

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: P584199

Luminaire Tested: **HC825D010-HM82555930-81WWW**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P584199
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-HM82555930-81WWW
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, WHITE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2156.2 lumens
Efficiency: N/A
Efficacy: 80.5 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

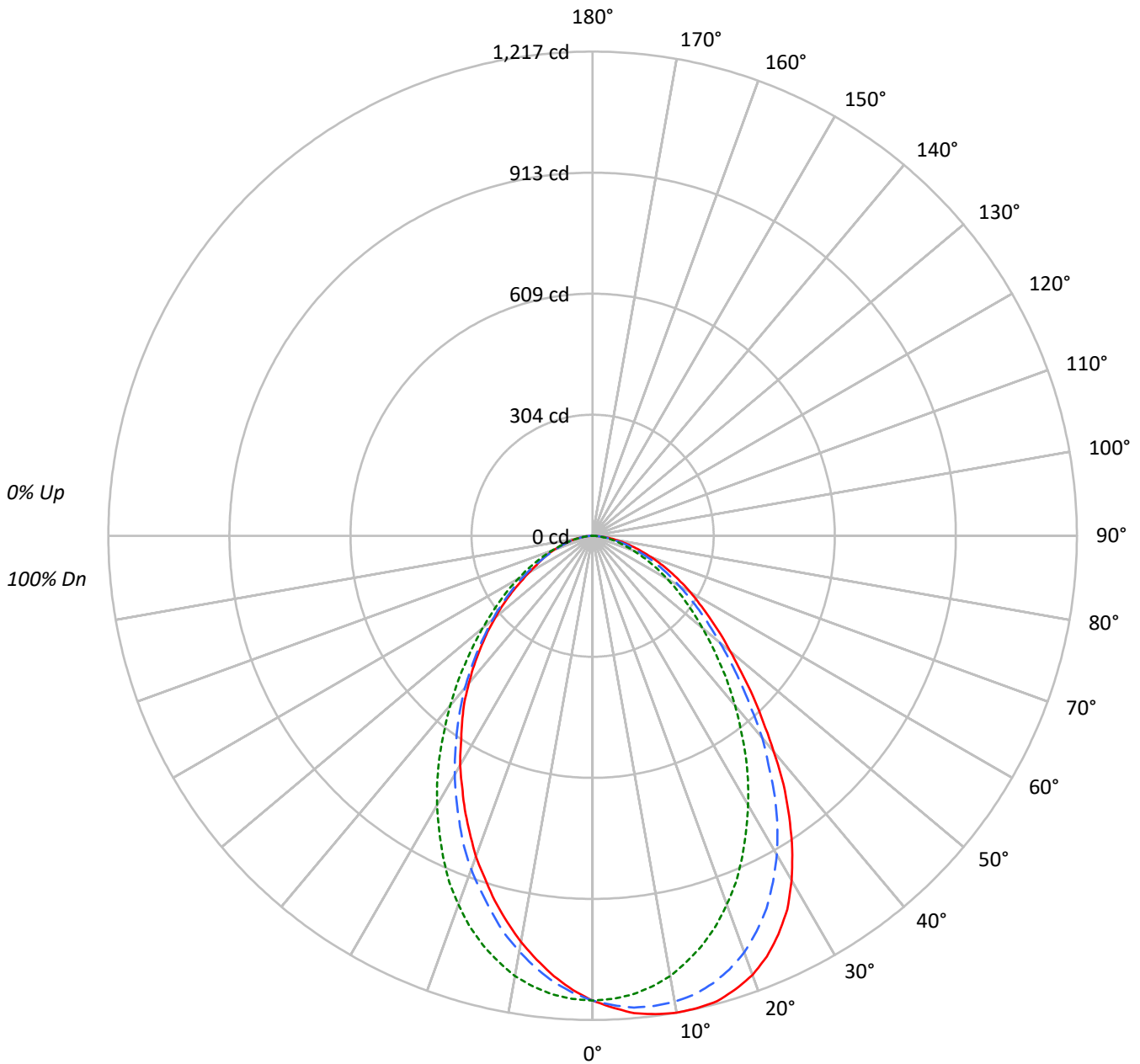
Input Watts (W): 26.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	36026	36026	36026
5°	37294	35820	34399
10°	38119	35192	32461
15°	38663	34009	30315
20°	38545	32356	28142
25°	37597	30261	25838
30°	35617	27827	23711
35°	32404	25184	21540
40°	28464	22397	19463
45°	24818	19703	17352
50°	21602	17261	15284
55°	19257	15171	13295
60°	17503	13297	11342
65°	15731	11572	10295
70°	14011	9863	9286
75°	12272	8316	7935
80°	10406	6766	7032
85°	7819	5024	5590



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	109.4	5.1
10°-20°	301.5	14.0
20°-30°	418.5	19.4
30°-40°	432.7	20.1
40°-50°	362.3	16.8
50°-60°	263.0	12.2
60°-70°	166.0	7.7
70°-80°	82.2	3.8
80°-90°	20.4	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°	829.5	38.5
0°-40°	1262.2	58.5
0°-60°	1887.6	87.5
0°-90°	2156.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2156.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1168	1168	1168	1168	1168	
5°	1205	1191	1157	1126	1111	115
15°	1211	1165	1065	980	950	341
25°	1105	1034	889	793	759	506
35°	861	797	669	593	572	536
45°	569	528	452	408	398	440
55°	358	327	282	258	247	323
65°	216	189	159	140	141	215
75°	103	86	70	67	67	111
85°	22	17	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°	1168.3	1168.3	1168.3	1168.3	1168.3	1168.3	1168.3	1168.3	1168.3	1168.3	1168.3
2.5°	1187.4	1187.4	1189.0	1187.4	1187.4	1187.4	1185.8	1185.8	1184.2	1184.2	1181.1
5°	1204.8	1201.6	1204.8	1201.6	1201.6	1201.6	1200.1	1196.9	1195.3	1192.1	1190.6
7.5°	1212.7	1211.1	1211.1	1209.5	1209.5	1208.0	1206.4	1204.8	1198.5	1196.9	1192.1
10°	1217.4	1215.9	1215.9	1214.3	1211.1	1211.1	1208.0	1206.4	1198.5	1195.3	1189.0
12.5°	1215.9	1215.9	1215.9	1214.3	1209.5	1208.0	1204.8	1200.1	1193.7	1187.4	1181.1
15°	1211.1	1211.1	1208.0	1206.4	1201.6	1198.5	1196.9	1189.0	1182.7	1174.6	1165.2
17.5°	1195.3	1195.3	1193.7	1190.6	1185.8	1182.7	1179.5	1171.5	1165.2	1152.5	1143.0
