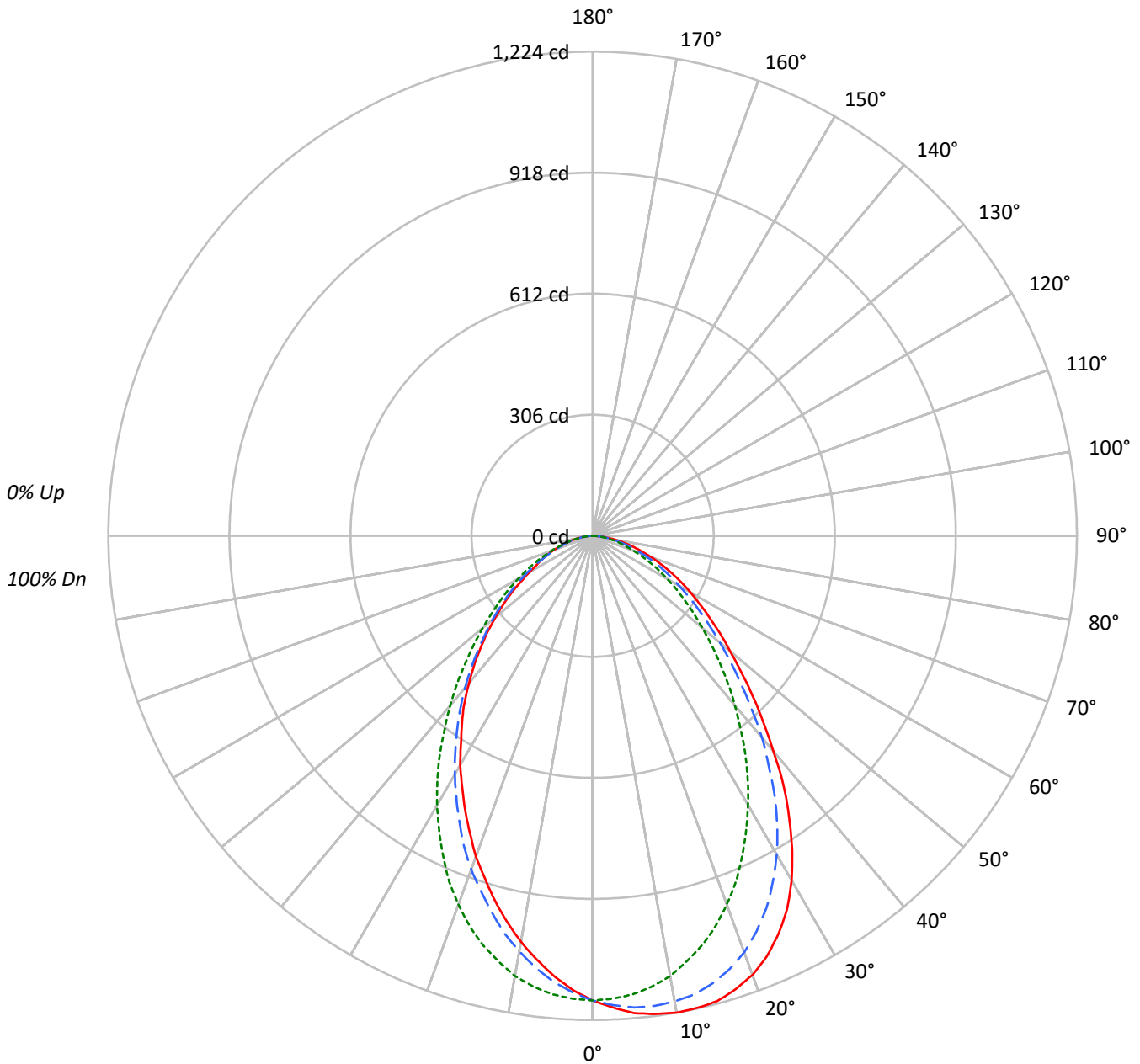
Input Watts (W): 26.8  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	50	30	10	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	110	106	103	99	108	104	101	98	100	97	95	96	94	92	93	91	89	87					87			
2	102	95	89	84	99	93	88	83	90	85	81	86	83	79	83	80	78	76					76			
3	94	85	78	72	92	83	77	71	81	75	70	78	73	69	75	71	68	66					66			
4	87	76	69	63	85	75	68	62	73	67	62	71	65	61	68	64	60	58					58			
5	81	69	61	55	79	68	61	55	66	60	54	64	59	54	63	57	53	51					51			
6	75	63	55	49	73	62	55	49	61	54	49	59	53	48	57	52	48	46					46			
7	70	58	50	44	69	57	50	44	56	49	44	54	48	44	53	48	43	41					41			
8	66	53	46	40	64	53	45	40	51	45	40	50	44	40	49	44	39	38					38			
9	62	49	42	37	60	49	42	37	48	41	36	47	41	36	46	40	36	34					34			
10	58	46	39	34	57	45	38	34	44	38	33	44	38	33	43	37	33	32					32			

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

	0°	90°	180°
0°	36220	36220	36220
5°	37495	36015	34585
10°	38329	35383	32640
15°	38874	34194	30478
20°	38758	32533	28293
25°	37797	30421	25974
30°	35810	27980	23835
35°	32577	25319	21657
40°	28613	22518	19567
45°	24949	19807	17448
50°	21712	17357	15370
55°	19365	15252	13370
60°	17595	13371	11403
65°	15819	11631	10354
70°	14083	9918	9341
75°	12343	8352	7983
80°	10477	6784	7068
85°	7925	5059	5626



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	110.0	5.1
10°-20°	303.2	14.0
20°-30°	420.8	19.4
30°-40°	435.1	20.1
40°-50°	364.3	16.8
50°-60°	264.4	12.2
60°-70°	166.9	7.7
70°-80°	82.7	3.8
80°-90°	20.5	0.9
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°	834.0	38.5
0°-40°	1269.0	58.5
0°-60°	1897.8	87.5
0°-90°	2167.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2167.8	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1175	1175	1175	1175	1175	
5°	1211	1197	1164	1132	1117	116
15°	1218	1171	1071	985	955	343
25°	1111	1039	894	797	763	509
35°	865	802	673	596	575	539
45°	572	531	454	410	400	443
55°	360	328	284	260	249	325
65°	217	190	159	140	142	216
75°	104	86	70	67	67	111
