

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: P584166

Luminaire Tested: **HC825D010-HM82555840-81WWWB**

Issue Date: 10/21/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P584166  
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-HM82555840-81WWWB  
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, BLACK BAFFLE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2621.4 lumens  
Efficiency: N/A  
Efficacy: 97.8 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

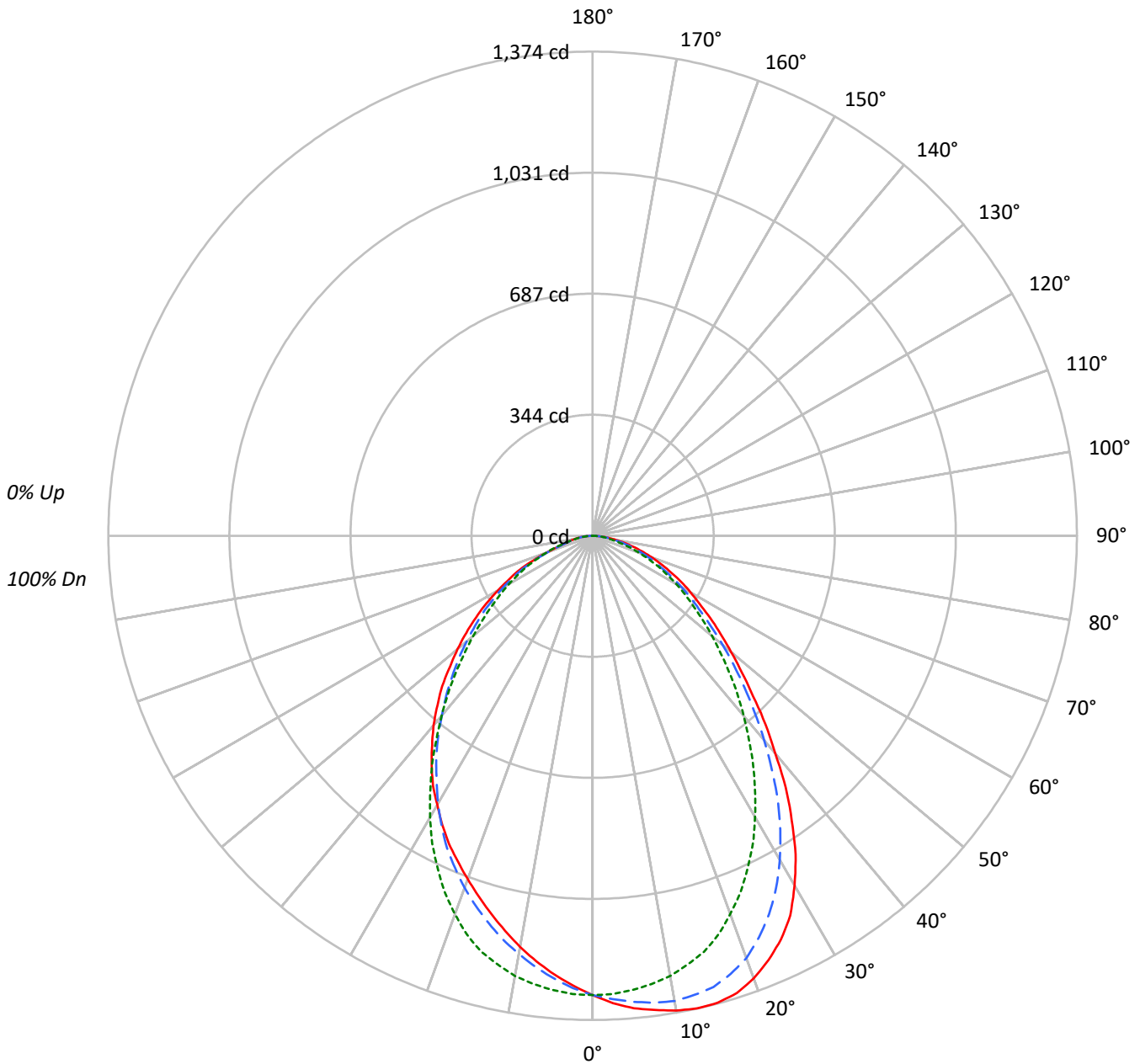
Input Watts (W): 26.8  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	40192	40192	40192
5°	41664	40058	38683
10°	42841	39710	37102
15°	43793	39008	35464
20°	43861	37485	34020
25°	43023	35402	32820
30°	40805	32829	31380
35°	37076	29901	29969
40°	32421	26829	28246
45°	28093	23902	26322
50°	24605	21223	23982
55°	21897	18811	21698
60°	19754	16898	19069
65°	17833	14856	16614
70°	16021	12523	12352
75°	14106	9936	9269
80°	11845	8222	8879
85°	9164	7182	7890



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	123.0	4.7
10°-20°	346.3	13.2
20°-30°	494.9	18.9
30°-40°	525.9	20.1
40°-50°	452.8	17.3
50°-60°	338.5	12.9
60°-70°	215.9	8.2
70°-80°	98.3	3.7
80°-90°	25.8	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°	964.2	36.8
0°-40°	1490.1	56.8
0°-60°	2281.4	87.0
0°-90°	2621.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2621.4	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1303	1303	1303	1303	1303	
5°	1346	1327	1294	1261	1250	129
15°	1372	1326	1222	1139	1111	386
25°	1264	1185	1040	978	965	579
35°	985	916	794	774	796	613
45°	644	609	548	563	604	501
55°	407	374	350	380	404	366
65°	244	217	204	213	228	244
75°	118	102	83	76	78	126
85°	26	22	20	22	22	31
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°	1303.4	1303.4	1303.4	1303.4	1303.4	1303.4	1303.4	1303.4	1303.4	1303.4	1303.4
2.5°	1327.4	1323.7	1325.6	1323.7	1325.6	1325.6	1321.9	1321.9	1321.9	1321.9	1316.3
5°	1346.0	1344.1	1344.1	1342.2	1340.4	1342.2	1340.4	1338.6	1334.8	1333.0	1327.4
7.5°	1357.1	1357.1	1357.1	1357.1	1355.2	1353.3	1351.5	1347.8	1344.1	1340.4	1336.6
10°	1368.2	1370.0	1368.2	1366.3	1364.5	1360.7	1358.9	1355.2	1349.7	1344.1	1340.4
12.5°	1373.7	1373.7	1371.8	1371.8	1368.2	1366.3	1360.7	1355.2	1349.7	1344.1	1334.8
15°	1371.8	1371.8	1370.0	1368.2	1362.6	1360.7	1357.1	1351.5	1342.2	1334.8	1325.6
17.5°	1360.7	1358.9	1355.2	1355.2	1347.8	1346.0	1342.2	1334.8	1325.6	1314.5	1303.4
