

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: P584327

Luminaire Tested: **HC830D010-HM82555930-81RWWC**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P584327
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2109-368-14)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 10/21/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HC830D010-HM82555930-81RWWC
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, SPECULAR TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3037.8 lumens
Efficiency: N/A
Efficacy: 108.5 lumens/watt
Spacing Criteria (0/90/45): 1.15 / 1.08 / 1.17
Luminous Opening: Circular (Dia: 0.67' x H: 0')
CIE Type: Direct

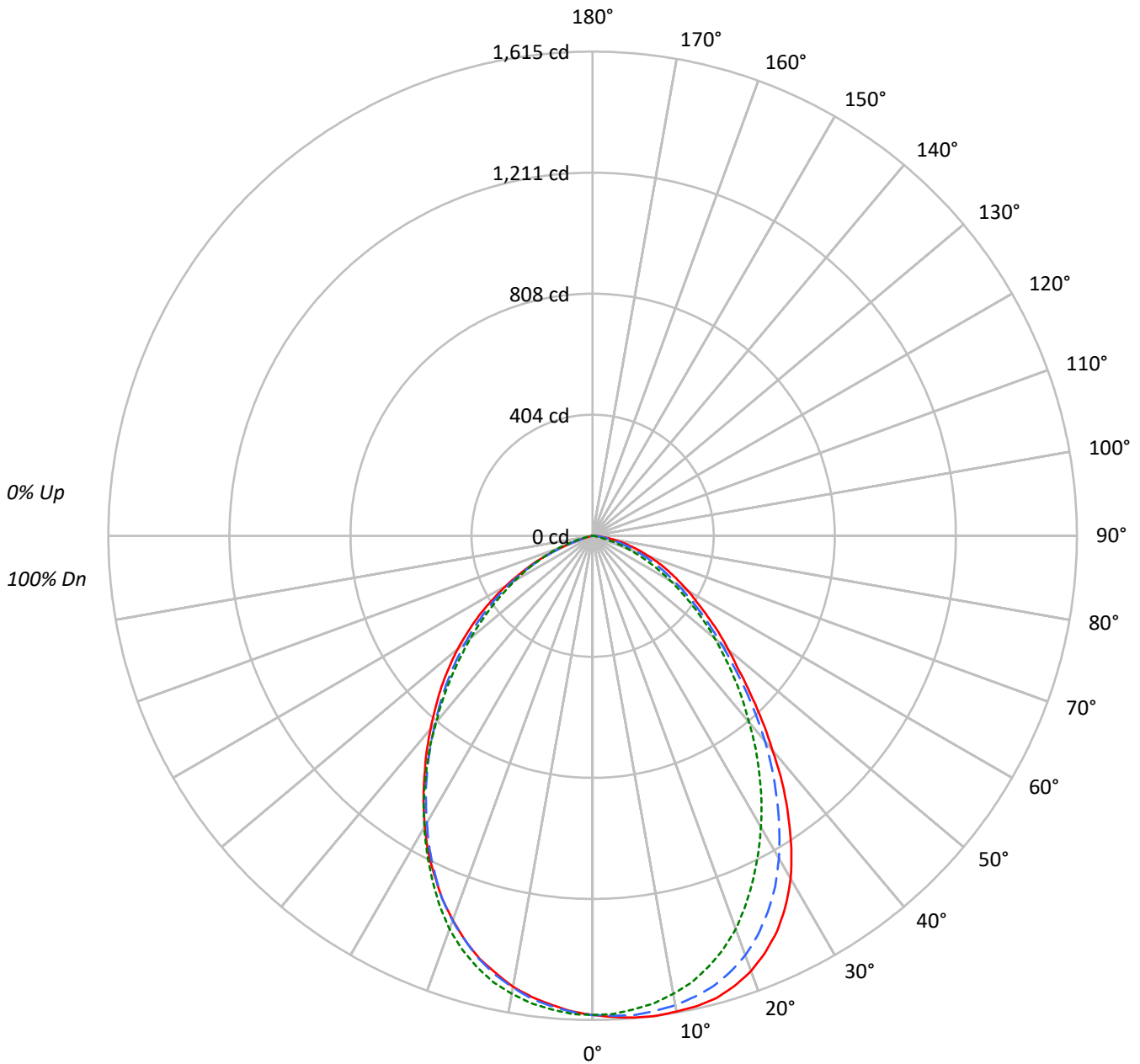
Input Watts (W): 28
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	111	107	104	101	108	105	102	99	101	98	96	97	95	93	93	92	90	88																			
2	103	96	90	85	100	94	89	84	91	86	82	87	84	81	84	82	79	77																			
3	95	86	79	73	93	84	78	73	82	76	72	79	74	70	76	73	69	67																			
4	88	77	70	64	86	76	69	64	74	68	63	72	66	62	69	65	61	59																			
5	81	70	62	56	80	69	62	56	67	61	56	65	59	55	63	58	54	52																			
6	76	64	56	50	74	63	55	50	61	55	50	60	54	49	58	53	49	47																			
7	71	59	51	45	69	58	50	45	56	50	45	55	49	44	54	48	44	42																			
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38																			
9	62	50	42	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35																			
10	58	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	49289	49289	49289
5°	49935	49078	48617
10°	50447	48577	47842
15°	50957	47551	46596
20°	50700	45797	44750
25°	49515	43058	42472
30°	47036	39965	39819
35°	42817	36470	36793
40°	37537	32642	33841
45°	32384	29035	31085
50°	28357	25493	28155
55°	25128	21913	24784
60°	22634	18428	20531
65°	20394	14790	15731
70°	17888	10774	8664
75°	15262	5600	2299
80°	11738	1527	373
85°	7536	0	0



