

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: P584200

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

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P584200
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2109-368-18)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 10/21/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HC825D010-HM82555930-81WWWB
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, BLACK BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2245.0 lumens
Efficiency: N/A
Efficacy: 83.8 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 1.09 / 1.18
Luminous Opening: Circular (Dia: 0.67' x H: 0')
CIE Type: Direct

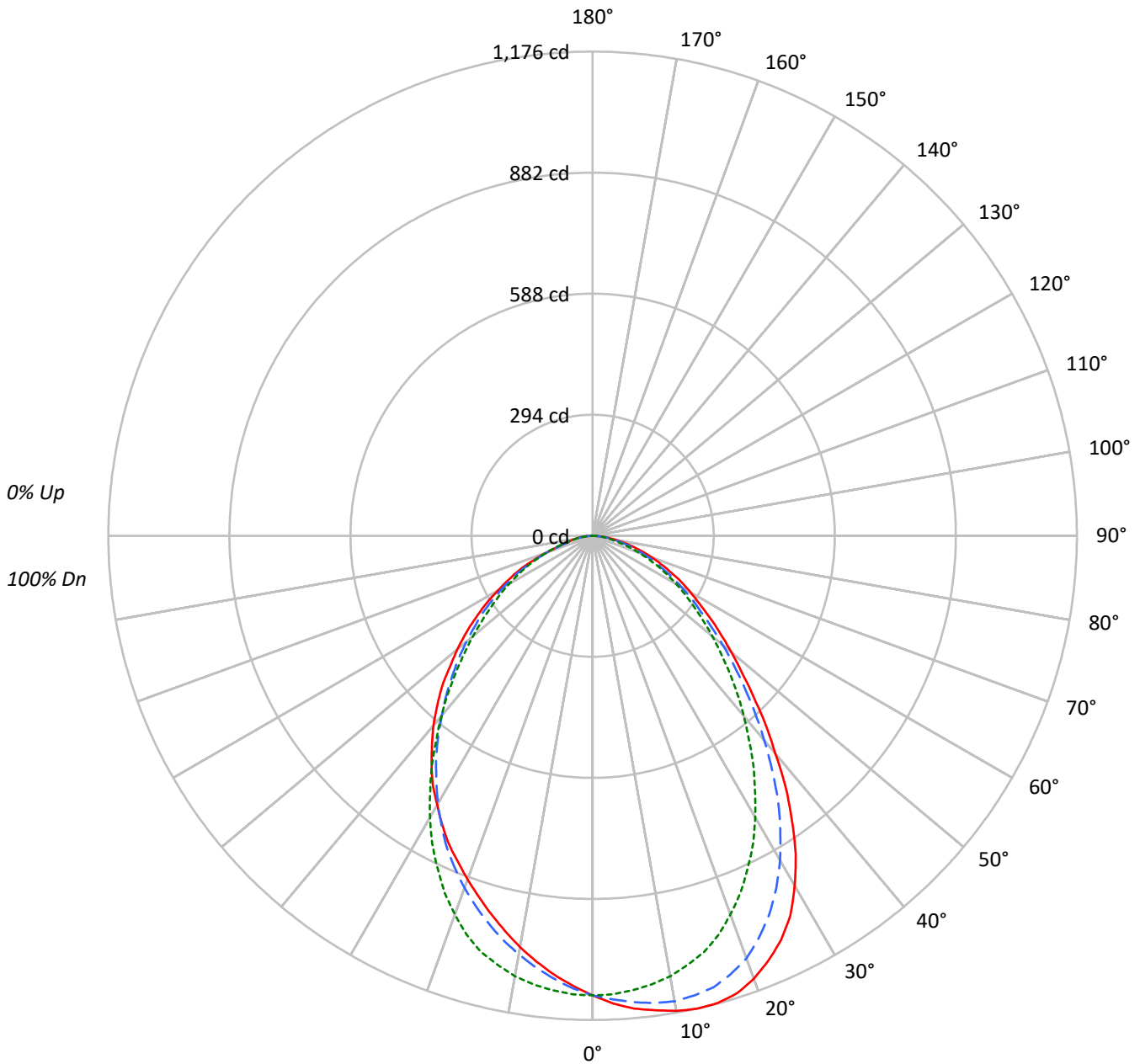
Input Watts (W): 26.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
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	110	106	103	99	108	104	101	98	100	97	95	96	94	92	92	91	89	87																			
2	102	94	88	83	99	93	87	82	89	85	81	86	82	79	83	80	77	75																			
3	94	84	77	71	91	83	76	71	80	74	69	77	72	68	75	71	67	65																			
4	87	76	68	62	84	75	67	61	72	66	61	70	64	60	68	63	59	57																			
5	80	69	60	54	78	67	60	54	65	59	54	64	58	53	62	57	52	50																			
6	75	62	54	48	73	61	54	48	60	53	48	58	52	47	57	51	47	45																			
7	70	57	49	43	68	56	49	43	55	48	43	53	47	43	52	47	42	40																			
8	65	52	45	39	64	52	44	39	51	44	39	49	43	39	48	43	38	37																			
9	61	48	41	36	60	48	41	36	47	40	35	46	40	35	45	39	35	33																			
10	57	45	38	33	56	44	37	33	44	37	32	43	37	32	42	36	32	30																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	34419	34419	34419
5°	35681	34306	33127
10°	36691	34011	31775
15°	37508	33409	30369
20°	37567	32103	29137
25°	36845	30319	28104
30°	34948	28119	26876
35°	31753	25606	25666
40°	27763	22977	24189
45°	24064	20466	22542
50°	21070	18182	20537
55°	18752	16112	18580
60°	16917	14475	16331
65°	15272	12725	14235
70°	13731	10720	10585
75°	12081	8507	7935
80°	10122	7032	7600
85°	7819	6156	6722