85°	22	18	14	16	16	27
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°	1174.6	1174.6	1174.6	1174.6	1174.6	1174.6	1174.6	1174.6	1174.6	1174.6	1174.6
2.5°	1193.8	1193.8	1195.4	1193.8	1193.8	1193.8	1192.2	1192.2	1190.6	1190.6	1187.4
5°	1211.3	1208.1	1211.3	1208.1	1208.1	1208.1	1206.5	1203.3	1201.7	1198.5	1197.0
7.5°	1219.3	1217.7	1217.7	1216.1	1216.1	1214.4	1213.0	1211.3	1204.9	1203.3	1198.5
10°	1224.1	1222.5	1222.5	1220.9	1217.7	1217.7	1214.4	1213.0	1204.9	1201.7	1195.4
12.5°	1222.5	1222.5	1222.5	1220.9	1216.1	1214.4	1211.3	1206.5	1200.1	1193.8	1187.4
15°	1217.7	1217.7	1214.4	1213.0	1208.1	1204.9	1203.3	1195.4	1189.0	1181.1	1171.4
17.5°	1201.7	1201.7	1200.1	1197.0	1192.2	1189.0	1185.8	1177.9	1171.4	1158.7	1149.2
20°	1181.1	1179.5	1177.9	1173.0	1168.2	1166.7	1161.9	1150.8	1142.8	1133.2	1120.5
22.5°	1150.8	1149.2	1147.6	1144.4	1136.4	1133.2	1130.0	1122.0	1107.7	1098.1	1082.2
25°	1110.9	1110.9	1107.7	1103.0	1094.9	1091.7	1087.0	1079.0	1066.3	1051.9	1039.2
27.5°	1064.6	1063.0	1058.3	1055.1	1048.7	1044.0	1036.0	1026.5	1013.7	1002.5	986.5
30°	1005.7	1005.7	1002.5	997.8	989.8	986.5	980.2	969.0	956.3	941.9	930.8
32.5°	938.7	938.7	934.0	930.8	926.0	918.1	916.5	903.7	892.6	881.4	868.6
35°	865.4	867.0	863.8	857.5	849.5	849.5	846.4	835.1	822.4	811.3	801.6
37.5°	792.1	787.3	785.8	782.6	777.8	771.4	768.3	763.4	752.3	744.3	730.0
40°	710.8	712.4	709.3	706.1	704.5	699.7	698.1	690.2	682.1	672.6	666.2
42.5°	637.5	637.5	637.5	634.3	631.2	626.4	624.8	620.0	610.4	604.0	594.5
45°	572.1	567.4	567.4	565.8	564.2	561.0	556.3	553.1	546.7	541.8	530.7
47.5°	508.5	510.1	508.5	506.9	502.0	500.4	498.8	492.5	486.1	481.3	473.4
50°	452.6	455.8	452.6	452.6	449.5	447.9	444.7	439.9	435.1	427.1	419.2
52.5°	406.4	406.4	404.8	403.3	398.5	395.3	393.7	392.0	384.1	377.7	371.4
55°	360.2	361.8	361.8	357.1	355.5	352.2	350.6	345.8	342.7	333.1	328.3
57.5°	320.4	318.8	320.4	317.1	313.9	310.8	309.2	306.0	301.2	294.9	288.5
60°	285.3	282.2	282.2	280.6	277.3	275.7	272.5	267.7	263.0	256.6	251.8
62.5°	250.3	248.7	247.1	245.5	242.2	240.6	239.0	234.3	229.5	224.7	220.0