20°	1336.6	1336.6	1334.8	1333.0	1325.6	1320.1	1316.3	1307.1	1299.6	1286.7	1275.5
22.5°	1303.4	1307.1	1303.4	1299.6	1290.4	1288.6	1283.0	1271.9	1260.8	1246.0	1233.0
25°	1264.5	1262.6	1260.8	1257.0	1249.7	1246.0	1238.5	1227.5	1216.4	1199.7	1184.9
27.5°	1214.4	1207.1	1207.1	1199.7	1194.1	1188.6	1184.9	1173.8	1158.9	1146.0	1127.5
30°	1146.0	1147.9	1138.6	1136.8	1127.5	1123.8	1116.3	1105.3	1092.3	1077.5	1062.7
32.5°	1071.9	1066.4	1066.4	1059.0	1051.6	1046.0	1044.2	1031.3	1020.1	1005.3	990.5
35°	984.9	984.9	979.4	977.6	970.2	966.4	960.9	953.5	940.5	927.6	916.5
37.5°	899.8	896.0	894.2	890.6	885.0	879.4	879.4	866.5	864.6	849.8	834.9
40°	805.4	809.0	805.4	799.8	797.9	794.3	792.3	785.0	779.4	766.4	757.2
42.5°	725.8	722.0	722.0	720.2	712.7	712.7	709.1	705.3	696.1	692.4	681.3
45°	644.2	648.0	642.4	644.2	636.9	636.9	636.9	629.5	622.1	616.5	609.2
47.5°	573.9	575.8	575.8	570.2	568.4	568.4	564.6	561.0	555.4	548.1	542.5
50°	512.9	514.7	510.9	509.1	505.5	503.5	503.5	496.2	492.4	485.0	481.4
52.5°	457.3	457.3	455.4	455.4	449.9	449.9	446.2	440.6	436.9	433.2	423.9
55°	407.3	407.3	405.4	403.6	403.6	398.0	396.2	390.7	386.9	379.5	374.0
57.5°	359.2	361.0	359.2	357.3	355.5	353.6	349.9	344.3	340.7	335.1	331.4
60°	320.3	320.3	318.4	316.6	312.9	311.0	309.2	305.5	299.9	296.2	290.6
62.5°	283.2	281.4	279.6	277.7	274.0	274.0	270.3	266.6	261.1	257.3	253.6
65°	244.4	244.4	242.6	242.6	240.6	237.0	235.1	233.3	225.9	224.1	216.6
67.5°	209.2	211.0	207.4	207.4	203.6	203.6	201.8	196.2	194.4	190.7	187.0
70°	177.7	177.7	177.7	175.9	172.2	170.3	168.5	164.8	163.0	159.2	155.5
72.5°	146.3	146.3	144.5	144.5	142.5	140.7	138.9	135.1	135.1	131.4	127.8
75°	118.4	118.4	116.6	114.8	112.9	112.9	111.1	109.2	105.5	103.7	101.9
77.5°	90.7	90.7	90.7	88.9	87.0	87.0	87.0	83.4	79.6	79.6	77.8
80°	66.7	66.7	64.8	64.8	62.9	62.9	62.9	61.1	59.3	57.4	55.5
82.5°	44.4	44.4	44.4	44.4	42.6	42.6	42.6	40.8	38.8	38.8	38.8
85°	25.9	25.9	25.9	25.9	24.1	24.1	24.1	24.1	24.1	22.3	22.3
87.5°	11.1	9.3	11.1	9.3	11.1	9.3	11.1	9.3	9.3	9.3	9.3
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):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	1303.4	1303.4	1303.4	1303.4	1303.4	1303.4	1303.4	1303.4	1303.4	1303.4	1303.4
2.5°	1318.1	1316.3	1314.5	1312.6	1312.6	1310.8	1307.1	1305.2	1303.4	1301.5	1301.5
5°	1325.6	1323.7	1320.1	1316.3	1314.5	1310.8	1307.1	1303.4	1299.6	1294.1	1292.2