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	105.3	4.7
10°-20°	296.6	13.2
20°-30°	423.9	18.9
30°-40°	450.4	20.1
40°-50°	387.8	17.3
50°-60°	289.9	12.9
60°-70°	184.9	8.2
70°-80°	84.2	3.7
80°-90°	22.1	1.0
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°	825.8	36.8
0°-40°	1276.2	56.8
0°-60°	1953.9	87.0
0°-90°	2245.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2245.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1116	1116	1116	1116	1116	
5°	1153	1137	1108	1080	1070	110
15°	1175	1135	1046	975	951	331
25°	1083	1015	891	837	826	496
35°	844	785	680	663	682	525
45°	552	522	469	482	517	429
55°	349	320	300	325	346	314
65°	209	186	174	182	195	209
75°	101	87	71	65	67	108
85°	22	19	17	19	19	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°	1116.2	1116.2	1116.2	1116.2	1116.2	1116.2	1116.2	1116.2	1116.2	1116.2	1116.2
2.5°	1136.9	1133.7	1135.3	1133.7	1135.3	1135.3	1132.1	1132.1	1132.1	1132.1	1127.4
5°	1152.7	1151.1	1151.1	1149.5	1148.0	1149.5	1148.0	1146.4	1143.2	1141.6	1136.9
7.5°	1162.2	1162.2	1162.2	1162.2	1160.6	1159.0	1157.4	1154.3	1151.1	1148.0	1144.8
10°	1171.8	1173.4	1171.8	1170.2	1168.5	1165.4	1163.8	1160.6	1155.9	1151.1	1148.0
12.5°	1176.5	1176.5	1174.9	1174.9	1171.8	1170.2	1165.4	1160.6	1155.9	1151.1	1143.2
15°	1174.9	1174.9	1173.4	1171.8	1166.9	1165.4	1162.2	1157.4	1149.5	1143.2	1135.3
17.5°	1165.4	1163.8	1160.6	1160.6	1154.3	1152.7	1149.5	1143.2	1135.3	1125.7	1116.2
20°	1144.8	1144.8	1143.2	1141.6	1135.3	1130.6	1127.4	1119.4	1113.1	1102.0	1092.5
22.5°	1116.2	1119.4	1116.2	1113.1	1105.1	1103.6	1098.8	1089.3	1079.7	1067.1	1056.0
25°	1082.9	1081.3	1079.7	1076.6	1070.2	1067.1	1060.7	1051.3	1041.8	1027.4	1014.8
27.5°	1040.1	1033.8	1033.8	1027.4	1022.7	1017.9	1014.8	1005.3	992.5	981.5	965.6
30°	981.5	983.0	975.1	973.5	965.6	962.5	956.0	946.6	935.5	922.8	910.1
32.5°	918.1	913.2	913.2	906.9	900.6	895.8	894.3	883.2	873.7	860.9	848.3
35°	843.5	843.5	838.8	837.2	830.9	827.6	822.9	816.5	805.5	794.4	784.8
37.5°	770.6	767.4	765.8	762.7	757.9	753.2	753.2	742.0	740.4	727.8	715.1
40°	689.7	692.9	689.7	685.0	683.4	680.2	678.6	672.3	667.6	656.4	648.5
42.5°	621.6	618.4	618.4	616.7	610.4	610.4	607.2	604.1	596.2	593.0	583.5
