

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: P584319

Luminaire Tested: **HC830D010-HM82555927-81WWWB**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P584319
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: HC830D010-HM82555927-81WWWB
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, BLACK BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2536.7 lumens
Efficiency: N/A
Efficacy: 90.6 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

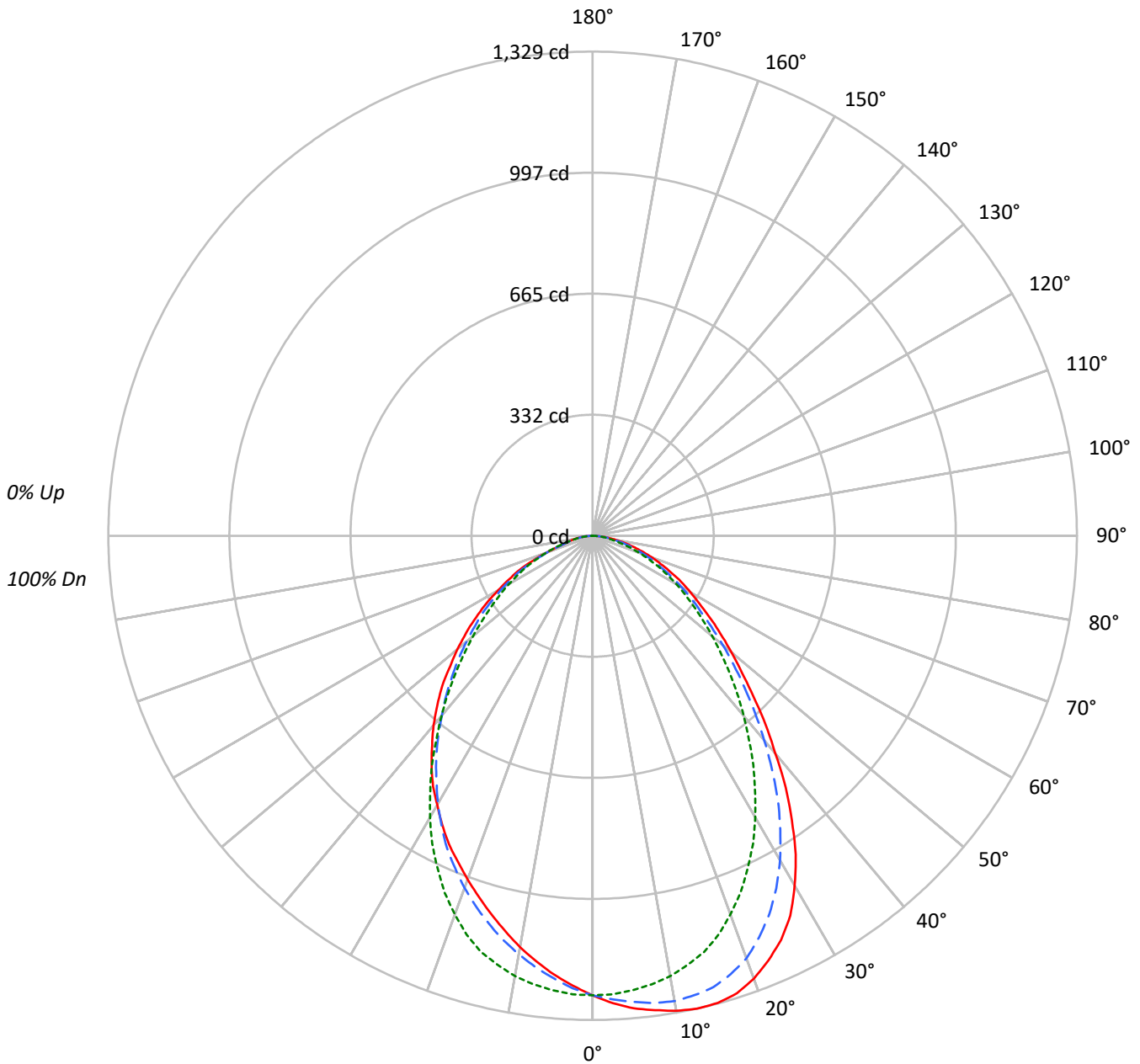
Input Watts (W): 28
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	38894	38894	38894
5°	40315	38764	37433
10°	41457	38426	35902
15°	42379	37750	34318
20°	42447	36274	32924
25°	41632	34255	31758
30°	39488	31768	30365
35°	35879	28933	29001
40°	31370	25960	27332
45°	27190	23126	25468
50°	23809	20542	23204
55°	21193	18204	20999
60°	19119	16349	18452
65°	17256	14374	16074
70°	15498	12117	11955
75°	13654	9603	8971
80°	11436	7956	8595
85°	8881	6970	7607



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	119.0	4.7
10°-20°	335.1	13.2
20°-30°	478.9	18.9
30°-40°	508.9	20.1
40°-50°	438.2	17.3
50°-60°	327.6	12.9
60°-70°	208.9	8.2
70°-80°	95.1	3.7
80°-90°	24.9	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°	933.1	36.8
0°-40°	1442.0	56.8
0°-60°	2207.7	87.0
0°-90°	2536.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2536.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1261	1261	1261	1261	1261	
5°	1302	1284	1252	1220	1209	125
15°	1328	1283	1182	1102	1075	374
25°	1224	1147	1007	946	933	560
35°	953	887	769	749	770	594
45°	624	589	530	545	584	485
55°	394	362	339	367	391	354
65°	236	210	197	206	220	236
75°	115	99	81	74	75	122
85°	25	22	20	22	22	30
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°	1261.3	1261.3	1261.3	1261.3	1261.3	1261.3	1261.3	1261.3	1261.3	1261.3	1261.3
2.5°	1284.5	1280.9	1282.7	1280.9	1282.7	1282.7	1279.1	1279.1	1279.1	1279.1	1273.8
5°	1302.4	1300.6	1300.6	1298.9	1297.1	1298.9	1297.1	1295.3	1291.7	1289.9	1284.5
7.5°	1313.3	1313.3	1313.3	1313.3	1311.5	1309.6	1307.8	1304.2	1300.6	1297.1	1293.5
10°	1324.0	1325.7	1324.0	1322.2	1320.4	1316.8	1315.0	1311.5	1306.0	1300.6	1297.1
12.5°	1329.3	1329.3	1327.5	1327.5	1324.0	1322.2	1316.8	1311.5	1306.0	1300.6	1291.7
15°	1327.5	1327.5	1325.7	1324.0	1318.6	1316.8	1313.3	1307.8	1298.9	1291.7	1282.7
17.5°	1316.8	1315.0	1311.5	1311.5	1304.2	1302.4	1298.9	1291.7	1282.7	1272.0	1261.3