7.5°	1331.2	1325.6	1321.9	1314.5	1312.6	1308.9	1303.4	1297.8	1290.4	1283.0	1277.5
10°	1331.2	1323.7	1318.1	1308.9	1305.2	1301.5	1294.1	1284.9	1275.5	1268.2	1259.0
12.5°	1327.4	1318.1	1308.9	1299.6	1294.1	1288.6	1277.5	1268.2	1257.0	1246.0	1238.5
15°	1314.5	1303.4	1292.2	1281.1	1275.5	1268.2	1257.0	1244.1	1233.0	1221.9	1209.0
17.5°	1290.4	1279.3	1266.3	1253.4	1246.0	1240.5	1223.8	1214.4	1197.9	1186.7	1175.6
20°	1259.0	1246.0	1229.3	1216.4	1207.1	1201.5	1188.6	1171.9	1158.9	1142.3	1131.2
22.5°	1218.2	1201.5	1184.9	1171.9	1162.7	1155.3	1138.6	1121.9	1110.9	1096.0	1083.1
25°	1170.0	1153.4	1136.8	1118.3	1108.9	1101.6	1086.8	1071.9	1057.2	1040.5	1029.3
27.5°	1112.7	1094.2	1079.3	1062.7	1053.4	1042.3	1025.7	1010.8	996.1	984.9	970.2
30°	1049.8	1029.3	1014.6	997.9	988.7	979.4	962.7	947.9	935.0	922.0	914.5
32.5°	973.8	959.0	944.2	927.6	920.1	914.5	897.9	883.1	868.3	857.2	851.6
35°	901.6	885.0	871.9	857.2	848.0	842.4	827.5	814.6	807.2	794.3	786.9
37.5°	825.7	812.8	797.9	783.1	777.6	772.0	760.9	747.9	736.8	727.6	723.9
40°	746.1	735.0	722.0	712.7	707.3	701.7	692.4	683.2	675.7	666.5	662.8
42.5°	670.2	662.8	651.6	640.6	635.0	633.1	622.1	614.6	611.0	607.2	603.6
45°	601.7	590.6	583.2	575.8	570.2	566.6	561.0	555.4	551.7	548.1	544.3
47.5°	535.0	525.8	518.4	512.9	507.3	505.5	501.7	496.2	492.4	492.4	492.4
50°	473.9	466.5	459.1	455.4	453.6	449.9	446.2	444.4	442.4	442.4	442.4
52.5°	420.3	412.8	407.3	403.6	403.6	399.9	396.2	394.3	394.3	394.3	394.3
55°	370.3	364.8	361.0	357.3	353.6	351.7	351.7	351.7	349.9	349.9	351.7
57.5°	325.8	322.2	316.6	312.9	311.0	311.0	309.2	307.3	309.2	311.0	312.9
60°	285.2	281.4	279.6	274.0	274.0	274.0	272.1	272.1	272.1	274.0	275.8
62.5°	248.1	246.2	242.6	240.6	238.8	238.8	237.0	237.0	237.0	237.0	238.8
65°	214.7	211.0	207.4	207.4	207.4	205.5	205.5	201.8	203.6	203.6	201.8
67.5°	183.3	179.5	177.7	175.9	174.0	174.0	172.2	170.3	168.5	168.5	168.5
70°	153.7	150.0	150.0	146.3	146.3	144.5	142.5	142.5	140.7	138.9	137.0
72.5°	124.0	122.2	120.4	118.4	118.4	118.4	116.6	114.8	112.9	111.1	107.4
75°	98.1	98.1	94.4	92.6	92.6	90.7	88.9	87.0	85.2	83.4	81.4
77.5°	75.9	74.0	70.3	68.5	68.5	68.5	66.7	64.8	62.9	61.1	59.3
80°	55.5	53.7	51.8	50.0	50.0	50.0	48.2	48.2	46.3	46.3	46.3
82.5°	37.0	37.0	35.2	35.2	35.2	35.2	33.3	33.3	33.3	33.3	33.3
85°	22.3	22.3	20.3	20.3	20.3	20.3	20.3	20.3	20.3	20.3	20.3
87.5°	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3