45°	551.8	554.9	550.2	551.8	545.5	545.5	545.5	539.1	532.8	528.0	521.6
47.5°	491.6	493.2	493.2	488.3	486.7	486.7	483.6	480.4	475.7	469.3	464.6
50°	439.2	440.8	437.6	436.0	432.8	431.3	431.3	424.9	421.8	415.4	412.3
52.5°	391.6	391.6	390.0	390.0	385.3	385.3	382.1	377.4	374.2	371.1	363.1
55°	348.8	348.8	347.2	345.6	345.6	340.9	339.3	334.6	331.4	325.1	320.3
57.5°	307.6	309.2	307.6	306.0	304.4	302.8	299.7	294.9	291.8	287.0	283.8
60°	274.3	274.3	272.7	271.1	267.9	266.3	264.8	261.6	256.9	253.7	248.9
62.5°	242.6	241.0	239.5	237.9	234.7	234.7	231.4	228.3	223.5	220.4	217.2
65°	209.3	209.3	207.7	207.7	206.1	203.0	201.4	199.8	193.5	191.9	185.5
67.5°	179.1	180.7	177.6	177.6	174.4	174.4	172.8	168.1	166.5	163.3	160.2
70°	152.3	152.3	152.3	150.7	147.4	145.8	144.2	141.1	139.5	136.3	133.2
72.5°	125.3	125.3	123.7	123.7	122.1	120.5	118.9	115.8	115.8	112.6	109.4
75°	101.4	101.4	99.9	98.3	96.7	96.7	95.1	93.5	90.4	88.8	87.2
77.5°	77.7	77.7	77.7	76.1	74.5	74.5	74.5	71.4	68.2	68.2	66.6
80°	57.0	57.0	55.5	55.5	53.9	53.9	53.9	52.3	50.7	49.1	47.6
82.5°	38.1	38.1	38.1	38.1	36.5	36.5	36.5	34.9	33.3	33.3	33.3
85°	22.1	22.1	22.1	22.1	20.7	20.7	20.7	20.7	20.7	19.0	19.0
87.5°	9.5	7.9	9.5	7.9	9.5	7.9	9.5	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°	1116.2	1116.2	1116.2	1116.2	1116.2	1116.2	1116.2	1116.2	1116.2	1116.2	1116.2
2.5°	1129.0	1127.4	1125.7	1124.1	1124.1	1122.5	1119.4	1117.8	1116.2	1114.6	1114.6
5°	1135.3	1133.7	1130.6	1127.4	1125.7	1122.5	1119.4	1116.2	1113.1	1108.3	1106.7
7.5°	1140.0	1135.3	1132.1	1125.7	1124.1	1121.0	1116.2	1111.5	1105.1	1098.8	1094.1
10°	1140.0	1133.7	1129.0	1121.0	1117.8	1114.6	1108.3	1100.4	1092.5	1086.2	1078.1
12.5°	1136.9	1129.0	1121.0	1113.1	1108.3	1103.6	1094.1	1086.2	1076.6	1067.1	1060.7
15°	1125.7	1116.2	1106.7	1097.2	1092.5	1086.2	1076.6	1065.5	1056.0	1046.5	1035.3
17.5°	1105.1	1095.6	1084.6	1073.4	1067.1	1062.3	1048.1	1040.1	1025.8	1016.4	1006.9
20°	1078.1	1067.1	1052.8	1041.8	1033.8	1029.0	1017.9	1003.7	992.5	978.3	968.8
22.5°	1043.2	1029.0	1014.8	1003.7	995.7	989.4	975.1	960.9	951.3	938.6	927.6
25°	1002.1	987.8	973.5	957.6	949.7	943.4	930.7	918.1	905.3	891.1	881.6
27.5°	952.9	937.1	924.4	910.1	902.2	892.7	878.4	865.7	853.0	843.5	830.9