20°	1174.6	1173.1	1171.5	1166.7	1162.0	1160.4	1155.7	1144.6	1136.7	1127.1	1114.4
22.5°	1144.6	1143.0	1141.4	1138.3	1130.3	1127.1	1123.9	1116.0	1101.8	1092.3	1076.4
25°	1105.0	1105.0	1101.8	1097.0	1089.0	1085.9	1081.1	1073.2	1060.6	1046.2	1033.6
27.5°	1059.0	1057.4	1052.7	1049.5	1043.1	1038.3	1030.4	1020.9	1008.3	997.1	981.3
30°	1000.3	1000.3	997.1	992.4	984.5	981.3	975.0	963.9	951.1	936.9	925.8
32.5°	933.7	933.7	929.0	925.8	921.1	913.1	911.5	898.9	887.8	876.7	864.0
35°	860.8	862.4	859.2	852.9	845.0	845.0	841.8	830.6	818.0	806.9	797.4
37.5°	787.8	783.1	781.5	778.4	773.6	767.3	764.1	759.4	748.3	740.3	726.1
40°	707.1	708.7	705.5	702.2	700.7	695.9	694.3	686.4	678.5	669.0	662.7
42.5°	634.1	634.1	634.1	631.0	627.8	623.1	621.5	616.6	607.1	600.8	591.3
45°	569.1	564.3	564.3	562.8	561.2	558.0	553.3	550.1	543.8	539.0	527.9
47.5°	505.7	507.3	505.7	504.1	499.4	497.8	496.2	489.8	483.5	478.7	470.8
50°	450.3	453.4	450.3	450.3	447.0	445.4	442.3	437.5	432.8	424.9	417.0
52.5°	404.2	404.2	402.6	401.0	396.3	393.1	391.5	390.0	382.1	375.7	369.4
55°	358.2	359.8	359.8	355.1	353.5	350.3	348.7	344.0	340.8	331.3	326.6
57.5°	318.6	317.0	318.6	315.4	312.3	309.1	307.5	304.4	299.6	293.3	287.0
60°	283.8	280.6	280.6	279.1	275.8	274.2	271.0	266.3	261.6	255.2	250.5
62.5°	248.9	247.3	245.7	244.2	241.0	239.4	237.8	233.0	228.2	223.5	218.8
65°	215.6	215.6	214.0	210.8	209.3	207.7	206.1	202.9	196.6	193.5	188.6
67.5°	185.4	183.9	183.9	180.7	177.5	176.0	176.0	172.8	168.0	163.3	160.1
70°	155.4	157.0	155.4	153.8	150.5	150.5	147.4	145.8	139.5	137.9	133.2
72.5°	128.4	128.4	126.8	126.8	123.7	122.1	122.1	118.9	115.8	112.6	109.4
75°	103.0	103.0	103.0	101.4	99.8	96.7	96.7	95.1	91.9	88.8	85.6
77.5°	80.9	79.3	79.3	77.7	76.1	74.5	74.5	73.0	69.8	68.2	64.9
80°	58.6	57.0	57.0	57.0	53.9	55.5	53.9	52.3	50.7	49.1	47.5
82.5°	38.1	39.6	39.6	38.1	36.5	36.5	36.5	34.9	34.9	33.3	31.7
85°	22.1	22.1	22.1	22.1	20.7	20.7	20.7	19.0	19.0	19.0	17.4
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°	1168.3	1168.3	1168.3	1168.3	1168.3	1168.3	1168.3	1168.3	1168.3	1168.3	1168.3
2.5°	1181.1	1177.9	1176.3	1174.6	1174.6	1173.1	1171.5	1168.3	1168.3	1165.2	1163.6
5°	1187.4	1182.7	1179.5	1176.3	1174.6	1171.5	1168.3	1163.6	1162.0	1157.2	1152.5
7.5°	1189.0	1181.1	1177.9	1171.5	1168.3	1165.2	1158.8	1154.1	1147.8	1143.0	1136.7