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°	1303.4	1303.4	1303.4	1303.4	1303.4	1303.4	1303.4	1303.4	1303.4	1303.4	1303.4
2.5°	1297.8	1297.8	1294.1	1292.2	1290.4	1292.2	1288.6	1286.7	1284.9	1284.9	1283.0
5°	1286.7	1284.9	1277.5	1275.5	1273.7	1271.9	1268.2	1264.5	1260.8	1259.0	1257.0
7.5°	1271.9	1266.3	1259.0	1257.0	1255.2	1249.7	1244.1	1240.5	1234.9	1233.0	1229.3
10°	1251.6	1244.1	1238.5	1233.0	1229.3	1223.8	1218.2	1212.6	1205.2	1203.4	1197.9
12.5°	1227.5	1218.2	1207.1	1205.2	1199.7	1192.3	1184.9	1179.4	1173.8	1170.0	1164.5
15°	1197.9	1188.6	1177.4	1171.9	1166.4	1160.8	1151.5	1144.2	1138.6	1133.0	1127.5
17.5°	1162.7	1151.5	1142.3	1136.8	1133.0	1123.8	1116.3	1107.1	1101.6	1096.0	1090.4
20°	1120.1	1110.9	1097.8	1092.3	1090.4	1083.1	1073.7	1070.1	1062.7	1057.2	1053.4
22.5°	1071.9	1062.7	1051.6	1047.9	1040.5	1036.7	1027.5	1023.8	1020.1	1014.6	1012.6
25°	1018.2	1009.0	999.7	997.9	992.3	988.7	983.1	977.6	977.6	972.0	972.0
27.5°	962.7	953.5	946.1	942.3	940.5	936.8	931.2	929.4	927.6	925.7	925.7
30°	903.5	892.4	888.6	886.8	885.0	881.3	879.4	875.7	877.5	879.4	877.5
32.5°	840.5	836.8	829.5	825.7	827.5	825.7	822.0	825.7	823.9	827.5	829.5
35°	779.4	775.8	772.0	772.0	768.4	768.4	768.4	770.2	773.8	775.8	779.4
37.5°	720.2	714.7	712.7	710.9	712.7	712.7	712.7	716.5	720.2	723.9	729.4
40°	657.2	653.6	653.6	653.6	653.6	659.1	657.2	660.9	664.7	670.2	675.7
42.5°	598.0	598.0	599.8	599.8	599.8	599.8	603.6	609.2	614.6	620.2	625.7
45°	542.5	542.5	542.5	546.1	546.1	548.1	555.4	559.1	562.8	568.4	573.9
47.5°	490.6	490.6	492.4	494.3	496.2	499.9	503.5	509.1	514.7	518.4	524.0
50°	442.4	444.4	448.0	451.8	451.8	453.6	459.1	462.9	466.5	472.1	473.9
52.5°	396.2	399.9	403.6	405.4	407.3	411.0	412.8	418.4	420.3	425.9	427.7
55°	353.6	355.5	361.0	362.8	362.8	366.6	370.3	374.0	379.5	379.5	383.3
57.5°	314.7	316.6	320.3	322.2	320.3	325.8	327.7	331.4	333.2	336.9	338.8
60°	275.8	279.6	281.4	281.4	283.2	285.2	288.8	288.8	292.5	296.2	296.2
62.5°	238.8	240.6	242.6	244.4	246.2	244.4	250.0	250.0	253.6	255.5	259.2
65°	203.6	205.5	205.5	207.4	207.4	209.2	209.2	211.0	212.9	216.6	218.5
67.5°	168.5	168.5	168.5	170.3	168.5	170.3	170.3	172.2	172.2	175.9	177.7
70°	137.0	135.1	133.3	133.3	133.3	133.3	131.4	133.3	133.3	135.1	135.1
72.5°	105.5	103.7	101.9	99.9	99.9	98.1	96.3	98.1	98.1	99.9	99.9
75°	79.6	75.9	75.9	75.9	74.0	74.0	74.0	75.9	75.9	75.9	77.8
77.5°	59.3	59.3	57.4	57.4	57.4	59.3	59.3	61.1	61.1	61.1	61.1
80°	44.4	46.3	46.3	46.3	46.3	48.2	48.2	48.2	48.2	50.0	50.0