20°	1293.5	1293.5	1291.7	1289.9	1282.7	1277.3	1273.8	1264.9	1257.6	1245.1	1234.4
22.5°	1261.3	1264.9	1261.3	1257.6	1248.7	1246.9	1241.6	1230.7	1220.0	1205.8	1193.2
25°	1223.6	1221.8	1220.0	1216.5	1209.3	1205.8	1198.5	1187.8	1177.0	1160.9	1146.6
27.5°	1175.2	1168.1	1168.1	1160.9	1155.6	1150.1	1146.6	1135.9	1121.5	1109.0	1091.0
30°	1109.0	1110.8	1101.8	1100.1	1091.0	1087.5	1080.3	1069.5	1057.0	1042.6	1028.4
32.5°	1037.3	1031.9	1031.9	1024.8	1017.5	1012.2	1010.4	997.9	987.1	972.8	958.5
35°	953.1	953.1	947.8	946.0	938.7	935.1	929.8	922.7	910.1	897.6	886.8
37.5°	870.7	867.1	865.4	861.8	856.3	851.0	851.0	838.5	836.7	822.3	808.0
40°	779.3	783.0	779.3	773.9	772.1	768.6	766.8	759.7	754.2	741.7	732.8
42.5°	702.3	698.7	698.7	696.9	689.7	689.7	686.2	682.6	673.6	670.0	659.3
45°	623.5	627.1	621.6	623.5	616.3	616.3	616.3	609.1	602.0	596.6	589.4
47.5°	555.4	557.2	557.2	551.8	550.0	550.0	546.5	542.8	537.4	530.3	524.9
50°	496.3	498.1	494.5	492.7	489.0	487.3	487.3	480.1	476.6	469.4	465.9
52.5°	442.5	442.5	440.8	440.8	435.3	435.3	431.7	426.4	422.8	419.2	410.2
55°	394.2	394.2	392.4	390.6	390.6	385.2	383.3	378.0	374.4	367.3	361.9
57.5°	347.5	349.3	347.5	345.8	344.0	342.2	338.6	333.3	329.6	324.2	320.7
60°	310.0	310.0	308.2	306.4	302.7	300.9	299.2	295.6	290.2	286.7	281.3
62.5°	274.1	272.3	270.5	268.7	265.1	265.1	261.6	258.0	252.7	249.0	245.4
65°	236.5	236.5	234.7	234.7	232.9	229.4	227.6	225.8	218.5	216.8	209.6
67.5°	202.5	204.3	200.7	200.7	197.0	197.0	195.2	189.9	188.1	184.5	181.0
70°	171.9	171.9	171.9	170.1	166.6	164.8	163.0	159.4	157.7	154.1	150.5
72.5°	141.5	141.5	139.7	139.7	137.9	136.1	134.4	130.8	130.8	127.2	123.7
75°	114.6	114.6	112.8	111.1	109.3	109.3	107.5	105.7	102.1	100.4	98.6
77.5°	87.7	87.7	87.7	86.0	84.2	84.2	84.2	80.6	77.0	77.0	75.3
80°	64.4	64.4	62.7	62.7	60.9	60.9	60.9	59.1	57.3	55.5	53.7
82.5°	43.0	43.0	43.0	43.0	41.3	41.3	41.3	39.4	37.6	37.6	37.6
85°	25.1	25.1	25.1	25.1	23.3	23.3	23.3	23.3	23.3	21.5	21.5
87.5°	10.7	8.9	10.7	8.9	10.7	8.9	10.7	8.9	8.9	8.9	8.9
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°	1261.3	1261.3	1261.3	1261.3	1261.3	1261.3	1261.3	1261.3	1261.3	1261.3	1261.3
2.5°	1275.6	1273.8	1272.0	1270.2	1270.2	1268.4	1264.9	1263.1	1261.3	1259.5	1259.5
5°	1282.7	1280.9	1277.3	1273.8	1272.0	1268.4	1264.9	1261.3	1257.6	1252.3	1250.5
7.5°	1288.2	1282.7	1279.1	1272.0	1270.2	1266.6	1261.3	1255.8	1248.7	1241.6	1236.2