30°	899.0	881.6	868.8	854.6	846.7	838.8	824.5	811.8	800.7	789.7	783.2
32.5°	834.0	821.3	808.6	794.4	788.1	783.2	769.0	756.3	743.7	734.1	729.3
35°	772.2	757.9	746.8	734.1	726.2	721.4	708.8	697.6	691.3	680.2	673.9
37.5°	707.2	696.0	683.4	670.7	666.0	661.2	651.6	640.6	631.1	623.2	620.0
40°	639.0	629.5	618.4	610.4	605.7	600.9	593.0	585.1	578.8	570.8	567.6
42.5°	573.9	567.6	558.1	548.6	543.9	542.3	532.8	526.4	523.2	520.0	516.9
45°	515.3	505.8	499.5	493.2	488.3	485.1	480.4	475.7	472.5	469.3	466.2
47.5°	458.3	450.3	443.9	439.2	434.4	432.8	429.7	424.9	421.8	421.8	421.8
50°	406.0	399.5	393.2	390.0	388.5	385.3	382.1	380.5	379.0	379.0	379.0
52.5°	359.9	353.5	348.8	345.6	345.6	342.5	339.3	337.7	337.7	337.7	337.7
55°	317.1	312.3	309.2	306.0	302.8	301.2	301.2	301.2	299.7	299.7	301.2
57.5°	279.1	275.8	271.1	267.9	266.3	266.3	264.8	263.2	264.8	266.3	267.9
60°	244.2	241.0	239.5	234.7	234.7	234.7	233.0	233.0	233.0	234.7	236.3
62.5°	212.5	210.9	207.7	206.1	204.6	204.6	203.0	203.0	203.0	203.0	204.6
65°	183.9	180.7	177.6	177.6	177.6	176.0	176.0	172.8	174.4	174.4	172.8
67.5°	157.0	153.8	152.3	150.7	149.1	149.1	147.4	145.8	144.2	144.2	144.2
70°	131.6	128.4	128.4	125.3	125.3	123.7	122.1	122.1	120.5	118.9	117.4
72.5°	106.3	104.6	103.0	101.4	101.4	101.4	99.9	98.3	96.7	95.1	91.9
75°	84.0	84.0	80.9	79.3	79.3	77.7	76.1	74.5	73.0	71.4	69.8
77.5°	65.1	63.5	60.2	58.6	58.6	58.6	57.0	55.5	53.9	52.3	50.7
80°	47.6	46.0	44.4	42.8	42.8	42.8	41.2	41.2	39.6	39.6	39.6
82.5°	31.7	31.7	30.2	30.2	30.2	30.2	28.6	28.6	28.6	28.6	28.6
85°	19.0	19.0	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4
87.5°	7.9	7.9	7.9	7.9	7.9	7.9	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):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	1116.2	1116.2	1116.2	1116.2	1116.2	1116.2	1116.2	1116.2	1116.2	1116.2	1116.2
2.5°	1111.5	1111.5	1108.3	1106.7	1105.1	1106.7	1103.6	1102.0	1100.4	1100.4	1098.8
5°	1102.0	1100.4	1094.1	1092.5	1090.9	1089.3	1086.2	1082.9	1079.7	1078.1	1076.6
7.5°	1089.3	1084.6	1078.1	1076.6	1075.0	1070.2	1065.5	1062.3	1057.6	1056.0	1052.8
10°	1071.8	1065.5	1060.7	1056.0	1052.8	1048.1	1043.2	1038.5	1032.2	1030.6	1025.8