65°	216.8	216.8	215.2	212.0	210.4	208.8	207.2	204.0	197.6	194.4	189.7
67.5°	186.5	184.9	184.9	181.7	178.5	176.9	176.9	173.8	169.0	164.1	160.9
70°	156.2	157.8	156.2	154.6	151.4	151.4	148.2	146.6	140.3	138.7	133.9
72.5°	129.1	129.1	127.5	127.5	124.3	122.7	122.7	119.5	116.3	113.2	110.0
75°	103.6	103.6	103.6	102.0	100.4	97.3	97.3	95.7	92.4	89.2	86.0
77.5°	81.3	79.7	79.7	78.1	76.5	74.9	74.9	73.3	70.1	68.6	65.4
80°	59.0	57.4	57.4	57.4	54.1	55.7	54.1	52.6	51.0	49.4	47.8
82.5°	38.2	39.8	39.8	38.2	36.7	36.7	36.7	35.1	35.1	33.5	31.9
85°	22.4	22.4	22.4	22.4	20.8	20.8	20.8	19.2	19.2	19.2	17.5
87.5°	9.5	9.5	9.5	9.5	9.5	9.5	7.9	7.9	7.9	7.9	7.9
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°	1174.6	1174.6	1174.6	1174.6	1174.6	1174.6	1174.6	1174.6	1174.6	1174.6	1174.6
2.5°	1187.4	1184.2	1182.6	1181.1	1181.1	1179.5	1177.9	1174.6	1174.6	1171.4	1169.8
5°	1193.8	1189.0	1185.8	1182.6	1181.1	1177.9	1174.6	1169.8	1168.2	1163.5	1158.7
7.5°	1195.4	1187.4	1184.2	1177.9	1174.6	1171.4	1165.1	1160.3	1153.9	1149.2	1142.8
10°	1189.0	1182.6	1174.6	1166.7	1165.1	1160.3	1150.8	1144.4	1136.4	1130.0	1120.5
12.5°	1179.5	1169.8	1161.9	1152.3	1147.6	1142.8	1133.2	1123.6	1112.5	1101.4	1091.7
15°	1163.5	1152.3	1141.2	1130.0	1123.6	1118.9	1107.7	1096.5	1085.4	1071.1	1061.4
17.5°	1139.6	1126.8	1115.7	1101.4	1094.9	1090.2	1075.8	1063.0	1048.7	1034.4	1024.8
20°	1109.3	1093.3	1080.6	1064.6	1059.9	1051.9	1037.6	1023.2	1007.3	991.4	980.2
22.5°	1069.5	1053.5	1039.2	1023.2	1015.2	1007.3	993.0	975.4	959.5	946.7	935.6
25°	1023.2	1008.9	991.4	977.0	967.5	957.9	941.9	927.6	913.2	894.1	883.0
27.5°	972.2	954.7	941.9	922.9	913.2	906.9	889.4	870.2	857.5	840.0	827.2
30°	914.8	898.9	884.6	865.4	855.9	849.5	833.5	816.1	803.2	785.8	773.0
32.5°	854.3	836.7	819.2	806.5	795.3	788.9	771.4	760.2	744.3	730.0	715.6
35°	788.9	771.4	758.6	741.1	734.8	728.3	714.0	699.7	685.3	672.6	661.5
37.5°	718.8	706.1	691.8	679.0	674.2	667.8	650.2	637.5	626.4	613.6	604.0
40°	650.2	639.1	629.6	616.9	608.8	604.0	591.3	580.2	567.4	559.4	549.9