10°	1182.7	1176.3	1168.3	1160.4	1158.8	1154.1	1144.6	1138.3	1130.3	1123.9	1114.4
12.5°	1173.1	1163.6	1155.7	1146.2	1141.4	1136.7	1127.1	1117.6	1106.5	1095.5	1085.9
15°	1157.2	1146.2	1135.1	1123.9	1117.6	1112.9	1101.8	1090.7	1079.6	1065.3	1055.8
17.5°	1133.5	1120.8	1109.7	1095.5	1089.0	1084.3	1070.1	1057.4	1043.1	1028.8	1019.4
20°	1103.4	1087.5	1074.8	1059.0	1054.2	1046.2	1032.0	1017.8	1001.9	986.0	975.0
22.5°	1063.7	1047.9	1033.6	1017.8	1009.9	1001.9	987.6	970.2	954.3	941.7	930.6
25°	1017.8	1003.4	986.0	971.8	962.3	952.7	936.9	922.7	908.3	889.4	878.3
27.5°	967.1	949.6	936.9	917.8	908.3	902.0	884.6	865.5	852.9	835.5	822.7
30°	909.9	894.1	879.9	860.8	851.3	845.0	829.1	811.7	799.0	781.5	768.9
32.5°	849.7	832.2	814.8	802.2	791.1	784.7	767.3	756.2	740.3	726.1	711.8
35°	784.7	767.3	754.6	737.1	730.8	724.5	710.2	695.9	681.7	669.0	657.9
37.5°	715.0	702.2	688.0	675.4	670.6	664.3	646.8	634.1	623.1	610.3	600.8
40°	646.8	635.7	626.2	613.5	605.6	600.8	588.2	577.1	564.3	556.4	546.9
42.5°	585.0	572.2	562.8	553.3	545.4	540.6	529.4	521.5	512.0	504.1	493.1
45°	520.0	513.6	502.6	494.7	489.8	483.5	475.6	466.1	458.2	451.8	443.8
47.5°	462.9	456.6	448.7	439.1	435.9	431.2	423.3	417.0	410.6	404.2	396.3
50°	410.6	402.6	396.3	390.0	386.8	382.1	374.2	371.0	366.2	359.8	355.1
52.5°	363.1	356.7	350.3	342.4	340.8	337.7	332.9	326.6	321.9	318.6	315.4
55°	320.3	313.9	309.1	302.8	301.2	298.0	291.7	288.5	285.4	282.2	279.1
57.5°	282.2	275.8	269.5	266.3	263.1	260.0	258.4	253.7	250.5	248.9	245.7
60°	247.3	241.0	236.3	231.4	229.8	228.2	225.1	221.9	218.8	215.6	214.0
62.5°	214.0	207.7	204.5	201.4	198.2	198.2	195.0	191.9	188.6	187.0	183.9
65°	183.9	180.7	176.0	171.2	169.6	169.6	164.9	163.3	161.7	158.6	155.4
67.5°	155.4	152.2	147.4	145.8	144.2	142.6	141.1	137.9	134.7	133.2	130.0
70°	130.0	126.8	123.7	122.1	120.5	118.9	115.8	114.2	111.0	109.4	107.7
72.5°	104.6	103.0	99.8	98.3	96.7	95.1	93.5	91.9	88.8	87.2	85.6
75°	84.0	82.4	79.3	77.7	76.1	76.1	74.5	71.4	69.8	69.8	68.2
77.5°	63.5	61.8	60.2	58.6	57.0	57.0	55.5	53.9	52.3	52.3	50.7
80°	46.0	44.4	42.8	42.8	42.8	41.2	39.6	39.6	38.1	38.1	36.5
82.5°	30.1	30.1	28.6	28.6	28.6	27.0	27.0	25.4	25.4	25.4	25.4
85°	17.4	17.4	17.4	15.8	15.8	15.8	15.8	15.8	15.8	14.2	15.8
87.5°	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	6.3	6.3	6.3
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):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	1168.3	1168.3	1168.3	1168.3	1168.3	1168.3	1168.3	1168.3	1168.3	1168.3	1168.3