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CATALOG NUMBER: HC830D010-HM82555930-81RWWC

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	150.8	5.0
10°-20°	423.9	14.0
20°-30°	601.7	19.8
30°-40°	633.4	20.9
40°-50°	538.8	17.7
50°-60°	389.4	12.8
60°-70°	221.5	7.3
70°-80°	69.8	2.3
80°-90°	8.5	0.3
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°	1176.4	38.7
0°-40°	1809.8	59.6
0°-60°	2738.0	90.1
0°-90°	3037.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3037.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1598	1598	1598	1598	1598	
5°	1613	1605	1586	1575	1571	154
15°	1596	1556	1490	1462	1460	449
25°	1455	1383	1266	1244	1248	667
35°	1137	1071	969	962	977	708
45°	743	715	666	683	713	577
55°	467	433	408	431	461	421
65°	280	241	203	201	216	277
75°	128	98	47	21	19	138
85°	21	13	0	0	0	28
90°	0	0	0	0	0	



TEST NUMBER: P584327

CATALOG NUMBER: HC830D010-HM82555930-81RWWC

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	1598.4	1598.4	1598.4	1598.4	1598.4	1598.4	1598.4	1598.4	1598.4	1598.4	1598.4
2.5°	1606.9	1609.1	1604.8	1604.8	1609.1	1604.8	1606.9	1606.9	1604.8	1604.8	1602.7
5°	1613.2	1611.1	1611.1	1611.1	1613.2	1609.1	1606.9	1609.1	1604.8	1604.8	1604.8
7.5°	1615.4	1615.4	1613.2	1611.1	1611.1	1611.1	1609.1	1606.9	1604.8	1600.5	1598.4
10°	1611.1	1611.1	1613.2	1609.1	1609.1	1604.8	1604.8	1600.5	1600.5	1596.2	1589.8
12.5°	1606.9	1604.8	1604.8	1600.5	1600.5	1596.2	1596.2	1589.8	1587.7	1581.3	1574.8
15°	1596.2	1594.1	1589.8	1587.7	1585.5	1583.4	1579.1	1577.0	1570.6	1562.1	1555.7
17.5°	1574.8	1572.7	1570.6	1566.4	1562.1	1560.0	1557.8	1551.4	1542.8	1536.4	1525.8
20°	1545.0	1542.8	1542.8	1536.4	1534.3	1527.9	1525.8	1517.3	1510.9	1498.0	1489.5
22.5°	1504.4	1506.6	1502.3	1498.0	1493.7	1487.3	1483.2	1474.6	1463.9	1451.1	1440.5
25°	1455.3	1457.5	1453.2	1448.9	1442.6	1438.3	1434.1	1421.2	1410.5	1395.6	1382.8