42.5°	588.1	575.3	565.8	556.3	548.3	543.5	532.3	524.4	514.8	506.9	495.7
45°	522.8	516.4	505.3	497.2	492.5	486.1	478.2	468.6	460.6	454.2	446.3
47.5°	465.3	459.0	451.0	441.5	438.3	433.6	425.5	419.2	412.8	406.4	398.5
50°	412.8	404.8	398.5	392.0	388.9	384.1	376.1	373.0	368.2	361.8	357.1
52.5°	365.0	358.6	352.2	344.2	342.7	339.5	334.7	328.3	323.6	320.4	317.1
55°	322.0	315.5	310.8	304.4	302.8	299.6	293.3	290.1	286.9	283.7	280.6
57.5°	283.7	277.3	270.9	267.7	264.6	261.4	259.8	255.0	251.8	250.3	247.1
60°	248.7	242.2	237.4	232.7	231.1	229.5	226.3	223.1	220.0	216.8	215.2
62.5°	215.2	208.8	205.7	202.4	199.2	199.2	196.0	192.8	189.7	188.1	184.9
65°	184.9	181.7	176.9	172.2	170.6	170.6	165.7	164.1	162.5	159.4	156.2
67.5°	156.2	153.0	148.2	146.6	145.0	143.5	141.9	138.7	135.5	133.9	130.6
70°	130.6	127.5	124.3	122.7	121.1	119.5	116.3	114.7	111.6	110.0	108.4
72.5°	105.2	103.6	100.4	98.9	97.3	95.7	94.1	92.4	89.2	87.6	86.0
75°	84.4	82.9	79.7	78.1	76.5	76.5	74.9	71.7	70.1	70.1	68.6
77.5°	63.8	62.2	60.6	59.0	57.4	57.4	55.7	54.1	52.6	52.6	51.0
80°	46.2	44.6	43.0	43.0	43.0	41.4	39.8	39.8	38.2	38.2	36.7
82.5°	30.3	30.3	28.7	28.7	28.7	27.1	27.1	25.5	25.5	25.5	25.5
85°	17.5	17.5	17.5	15.9	15.9	15.9	15.9	15.9	15.9	14.3	15.9
87.5°	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	6.4	6.4	6.4
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°	1174.6	1174.6	1174.6	1174.6	1174.6	1174.6	1174.6	1174.6	1174.6	1174.6	1174.6
2.5°	1168.2	1166.7	1163.5	1163.5	1160.3	1160.3	1158.7	1157.1	1155.5	1153.9	1152.3
5°	1157.1	1150.8	1147.6	1146.0	1142.8	1141.2	1136.4	1133.2	1131.6	1128.4	1125.2
7.5°	1136.4	1130.0	1123.6	1122.0	1120.5	1114.1	1109.3	1104.6	1101.4	1098.1	1094.9
10°	1112.5	1106.2	1098.1	1094.9	1091.7	1083.8	1077.4	1072.7	1066.3	1059.9	1058.3
12.5°	1083.8	1074.3	1064.6	1061.4	1056.7	1048.7	1042.4	1034.4	1029.7	1021.6	1020.0
15°	1050.3	1039.2	1031.2	1023.2	1020.0	1012.1	1000.9	994.6	984.9	981.8	973.8
17.5°	1010.5	999.4	988.1	984.9	980.2	969.0	957.9	949.9	940.3	935.6	930.8