2.5°	1162.0	1160.4	1157.2	1157.2	1154.1	1154.1	1152.5	1150.9	1149.3	1147.8	1146.2
5°	1150.9	1144.6	1141.4	1139.9	1136.7	1135.1	1130.3	1127.1	1125.5	1122.4	1119.2
7.5°	1130.3	1123.9	1117.6	1116.0	1114.4	1108.1	1103.4	1098.6	1095.5	1092.3	1089.0
10°	1106.5	1100.2	1092.3	1089.0	1085.9	1078.0	1071.6	1066.9	1060.6	1054.2	1052.7
12.5°	1078.0	1068.5	1059.0	1055.8	1051.1	1043.1	1036.7	1028.8	1024.1	1016.2	1014.6
15°	1044.7	1033.6	1025.7	1017.8	1014.6	1006.7	995.5	989.2	979.7	976.5	968.6
17.5°	1005.1	993.9	982.9	979.7	975.0	963.9	952.7	944.8	935.3	930.6	925.8
20°	963.9	949.6	938.5	935.3	929.0	919.5	908.3	900.4	892.5	883.0	878.3
22.5°	916.2	900.4	890.9	883.0	881.5	870.3	857.6	851.3	845.0	837.1	830.6
25°	864.0	849.7	838.7	832.2	829.1	819.6	810.1	802.2	792.7	787.8	779.9
27.5°	810.1	800.6	786.3	779.9	775.2	767.3	756.2	751.5	741.9	735.6	730.8
30°	757.8	743.5	735.6	727.6	722.9	715.0	705.5	700.7	692.7	686.4	681.7
32.5°	700.7	691.2	680.1	676.9	670.6	662.7	656.3	648.4	642.0	635.7	634.1
35°	648.4	635.7	624.6	621.5	616.6	608.7	605.6	600.8	592.9	591.3	585.0
37.5°	591.3	585.0	572.2	567.5	565.9	559.6	553.3	550.1	545.4	540.6	539.0
40°	537.5	529.4	523.1	518.4	515.2	510.5	504.1	502.6	499.4	493.1	491.5
42.5°	486.6	478.7	472.4	470.8	466.1	461.3	458.2	453.4	451.8	450.3	447.0
45°	437.5	432.8	426.4	424.9	423.3	417.0	413.8	410.6	407.5	405.9	402.6
47.5°	393.1	388.4	383.6	382.1	378.9	377.3	372.6	371.0	366.2	364.7	363.1
50°	350.3	347.2	344.0	342.4	339.3	337.7	334.5	331.3	328.2	326.6	325.0
52.5°	312.3	309.1	305.9	304.4	302.8	299.6	296.5	293.3	291.7	290.1	288.5
55°	275.8	272.6	271.0	269.5	267.9	266.3	261.6	260.0	258.4	256.8	253.7
57.5°	242.6	239.4	236.3	236.3	234.7	233.0	229.8	226.7	226.7	223.5	220.3
60°	212.4	209.3	206.1	204.5	202.9	199.8	198.2	196.6	195.0	193.5	190.2
62.5°	180.7	179.1	176.0	176.0	172.8	171.2	169.6	168.0	166.5	163.3	161.7
65°	153.8	152.2	149.1	147.4	147.4	145.8	142.6	141.1	139.5	139.5	137.9
67.5°	128.4	126.8	123.7	122.1	122.1	120.5	118.9	118.9	117.3	115.8	117.3
70°	106.3	103.0	103.0	101.4	101.4	99.8	98.3	98.3	98.3	99.8	99.8
72.5°	84.0	82.4	80.9	80.9	80.9	80.9	79.3	79.3	80.9	82.4	82.4
75°	66.6	64.9	64.9	64.9	63.5	63.5	64.9	64.9	66.6	66.6	66.6
77.5°	49.1	49.1	49.1	49.1	49.1	49.1	50.7	50.7	52.3	52.3	52.3
80°	36.5	36.5	36.5	36.5	36.5	38.1	38.1	38.1	38.1	38.1	39.6