10°	1288.2	1280.9	1275.6	1266.6	1263.1	1259.5	1252.3	1243.3	1234.4	1227.2	1218.2
12.5°	1284.5	1275.6	1266.6	1257.6	1252.3	1246.9	1236.2	1227.2	1216.5	1205.8	1198.5
15°	1272.0	1261.3	1250.5	1239.8	1234.4	1227.2	1216.5	1203.9	1193.2	1182.5	1169.9
17.5°	1248.7	1238.0	1225.4	1212.9	1205.8	1200.3	1184.2	1175.2	1159.2	1148.3	1137.6
20°	1218.2	1205.8	1189.6	1177.0	1168.1	1162.7	1150.1	1134.1	1121.5	1105.4	1094.6
22.5°	1178.8	1162.7	1146.6	1134.1	1125.0	1117.9	1101.8	1085.7	1075.0	1060.6	1048.1
25°	1132.3	1116.1	1100.1	1082.1	1073.2	1065.9	1051.7	1037.3	1023.0	1006.8	996.1
27.5°	1076.8	1058.8	1044.4	1028.4	1019.3	1008.6	992.5	978.2	963.8	953.1	938.7
30°	1015.8	996.1	981.8	965.6	956.7	947.8	931.6	917.3	904.7	892.2	885.0
32.5°	942.4	928.0	913.6	897.6	890.4	885.0	868.9	854.5	840.3	829.4	824.1
35°	872.5	856.3	843.8	829.4	820.5	815.2	800.8	788.3	781.1	768.6	761.4
37.5°	799.0	786.5	772.1	757.9	752.4	747.0	736.3	723.7	713.0	704.1	700.4
40°	722.0	711.3	698.7	689.7	684.4	679.0	670.0	661.1	654.0	644.9	641.3
42.5°	648.5	641.3	630.6	619.8	614.5	612.7	602.0	594.7	591.2	587.6	584.0
45°	582.3	571.6	564.3	557.2	551.8	548.2	542.8	537.4	533.9	530.3	526.7
47.5°	517.8	508.8	501.6	496.3	490.9	489.0	485.5	480.1	476.6	476.6	476.6
50°	458.6	451.5	444.3	440.8	439.0	435.3	431.7	429.9	428.2	428.2	428.2
52.5°	406.6	399.5	394.2	390.6	390.6	387.0	383.3	381.6	381.6	381.6	381.6
55°	358.4	352.9	349.3	345.8	342.2	340.4	340.4	340.4	338.6	338.6	340.4
57.5°	315.3	311.8	306.4	302.7	300.9	300.9	299.2	297.4	299.2	300.9	302.7
60°	275.8	272.3	270.5	265.1	265.1	265.1	263.4	263.4	263.4	265.1	266.9
62.5°	240.1	238.3	234.7	232.9	231.1	231.1	229.4	229.4	229.4	229.4	231.1
65°	207.8	204.3	200.7	200.7	200.7	198.9	198.9	195.2	197.0	197.0	195.2
67.5°	177.4	173.8	171.9	170.1	168.4	168.4	166.6	164.8	163.0	163.0	163.0
70°	148.7	145.1	145.1	141.5	141.5	139.7	137.9	137.9	136.1	134.4	132.6
72.5°	120.1	118.2	116.4	114.6	114.6	114.6	112.8	111.1	109.3	107.5	103.9
75°	95.0	95.0	91.3	89.5	89.5	87.7	86.0	84.2	82.4	80.6	78.8
77.5°	73.5	71.7	68.1	66.3	66.3	66.3	64.4	62.7	60.9	59.1	57.3
80°	53.7	52.0	50.2	48.4	48.4	48.4	46.6	46.6	44.8	44.8	44.8
82.5°	35.8	35.8	34.0	34.0	34.0	34.0	32.2	32.2	32.2	32.2	32.2
85°	21.5	21.5	19.7	19.7	19.7	19.7	19.7	19.7	19.7	19.7	19.7
87.5°	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9