27.5°	1393.5	1393.5	1393.5	1389.2	1378.5	1376.4	1372.1	1359.4	1344.4	1331.6	1318.8
30°	1321.0	1318.8	1318.8	1312.4	1308.1	1299.6	1293.2	1282.6	1271.9	1256.9	1242.0
32.5°	1233.5	1235.6	1229.2	1224.9	1218.5	1218.5	1209.9	1201.5	1188.6	1173.7	1158.8
35°	1137.4	1139.5	1135.3	1133.1	1122.4	1120.3	1118.3	1107.6	1099.0	1088.3	1071.3
37.5°	1039.2	1037.2	1035.0	1035.0	1028.6	1024.3	1020.0	1013.6	1000.8	992.3	983.8
40°	932.5	932.5	932.5	930.4	928.3	924.0	921.8	917.6	909.1	900.5	894.1
42.5°	836.5	836.5	834.4	832.3	828.0	830.2	825.9	821.6	813.0	806.6	802.3
45°	742.6	742.6	742.6	744.8	740.5	734.1	734.1	729.8	725.5	721.2	714.8
47.5°	659.4	665.8	661.6	659.4	661.6	653.0	653.0	648.7	644.4	640.2	631.6
50°	591.1	591.1	591.1	586.9	584.8	584.8	578.3	574.0	571.9	567.6	559.1
52.5°	529.2	524.9	524.9	522.8	520.7	516.4	516.4	512.1	503.7	499.4	493.0
55°	467.4	467.4	465.3	463.1	461.0	458.8	456.7	450.3	446.0	439.6	433.2
57.5°	411.9	416.2	414.0	409.7	405.4	405.4	401.2	396.9	390.5	384.2	377.7
60°	367.0	364.9	364.9	362.8	358.5	356.3	354.2	347.8	341.5	335.1	328.6
62.5°	320.1	320.1	320.1	315.8	311.5	309.4	307.2	303.1	294.5	288.1	283.8
65°	279.5	277.4	275.3	273.1	271.0	266.7	264.7	260.4	254.0	247.5	241.1
67.5°	239.0	236.8	236.8	234.7	228.3	226.1	226.1	219.8	213.4	207.0	200.6
70°	198.4	198.4	198.4	194.2	192.0	189.9	187.7	183.5	177.2	170.7	164.3
72.5°	164.3	162.2	162.2	160.0	153.6	151.5	149.3	145.1	138.8	134.5	130.2
75°	128.1	128.1	125.9	123.8	121.6	119.5	117.4	113.1	106.7	100.4	98.2
77.5°	98.2	96.1	96.1	93.9	89.7	87.5	87.5	83.2	76.8	72.5	68.2
80°	66.1	68.2	66.1	64.0	61.8	59.8	57.7	55.5	51.2	47.0	42.7
82.5°	40.5	42.7	40.5	40.5	38.4	36.3	36.3	32.0	29.8	27.7	25.6
85°	21.3	21.3	21.3	21.3	19.3	19.3	19.3	17.1	15.0	12.8	12.8
87.5°	6.4	8.6	6.4	6.4	6.4	6.4	6.4	6.4	4.3	4.3	4.3
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: P584327