82.5°	25.4	25.4	25.4	25.4	25.4	25.4	25.4	27.0	27.0	27.0	27.0
85°	14.2	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8
87.5°	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3
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: P584199

CATALOG NUMBER: HC825D010-HM82555930-81WWW

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1168.3	1168.3	1168.3	1168.3	1168.3	1168.3	1168.3	1168.3
2.5°	1144.6	1144.6	1144.6	1146.2	1143.0	1143.0	1143.0	1143.0
5°	1117.6	1116.0	1114.4	1116.0	1112.9	1112.9	1111.3	1111.3
7.5°	1084.3	1082.7	1081.1	1081.1	1078.0	1078.0	1076.4	1074.8
10°	1047.9	1044.7	1046.2	1043.1	1041.5	1039.9	1038.3	1036.7
12.5°	1008.3	1005.1	1003.4	1000.3	997.1	995.5	997.1	993.9
15°	965.5	960.6	959.1	955.9	952.7	951.1	951.1	949.6
17.5°	917.8	914.7	913.1	909.9	908.3	905.2	903.6	902.0
20°	873.4	865.5	867.1	864.0	862.4	856.1	856.1	857.6
22.5°	824.3	819.6	816.4	813.2	811.7	808.5	808.5	806.9
25°	775.2	770.4	768.9	765.7	764.1	761.0	759.4	759.4
27.5°	727.6	721.3	721.3	718.2	715.0	713.4	711.8	710.2
30°	676.9	672.2	670.6	670.6	669.0	669.0	664.3	665.9
32.5°	629.4	626.2	624.6	621.5	621.5	619.9	619.9	615.1
35°	581.8	577.1	578.7	575.4	573.8	572.2	573.8	572.2
37.5°	535.9	532.6	532.6	529.4	529.4	527.9	526.3	529.4
40°	489.8	488.2	486.6	485.1	486.6	485.1	481.9	483.5
42.5°	443.8	443.8	442.3	442.3	440.7	440.7	440.7	440.7
45°	402.6	401.0	401.0	399.5	399.5	399.5	399.5	397.9
47.5°	361.4	359.8	359.8	359.8	358.2	358.2	356.7	358.2
50°	321.9	321.9	320.3	320.3	321.9	320.3	318.6	318.6
52.5°	285.4	285.4	283.8	283.8	282.2	280.6	282.2	282.2
55°	252.1	250.5	248.9	248.9	247.3	245.7	245.7	247.3
57.5°	220.3	218.8	217.2	217.2	214.0	212.4	212.4	212.4
60°	190.2	187.0	187.0	185.4	185.4	183.9	183.9	183.9
62.5°	161.7	160.1	160.1	160.1	160.1	158.6	158.6	158.6
65°	137.9	137.9	137.9	139.5	139.5	141.1	141.1	141.1
67.5°	118.9	120.5	120.5	120.5	122.1	122.1	122.1	120.5
70°	101.4	101.4	101.4	103.0	103.0	103.0	103.0	103.0
72.5°	84.0	84.0	84.0	84.0	84.0	84.0	84.0	84.0
75°	66.6	68.2	68.2	68.2	66.6	68.2	68.2	66.6
77.5°	52.3	52.3	52.3	52.3	52.3	52.3	52.3	52.3
80°	39.6	39.6	39.6	39.6	39.6	39.6	39.6	39.6
82.5°	27.0	27.0	27.0	27.0	27.0	27.0	27.0	27.0
85°	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8
87.5°	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3
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)