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°	1261.3	1261.3	1261.3	1261.3	1261.3	1261.3	1261.3	1261.3	1261.3	1261.3	1261.3
2.5°	1255.8	1255.8	1252.3	1250.5	1248.7	1250.5	1246.9	1245.1	1243.3	1243.3	1241.6
5°	1245.1	1243.3	1236.2	1234.4	1232.6	1230.7	1227.2	1223.6	1220.0	1218.2	1216.5
7.5°	1230.7	1225.4	1218.2	1216.5	1214.7	1209.3	1203.9	1200.3	1194.9	1193.2	1189.6
10°	1211.1	1203.9	1198.5	1193.2	1189.6	1184.2	1178.8	1173.4	1166.3	1164.5	1159.2
12.5°	1187.8	1178.8	1168.1	1166.3	1160.9	1153.8	1146.6	1141.2	1135.9	1132.3	1126.9
15°	1159.2	1150.1	1139.4	1134.1	1128.7	1123.2	1114.3	1107.2	1101.8	1096.4	1091.0
17.5°	1125.0	1114.3	1105.4	1100.1	1096.4	1087.5	1080.3	1071.3	1065.9	1060.6	1055.2
20°	1083.9	1075.0	1062.4	1057.0	1055.2	1048.1	1039.1	1035.5	1028.4	1023.0	1019.3
22.5°	1037.3	1028.4	1017.5	1014.0	1006.8	1003.3	994.4	990.7	987.1	981.8	980.0
25°	985.3	976.4	967.5	965.6	960.2	956.7	951.3	946.0	946.0	940.6	940.6
27.5°	931.6	922.7	915.5	911.8	910.1	906.5	901.1	899.4	897.6	895.8	895.8
30°	874.3	863.6	859.9	858.1	856.3	852.8	851.0	847.4	849.2	851.0	849.2
32.5°	813.4	809.8	802.6	799.0	800.8	799.0	795.4	799.0	797.2	800.8	802.6
35°	754.2	750.6	747.0	747.0	743.5	743.5	743.5	745.3	748.8	750.6	754.2
37.5°	696.9	691.5	689.7	688.0	689.7	689.7	689.7	693.3	696.9	700.4	705.9
40°	636.0	632.4	632.4	632.4	632.4	637.8	636.0	639.6	643.1	648.5	654.0
42.5°	578.7	578.7	580.5	580.5	580.5	580.5	584.0	589.4	594.7	600.2	605.6
45°	524.9	524.9	524.9	528.5	528.5	530.3	537.4	541.0	544.7	550.0	555.4
47.5°	474.8	474.8	476.6	478.3	480.1	483.7	487.3	492.7	498.1	501.6	507.0
50°	428.2	429.9	433.5	437.2	437.2	439.0	444.3	447.9	451.5	456.8	458.6
52.5°	383.3	387.0	390.6	392.4	394.2	397.7	399.5	404.9	406.6	412.1	413.9
55°	342.2	344.0	349.3	351.1	351.1	354.7	358.4	361.9	367.3	367.3	370.8
57.5°	304.5	306.4	310.0	311.8	310.0	315.3	317.1	320.7	322.5	326.0	327.8
60°	266.9	270.5	272.3	272.3	274.1	275.8	279.5	279.5	283.1	286.7	286.7
62.5°	231.1	232.9	234.7	236.5	238.3	236.5	241.8	241.8	245.4	247.2	250.8
65°	197.0	198.9	198.9	200.7	200.7	202.5	202.5	204.3	206.1	209.6	211.4
67.5°	163.0	163.0	163.0	164.8	163.0	164.8	164.8	166.6	166.6	170.1	171.9
70°	132.6	130.8	129.0	129.0	129.0	129.0	127.2	129.0	129.0	130.8	130.8
72.5°	102.1	100.4	98.6	96.8	96.8	95.0	93.2	95.0	95.0	96.8	96.8
75°	77.0	73.5	73.5	73.5	71.7	71.7	71.7	73.5	73.5	73.5	75.3
77.5°	57.3	57.3	55.5	55.5	55.5	57.3	57.3	59.1	59.1	59.1	59.1
80°	43.0	44.8	44.8	44.8	44.8	46.6	46.6	46.6	46.6	48.4	48.4