CATALOG NUMBER: HC830D010-HM82555930-81RWWC

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	1598.4	1598.4	1598.4	1598.4	1598.4	1598.4	1598.4	1598.4	1598.4	1598.4	1598.4
2.5°	1604.8	1602.7	1600.5	1600.5	1600.5	1600.5	1600.5	1598.4	1596.2	1596.2	1596.2
5°	1600.5	1600.5	1600.5	1598.4	1596.2	1596.2	1592.0	1589.8	1587.7	1585.5	1583.4
7.5°	1596.2	1592.0	1589.8	1587.7	1585.5	1585.5	1581.3	1577.0	1577.0	1572.7	1568.4
10°	1583.4	1581.3	1577.0	1572.7	1570.6	1568.4	1564.2	1557.8	1555.7	1551.4	1547.1
12.5°	1568.4	1564.2	1560.0	1551.4	1549.3	1547.1	1538.6	1532.1	1527.9	1525.8	1515.1
15°	1549.3	1540.7	1534.3	1523.7	1521.6	1517.3	1510.9	1504.4	1495.9	1489.5	1485.3
17.5°	1515.1	1506.6	1495.9	1485.3	1481.0	1481.0	1470.3	1461.8	1451.1	1446.8	1438.3
20°	1474.6	1463.9	1455.3	1442.6	1436.2	1429.8	1423.4	1410.5	1402.1	1395.6	1384.9
22.5°	1427.6	1412.7	1402.1	1389.2	1378.5	1372.1	1361.5	1350.8	1340.1	1333.7	1325.1
25°	1367.8	1355.1	1338.0	1325.1	1318.8	1310.3	1297.4	1286.7	1276.2	1265.5	1261.2
27.5°	1301.7	1284.6	1269.7	1254.8	1248.3	1242.0	1227.0	1214.2	1205.6	1195.1	1190.8
30°	1229.2	1212.1	1195.1	1182.2	1175.8	1165.1	1156.7	1141.7	1131.0	1122.4	1111.8
32.5°	1146.0	1133.1	1118.3	1099.0	1094.7	1086.2	1073.4	1067.0	1054.2	1047.7	1039.2
35°	1056.3	1047.7	1032.9	1017.9	1011.5	1007.2	996.6	983.8	975.2	968.8	964.5
37.5°	970.9	960.2	945.4	934.7	930.4	924.0	911.2	904.8	896.3	892.0	883.4
40°	879.1	868.6	857.9	851.4	845.0	840.7	832.3	825.9	817.3	810.9	808.8
42.5°	789.6	783.2	774.6	766.1	763.9	757.5	753.4	746.9	740.5	738.4	731.9
45°	708.5	702.1	693.5	685.0	682.8	678.6	676.4	670.1	665.8	665.8	665.8
47.5°	627.4	621.0	612.5	608.2	610.3	601.8	601.8	599.6	595.3	595.3	597.5
50°	554.8	546.3	544.2	539.9	535.6	531.4	533.5	527.1	527.1	531.4	529.2
52.5°	486.5	478.0	475.8	471.6	469.4	469.4	467.4	467.4	465.3	467.4	467.4
55°	424.7	418.3	414.0	409.7	407.6	407.6	407.6	405.4	403.3	407.6	409.7
57.5°	369.2	367.0	362.8	356.3	354.2	352.1	349.9	349.9	349.9	349.9	352.1
60°	320.1	315.8	311.5	305.2	305.2	303.1	300.9	298.8	298.8	298.8	298.8
62.5°	277.4	271.0	264.7	260.4	258.3	256.1	254.0	249.7	249.7	249.7	249.7
65°	234.7	228.3	224.0	219.8	215.6	215.6	211.3	209.1	204.9	202.7	198.4
67.5°	194.2	189.9	185.6	179.3	177.2	175.0	170.7	168.6	162.2	160.0	157.9
70°	157.9	151.5	147.2	142.9	140.9	136.6	132.3	128.1	123.8	119.5	115.2
72.5°	123.8	117.4	113.1	108.8	104.5	104.5	98.2	93.9	87.5	83.2	76.8
75°	91.8	85.4	81.1	74.7	72.5	70.4	64.0	59.8	53.4	47.0	42.7
77.5°	61.8	57.7	53.4	47.0	42.7	42.7	36.3	32.0	27.7	21.3	19.3
80°	38.4	34.1	29.8	25.6	25.6	21.3	19.3	15.0	10.7	8.6	6.4
82.5°	21.3	19.3	17.1	12.8	12.8	10.7	8.6	6.4	4.3	2.1	2.1
85°	10.7	8.6	6.4	6.4	4.3	4.3	4.3	2.1	2.1	0.0	0.0
87.5°	4.3	2.1	2.1	2.1	2.1	2.1	0.0	0.0	0.0	0.0	0.0
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: P584327