12.5°	1051.3	1043.2	1033.8	1032.2	1027.4	1021.1	1014.8	1010.0	1005.3	1002.1	997.3
15°	1025.8	1017.9	1008.4	1003.7	999.0	994.1	986.2	979.9	975.1	970.4	965.6
17.5°	995.7	986.2	978.3	973.5	970.4	962.5	956.0	948.1	943.4	938.6	933.9
20°	959.3	951.3	940.2	935.5	933.9	927.6	919.7	916.5	910.1	905.3	902.2
22.5°	918.1	910.1	900.6	897.4	891.1	887.9	880.0	876.9	873.7	868.8	867.3
25°	872.0	864.1	856.2	854.6	849.9	846.7	842.0	837.2	837.2	832.5	832.5
27.5°	824.5	816.5	810.2	807.1	805.5	802.3	797.6	796.0	794.4	792.8	792.8
30°	773.7	764.2	761.1	759.5	757.9	754.8	753.2	750.0	751.6	753.2	751.6
32.5°	719.9	716.7	710.4	707.2	708.8	707.2	704.0	707.2	705.6	708.8	710.4
35°	667.6	664.4	661.2	661.2	658.1	658.1	658.1	659.5	662.8	664.4	667.6
37.5°	616.7	612.0	610.4	608.8	610.4	610.4	610.4	613.6	616.7	620.0	624.7
40°	562.9	559.7	559.7	559.7	559.7	564.4	562.9	566.0	569.2	573.9	578.8
42.5°	512.1	512.1	513.7	513.7	513.7	513.7	516.9	521.6	526.4	531.1	536.0
45°	464.6	464.6	464.6	467.7	467.7	469.3	475.7	478.8	482.0	486.7	491.6
47.5°	420.2	420.2	421.8	423.4	424.9	428.1	431.3	436.0	440.8	443.9	448.8
50°	379.0	380.5	383.7	386.9	386.9	388.5	393.2	396.4	399.5	404.4	406.0
52.5°	339.3	342.5	345.6	347.2	348.8	352.0	353.5	358.3	359.9	364.7	366.3
55°	302.8	304.4	309.2	310.7	310.7	313.9	317.1	320.3	325.1	325.1	328.2
57.5°	269.5	271.1	274.3	275.8	274.3	279.1	280.7	283.8	285.4	288.6	290.2
60°	236.3	239.5	241.0	241.0	242.6	244.2	247.4	247.4	250.5	253.7	253.7
62.5°	204.6	206.1	207.7	209.3	210.9	209.3	214.0	214.0	217.2	218.8	222.0
65°	174.4	176.0	176.0	177.6	177.6	179.1	179.1	180.7	182.3	185.5	187.1
67.5°	144.2	144.2	144.2	145.8	144.2	145.8	145.8	147.4	147.4	150.7	152.3
70°	117.4	115.8	114.2	114.2	114.2	114.2	112.6	114.2	114.2	115.8	115.8
72.5°	90.4	88.8	87.2	85.6	85.6	84.0	82.5	84.0	84.0	85.6	85.6
75°	68.2	65.1	65.1	65.1	63.5	63.5	63.5	65.1	65.1	65.1	66.6
77.5°	50.7	50.7	49.1	49.1	49.1	50.7	50.7	52.3	52.3	52.3	52.3
80°	38.1	39.6	39.6	39.6	39.6	41.2	41.2	41.2	41.2	42.8	42.8
82.5°	28.6	28.6	28.6	28.6	30.2	30.2	30.2	30.2	30.2	30.2	30.2
85°	17.4	19.0	19.0	17.4	19.0	19.0	19.0	19.0	19.0	19.0	19.0
87.5°	7.9	7.9	7.9	7.9	7.9	7.9	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