20°	969.0	954.7	943.5	940.3	934.0	924.4	913.2	905.3	897.3	887.8	883.0
22.5°	921.3	905.3	895.7	887.8	886.2	875.0	862.2	855.9	849.5	841.6	835.1
25°	868.6	854.3	843.2	836.7	833.5	824.0	814.5	806.5	796.9	792.1	784.2
27.5°	814.5	804.9	790.5	784.2	779.4	771.4	760.2	755.4	745.9	739.6	734.8
30°	761.8	747.5	739.6	731.6	726.7	718.8	709.3	704.5	696.5	690.2	685.3
32.5°	704.5	694.9	683.7	680.5	674.2	666.2	659.9	651.8	645.5	639.1	637.5
35°	651.8	639.1	628.0	624.8	620.0	612.0	608.8	604.0	596.1	594.5	588.1
37.5°	594.5	588.1	575.3	570.6	569.0	562.6	556.3	553.1	548.3	543.5	541.8
40°	540.4	532.3	526.0	521.2	518.0	513.2	506.9	505.3	502.0	495.7	494.1
42.5°	489.3	481.3	475.0	473.4	468.6	463.8	460.6	455.8	454.2	452.6	449.5
45°	439.9	435.1	428.7	427.1	425.5	419.2	416.0	412.8	409.6	408.0	404.8
47.5°	395.3	390.4	385.7	384.1	380.9	379.3	374.5	373.0	368.2	366.6	365.0
50°	352.2	349.0	345.8	344.2	341.1	339.5	336.3	333.1	329.9	328.3	326.8
52.5°	313.9	310.8	307.6	306.0	304.4	301.2	298.0	294.9	293.3	291.7	290.1
55°	277.3	274.1	272.5	270.9	269.3	267.7	263.0	261.4	259.8	258.2	255.0
57.5°	243.9	240.6	237.4	237.4	235.9	234.3	231.1	227.9	227.9	224.7	221.5
60°	213.6	210.4	207.2	205.7	204.0	200.8	199.2	197.6	196.0	194.4	191.2
62.5°	181.7	180.1	176.9	176.9	173.8	172.2	170.6	169.0	167.3	164.1	162.5
65°	154.6	153.0	149.8	148.2	148.2	146.6	143.5	141.9	140.3	140.3	138.7
67.5°	129.1	127.5	124.3	122.7	122.7	121.1	119.5	119.5	117.9	116.3	117.9
70°	106.8	103.6	103.6	102.0	102.0	100.4	98.9	98.9	98.9	100.4	100.4
72.5°	84.4	82.9	81.3	81.3	81.3	81.3	79.7	79.7	81.3	82.9	82.9
75°	67.0	65.4	65.4	65.4	63.8	63.8	65.4	65.4	67.0	67.0	67.0
77.5°	49.4	49.4	49.4	49.4	49.4	49.4	51.0	51.0	52.6	52.6	52.6
80°	36.7	36.7	36.7	36.7	36.7	38.2	38.2	38.2	38.2	38.2	39.8
82.5°	25.5	25.5	25.5	25.5	25.5	25.5	25.5	27.1	27.1	27.1	27.1
85°	14.3	15.9	15.9	15.9	15.9	15.9	15.9	15.9	15.9	15.9	15.9
87.5°	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4
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: P584216

CATALOG NUMBER: HC825D010-HM82555935-81WWW