CATALOG NUMBER: HC830D010-HM82555930-81RWWC

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	1598.4	1598.4	1598.4	1598.4	1598.4	1598.4	1598.4	1598.4	1598.4	1598.4	1598.4
2.5°	1594.1	1594.1	1592.0	1592.0	1592.0	1589.8	1592.0	1589.8	1589.8	1589.8	1592.0
5°	1585.5	1581.3	1581.3	1579.1	1579.1	1577.0	1579.1	1577.0	1574.8	1572.7	1574.8
7.5°	1568.4	1564.2	1562.1	1560.0	1560.0	1560.0	1557.8	1555.7	1557.8	1551.4	1555.7
10°	1545.0	1542.8	1538.6	1536.4	1534.3	1536.4	1534.3	1530.0	1530.0	1530.0	1527.9
12.5°	1515.1	1510.9	1508.7	1506.6	1502.3	1502.3	1504.4	1500.2	1500.2	1495.9	1495.9
15°	1478.9	1474.6	1470.3	1470.3	1466.0	1466.0	1463.9	1463.9	1461.8	1459.6	1459.6
17.5°	1434.1	1427.6	1423.4	1425.5	1423.4	1421.2	1421.2	1416.9	1414.8	1416.9	1416.9
20°	1380.7	1376.4	1372.1	1374.2	1370.0	1367.8	1370.0	1363.7	1365.7	1365.7	1365.7
22.5°	1321.0	1318.8	1312.4	1312.4	1308.1	1306.0	1308.1	1308.1	1310.3	1308.1	1308.1
25°	1254.8	1250.5	1246.2	1246.2	1244.1	1242.0	1244.1	1246.2	1244.1	1246.2	1246.2
27.5°	1184.4	1177.9	1177.9	1173.7	1173.7	1175.8	1173.7	1175.8	1177.9	1177.9	1182.2
30°	1107.6	1105.4	1103.3	1101.1	1101.1	1103.3	1103.3	1103.3	1105.4	1109.7	1109.7
32.5°	1035.0	1030.7	1026.5	1026.5	1030.7	1028.6	1030.7	1030.7	1035.0	1035.0	1039.2
35°	956.1	956.1	951.8	953.9	953.9	953.9	953.9	958.1	962.4	964.5	968.8
37.5°	883.4	877.0	879.1	879.1	881.3	879.1	885.6	885.6	889.8	889.8	894.1
40°	804.5	804.5	806.6	804.5	806.6	806.6	810.9	815.2	817.3	821.6	823.7
42.5°	729.8	734.1	729.8	731.9	734.1	736.2	738.4	740.5	749.1	753.4	759.7
45°	661.6	663.7	665.8	668.0	665.8	670.1	672.1	676.4	682.8	685.0	687.1
47.5°	595.3	597.5	599.6	601.8	601.8	606.0	608.2	612.5	616.7	618.9	621.0
50°	531.4	535.6	537.8	537.8	539.9	544.2	548.5	548.5	552.6	559.1	561.2
52.5°	473.7	473.7	478.0	480.1	482.3	482.3	488.7	490.8	493.0	497.2	501.5
55°	409.7	416.2	418.3	418.3	422.6	426.9	428.9	431.0	431.0	439.6	439.6
57.5°	354.2	356.3	360.6	360.6	360.6	367.0	367.0	371.3	373.5	375.6	379.9
60°	298.8	303.1	303.1	305.2	303.1	307.2	309.4	313.7	315.8	317.9	320.1
62.5°	247.5	247.5	249.7	249.7	249.7	249.7	254.0	254.0	258.3	260.4	262.5
65°	198.4	198.4	198.4	198.4	198.4	198.4	198.4	198.4	200.6	200.6	204.9
67.5°	153.6	151.5	147.2	149.3	147.2	147.2	145.1	145.1	147.2	147.2	151.5
70°	110.9	108.8	104.5	104.5	102.4	100.4	98.2	96.1	93.9	93.9	93.9
72.5°	72.5	68.2	61.8	59.8	59.8	55.5	51.2	49.1	49.1	49.1	49.1
75°	36.3	32.0	27.7	25.6	25.6	21.3	23.4	21.3	21.3	21.3	21.3
77.5°	15.0	10.7	8.6	8.6	8.6	6.4	6.4	6.4	6.4	6.4	6.4
80°	4.3	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
82.5°	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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: P584327