TEST NUMBER: P584200

CATALOG NUMBER: HC825D010-HM82555930-81WWWB

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1116.2	1116.2	1116.2	1116.2	1116.2	1116.2	1116.2	1116.2
2.5°	1097.2	1097.2	1097.2	1097.2	1095.6	1095.6	1095.6	1094.1
5°	1073.4	1073.4	1073.4	1070.2	1071.8	1071.8	1068.7	1070.2
7.5°	1049.7	1048.1	1046.5	1046.5	1044.9	1043.2	1041.8	1043.2
10°	1022.7	1017.9	1017.9	1016.4	1016.4	1013.2	1013.2	1014.8
12.5°	992.5	989.4	989.4	987.8	986.2	984.6	983.0	983.0
15°	962.5	959.3	957.6	956.0	954.5	951.3	952.9	951.3
17.5°	932.3	927.6	927.6	926.0	924.4	921.2	921.2	919.7
20°	897.4	895.8	892.7	894.3	892.7	889.5	887.9	887.9
22.5°	862.5	862.5	860.9	860.9	859.4	857.8	856.2	856.2
25°	829.2	827.6	829.2	829.2	824.5	824.5	824.5	826.0
27.5°	791.2	792.8	791.2	791.2	791.2	791.2	792.8	791.2
30°	753.2	753.2	753.2	754.8	757.9	756.3	756.3	754.8
32.5°	711.9	713.5	713.5	715.1	716.7	719.9	719.9	721.4
35°	670.7	673.9	675.5	673.9	678.6	678.6	681.8	681.8
37.5°	627.9	629.5	632.7	634.2	637.4	639.0	640.6	640.6
40°	581.9	588.3	589.8	591.4	596.2	596.2	597.8	600.9
42.5°	539.1	545.5	547.0	548.6	551.8	556.5	554.9	558.1
45°	497.9	502.6	504.2	505.8	510.6	512.1	512.1	516.9
47.5°	453.5	456.7	458.3	461.4	464.6	467.7	470.9	469.3
50°	409.1	413.9	417.0	418.6	423.4	424.9	426.5	428.1
52.5°	369.5	372.6	374.2	375.8	380.5	382.1	383.7	386.9
55°	331.4	333.0	336.1	334.6	339.3	340.9	342.5	345.6
57.5°	293.3	294.9	296.5	296.5	299.7	302.8	304.4	306.0
60°	256.9	260.0	261.6	261.6	261.6	264.8	264.8	264.8
62.5°	223.5	223.5	225.1	225.1	228.3	228.3	228.3	228.3
65°	188.6	190.2	191.9	191.9	195.1	193.5	196.6	195.1
67.5°	152.3	152.3	155.4	155.4	153.8	155.4	155.4	155.4
70°	115.8	115.8	117.4	117.4	117.4	117.4	117.4	117.4
72.5°	85.6	85.6	85.6	87.2	85.6	85.6	87.2	85.6
75°	66.6	66.6	66.6	66.6	66.6	66.6	66.6	66.6
77.5°	52.3	52.3	53.9	53.9	53.9	53.9	53.9	53.9
80°	42.8	42.8	42.8	42.8	44.4	42.8	42.8	42.8
82.5°	31.7	30.2	31.7	30.2	31.7	31.7	31.7	31.7
85°	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0
87.5°	7.9	7.9	7.9	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



Report Generated By 670245859 / DESKTOP-HRDQ47P





— 0°-180° - - 45°-225° - - - - 90°-270°













(END OF REPORT)