82.5°	32.2	32.2	32.2	32.2	34.0	34.0	34.0	34.0	34.0	34.0	34.0
85°	19.7	21.5	21.5	19.7	21.5	21.5	21.5	21.5	21.5	21.5	21.5
87.5°	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9
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: P584319

CATALOG NUMBER: HC830D010-HM82555927-81WWWB

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1261.3	1261.3	1261.3	1261.3	1261.3	1261.3	1261.3	1261.3
2.5°	1239.8	1239.8	1239.8	1239.8	1238.0	1238.0	1238.0	1236.2
5°	1212.9	1212.9	1212.9	1209.3	1211.1	1211.1	1207.5	1209.3
7.5°	1186.0	1184.2	1182.5	1182.5	1180.7	1178.8	1177.0	1178.8
10°	1155.6	1150.1	1150.1	1148.3	1148.3	1144.8	1144.8	1146.6
12.5°	1121.5	1117.9	1117.9	1116.1	1114.3	1112.5	1110.8	1110.8
15°	1087.5	1083.9	1082.1	1080.3	1078.5	1075.0	1076.8	1075.0
17.5°	1053.5	1048.1	1048.1	1046.2	1044.4	1040.9	1040.9	1039.1
20°	1014.0	1012.2	1008.6	1010.4	1008.6	1005.1	1003.3	1003.3
22.5°	974.6	974.6	972.8	972.8	971.1	969.3	967.5	967.5
25°	936.9	935.1	936.9	936.9	931.6	931.6	931.6	933.4
27.5°	894.0	895.8	894.0	894.0	894.0	894.0	895.8	894.0
30°	851.0	851.0	851.0	852.8	856.3	854.5	854.5	852.8
32.5°	804.4	806.1	806.1	808.0	809.8	813.4	813.4	815.2
35°	757.9	761.4	763.2	761.4	766.8	766.8	770.4	770.4
37.5°	709.5	711.3	714.8	716.6	720.2	722.0	723.7	723.7
40°	657.5	664.7	666.4	668.2	673.6	673.6	675.4	679.0
42.5°	609.1	616.3	618.0	619.8	623.5	628.9	627.1	630.6
45°	562.5	567.9	569.8	571.6	576.9	578.7	578.7	584.0
47.5°	512.3	515.9	517.8	521.4	524.9	528.5	532.1	530.3
50°	462.2	467.6	471.2	473.0	478.3	480.1	481.9	483.7
52.5°	417.5	421.0	422.8	424.6	429.9	431.7	433.5	437.2
55°	374.4	376.2	379.8	378.0	383.3	385.2	387.0	390.6
57.5°	331.5	333.3	335.1	335.1	338.6	342.2	344.0	345.8
60°	290.2	293.8	295.6	295.6	295.6	299.2	299.2	299.2
62.5°	252.7	252.7	254.4	254.4	258.0	258.0	258.0	258.0
65°	213.2	215.0	216.8	216.8	220.3	218.5	222.1	220.3
67.5°	171.9	171.9	175.6	175.6	173.8	175.6	175.6	175.6
70°	130.8	130.8	132.6	132.6	132.6	132.6	132.6	132.6
72.5°	96.8	96.8	96.8	98.6	96.8	96.8	98.6	96.8
75°	75.3	75.3	75.3	75.3	75.3	75.3	75.3	75.3
77.5°	59.1	59.1	60.9	60.9	60.9	60.9	60.9	60.9
80°	48.4	48.4	48.4	48.4	50.2	48.4	48.4	48.4
82.5°	35.8	34.0	35.8	34.0	35.8	35.8	35.8	35.8
85°	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5
87.5°	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9
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)