82.5°	33.3	33.3	33.3	33.3	35.2	35.2	35.2	35.2	35.2	35.2	35.2
85°	20.3	22.3	22.3	20.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3
87.5°	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3
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: P584166

CATALOG NUMBER: HC825D010-HM82555840-81WWWB

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1303.4	1303.4	1303.4	1303.4	1303.4	1303.4	1303.4	1303.4
2.5°	1281.1	1281.1	1281.1	1281.1	1279.3	1279.3	1279.3	1277.5
5°	1253.4	1253.4	1253.4	1249.7	1251.6	1251.6	1247.8	1249.7
7.5°	1225.6	1223.8	1221.9	1221.9	1220.0	1218.2	1216.4	1218.2
10°	1194.1	1188.6	1188.6	1186.7	1186.7	1183.0	1183.0	1184.9
12.5°	1158.9	1155.3	1155.3	1153.4	1151.5	1149.7	1147.9	1147.9
15°	1123.8	1120.1	1118.3	1116.3	1114.5	1110.9	1112.7	1110.9
17.5°	1088.6	1083.1	1083.1	1081.2	1079.3	1075.7	1075.7	1073.7
20°	1047.9	1046.0	1042.3	1044.2	1042.3	1038.6	1036.7	1036.7
22.5°	1007.2	1007.2	1005.3	1005.3	1003.4	1001.6	999.7	999.7
25°	968.2	966.4	968.2	968.2	962.7	962.7	962.7	964.6
27.5°	923.8	925.7	923.8	923.8	923.8	923.8	925.7	923.8
30°	879.4	879.4	879.4	881.3	885.0	883.1	883.1	881.3
32.5°	831.3	833.1	833.1	834.9	836.8	840.5	840.5	842.4
35°	783.1	786.9	788.7	786.9	792.3	792.3	796.1	796.1
37.5°	733.2	735.0	738.7	740.5	744.3	746.1	747.9	747.9
40°	679.4	686.8	688.8	690.6	696.1	696.1	698.0	701.7
42.5°	629.5	636.9	638.7	640.6	644.2	649.8	648.0	651.6
45°	581.3	586.9	588.7	590.6	596.1	598.0	598.0	603.6
47.5°	529.5	533.2	535.0	538.7	542.5	546.1	549.9	548.1
50°	477.6	483.2	487.0	488.8	494.3	496.2	498.0	499.9
52.5°	431.3	435.1	436.9	438.8	444.4	446.2	448.0	451.8
55°	386.9	388.8	392.5	390.7	396.2	398.0	399.9	403.6
57.5°	342.5	344.3	346.3	346.3	349.9	353.6	355.5	357.3
60°	299.9	303.7	305.5	305.5	305.5	309.2	309.2	309.2
62.5°	261.1	261.1	262.9	262.9	266.6	266.6	266.6	266.6
65°	220.3	222.1	224.1	224.1	227.7	225.9	229.6	227.7
67.5°	177.7	177.7	181.5	181.5	179.5	181.5	181.5	181.5
70°	135.1	135.1	137.0	137.0	137.0	137.0	137.0	137.0
72.5°	99.9	99.9	99.9	101.9	99.9	99.9	101.9	99.9
75°	77.8	77.8	77.8	77.8	77.8	77.8	77.8	77.8
77.5°	61.1	61.1	62.9	62.9	62.9	62.9	62.9	62.9
80°	50.0	50.0	50.0	50.0	51.8	50.0	50.0	50.0
82.5°	37.0	35.2	37.0	35.2	37.0	37.0	37.0	37.0
85°	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3
87.5°	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3
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)