CATALOG NUMBER: HC830D010-HM82555930-81RWWC

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1598.4	1598.4	1598.4	1598.4	1598.4	1598.4	1598.4	1598.4
2.5°	1589.8	1589.8	1585.5	1587.7	1587.7	1587.7	1587.7	1587.7
5°	1570.6	1572.7	1570.6	1572.7	1572.7	1570.6	1570.6	1570.6
7.5°	1551.4	1553.5	1551.4	1553.5	1553.5	1553.5	1551.4	1551.4
10°	1527.9	1527.9	1527.9	1527.9	1527.9	1525.8	1527.9	1527.9
12.5°	1495.9	1495.9	1495.9	1498.0	1498.0	1495.9	1495.9	1493.7
15°	1461.8	1457.5	1459.6	1461.8	1459.6	1459.6	1459.6	1459.6
17.5°	1414.8	1416.9	1414.8	1414.8	1414.8	1414.8	1416.9	1414.8
20°	1365.7	1365.7	1367.8	1365.7	1365.7	1365.7	1365.7	1363.7
22.5°	1310.3	1308.1	1308.1	1310.3	1310.3	1308.1	1310.3	1310.3
25°	1248.3	1250.5	1248.3	1248.3	1250.5	1250.5	1250.5	1248.3
27.5°	1182.2	1184.4	1186.5	1184.4	1184.4	1184.4	1186.5	1188.6
30°	1114.0	1118.3	1114.0	1114.0	1118.3	1116.1	1118.3	1118.3
32.5°	1041.3	1047.7	1043.5	1047.7	1047.7	1049.9	1047.7	1049.9
35°	968.8	975.2	975.2	975.2	977.4	979.5	979.5	977.4
37.5°	900.5	902.7	902.7	907.0	909.1	911.2	911.2	909.1
40°	830.2	834.4	836.5	836.5	836.5	840.7	845.0	840.7
42.5°	761.8	763.9	766.1	766.1	770.4	772.5	774.6	774.6
45°	695.7	700.0	702.1	704.2	706.4	710.7	708.5	712.8
47.5°	627.4	633.7	635.9	638.0	642.3	644.4	646.6	648.7
50°	565.5	569.8	569.8	574.0	580.5	580.5	584.8	586.9
52.5°	503.7	505.8	507.9	510.0	514.2	518.5	518.5	522.8
55°	443.9	446.0	446.0	448.1	450.3	458.8	461.0	461.0
57.5°	382.0	382.0	386.3	388.3	390.5	394.7	394.7	394.7
60°	322.2	324.4	324.4	326.5	328.6	332.9	335.1	332.9
62.5°	262.5	264.7	264.7	266.7	271.0	273.1	271.0	271.0
65°	207.0	209.1	209.1	211.3	215.6	215.6	213.4	215.6
67.5°	151.5	151.5	151.5	151.5	151.5	151.5	151.5	151.5
70°	96.1	93.9	91.8	93.9	93.9	93.9	91.8	96.1
72.5°	47.0	49.1	49.1	49.1	49.1	49.1	49.1	47.0
75°	21.3	21.3	19.3	19.3	19.3	21.3	21.3	19.3
77.5°	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4
80°	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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)