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1174.6	1174.6	1174.6	1174.6	1174.6	1174.6	1174.6	1174.6
2.5°	1150.8	1150.8	1150.8	1152.3	1149.2	1149.2	1149.2	1149.2
5°	1123.6	1122.0	1120.5	1122.0	1118.9	1118.9	1117.3	1117.3
7.5°	1090.2	1088.6	1087.0	1087.0	1083.8	1083.8	1082.2	1080.6
10°	1053.5	1050.3	1051.9	1048.7	1047.1	1045.5	1044.0	1042.4
12.5°	1013.7	1010.5	1008.9	1005.7	1002.5	1000.9	1002.5	999.4
15°	970.6	965.9	964.3	961.1	957.9	956.3	956.3	954.7
17.5°	922.9	919.7	918.1	914.8	913.2	910.0	908.4	906.9
20°	878.1	870.2	871.8	868.6	867.0	860.7	860.7	862.2
22.5°	828.8	824.0	820.8	817.6	816.1	812.9	812.9	811.3
25°	779.4	774.6	773.0	769.9	768.3	765.1	763.4	763.4
27.5°	731.6	725.1	725.1	722.0	718.8	717.2	715.6	714.0
30°	680.5	675.8	674.2	674.2	672.6	672.6	667.8	669.4
32.5°	632.8	629.6	628.0	624.8	624.8	623.2	623.2	618.4
35°	585.0	580.2	581.8	578.5	576.9	575.3	576.9	575.3
37.5°	538.7	535.5	535.5	532.3	532.3	530.7	529.1	532.3
40°	492.5	490.9	489.3	487.7	489.3	487.7	484.5	486.1
42.5°	446.3	446.3	444.7	444.7	443.1	443.1	443.1	443.1
45°	404.8	403.3	403.3	401.7	401.7	401.7	401.7	400.1
47.5°	363.4	361.8	361.8	361.8	360.2	360.2	358.6	360.2
50°	323.6	323.6	322.0	322.0	323.6	322.0	320.4	320.4
52.5°	286.9	286.9	285.3	285.3	283.7	282.2	283.7	283.7
55°	253.4	251.8	250.3	250.3	248.7	247.1	247.1	248.7
57.5°	221.5	220.0	218.4	218.4	215.2	213.6	213.6	213.6
60°	191.2	188.1	188.1	186.5	186.5	184.9	184.9	184.9
62.5°	162.5	160.9	160.9	160.9	160.9	159.4	159.4	159.4
65°	138.7	138.7	138.7	140.3	140.3	141.9	141.9	141.9
67.5°	119.5	121.1	121.1	121.1	122.7	122.7	122.7	121.1
70°	102.0	102.0	102.0	103.6	103.6	103.6	103.6	103.6
72.5°	84.4	84.4	84.4	84.4	84.4	84.4	84.4	84.4
75°	67.0	68.6	68.6	68.6	67.0	68.6	68.6	67.0
77.5°	52.6	52.6	52.6	52.6	52.6	52.6	52.6	52.6
80°	39.8	39.8	39.8	39.8	39.8	39.8	39.8	39.8
82.5°	27.1	27.1	27.1	27.1	27.1	27.1	27.1	27.1
85°	15.9	15.9	15.9	15.9	15.9	15.9	15.9	15.9
87.5°	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4
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)