

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: P584283

Luminaire Tested: **HC830D010-HM82555835-81WWBB**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P584283
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2109-368-17)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 10/21/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HC830D010-HM82555835-81WWBB
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, WHITE BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2865.6 lumens
Efficiency: N/A
Efficacy: 102.3 lumens/watt
Spacing Criteria (0/90/45): 1.15 / 1.07 / 1.16
Luminous Opening: Circular (Dia: 0.67' x H: 0')
CIE Type: Direct

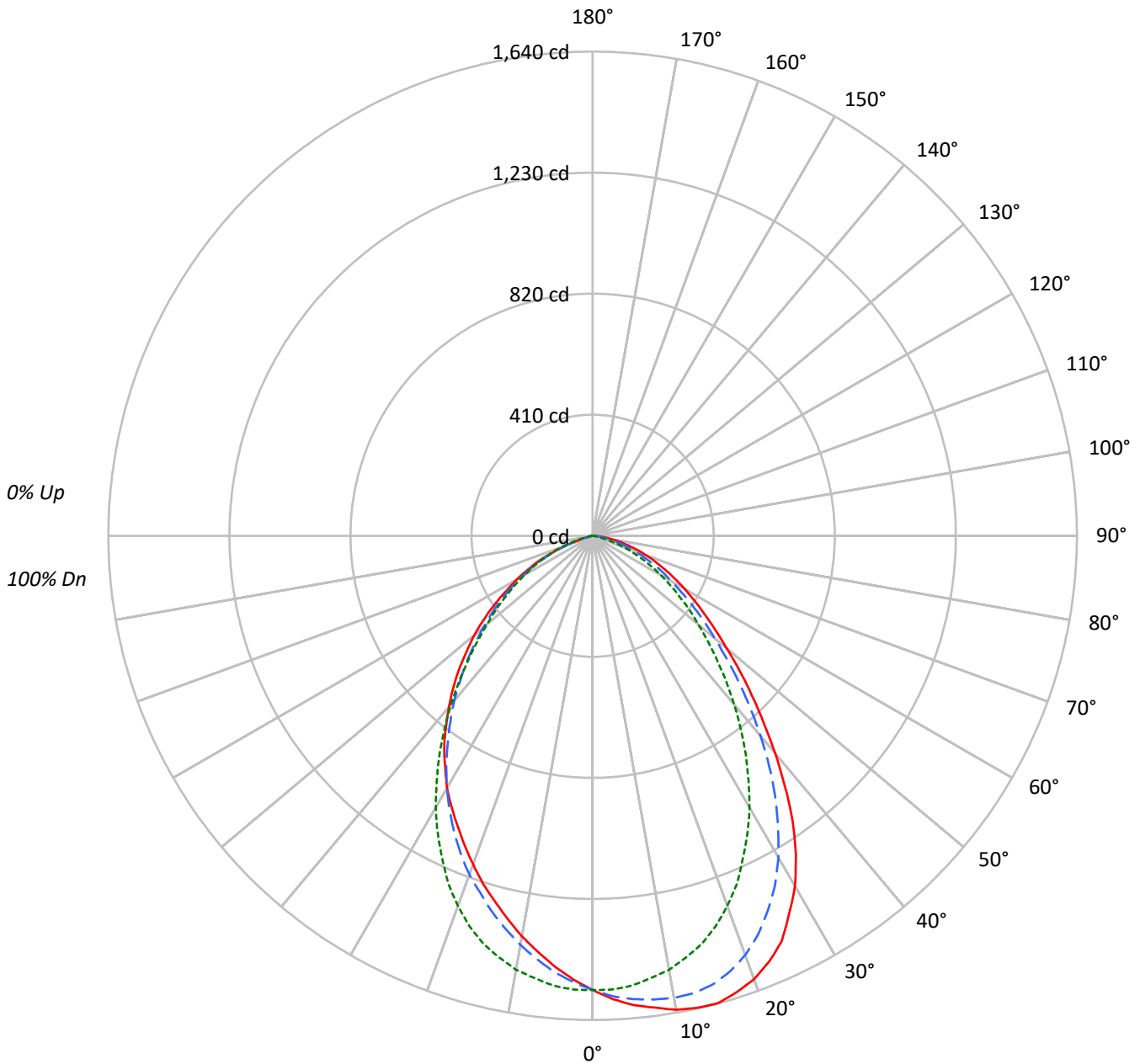
Input Watts (W): 28
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P584283

CATALOG NUMBER: HC830D010-HM82555835-81WWBB

Luminous Intensity Polar Plot





TEST NUMBER: P584283

CATALOG NUMBER: HC830D010-HM82555835-81WWBB

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			100
1	111	107	104	101	108	105	102	99	101	98	96	97	95	93	93	92	90	88			88
2	103	96	90	86	100	94	89	85	91	86	83	88	84	81	85	82	79	77			77
3	95	86	79	74	93	85	78	73	82	76	72	79	74	71	77	73	69	67			67
4	88	78	70	64	86	76	69	64	74	68	63	72	66	62	70	65	61	59			59
5	82	70	63	57	80	69	62	56	67	61	56	65	60	55	64	59	55	53			53
6	76	64	56	51	74	63	56	50	62	55	50	60	54	50	58	53	49	47			47
7	71	59	51	45	69	58	51	45	57	50	45	55	49	45	54	49	44	43			43
8	66	54	46	41	65	53	46	41	52	46	41	51	45	41	50	44	40	39			39
9	62	50	43	37	61	50	42	37	48	42	37	47	41	37	46	41	37	35			35
10	59	47	39	34	57	46	39	34	45	39	34	44	38	34	43	38	34	32			32

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	47439	47439	47439
5°	49400	47338	45342
10°	51051	46730	43132
15°	52343	45664	40892
20°	52449	43769	38860
25°	51560	40996	36852
30°	48803	37829	35126
35°	44495	34023	32984
40°	38692	29989	30456
45°	33195	25974	27879
50°	28357	22394	25042
55°	24849	19284	21757
60°	22122	16454	18298
65°	19635	13418	14600
70°	17419	9945	8295
75°	14523	5195	2466
80°	11436	1634	408
85°	8102	814	0



TEST NUMBER: P584283

CATALOG NUMBER: HC830D010-HM82555835-81WWBB

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	145.0	5.1
10°-20°	406.3	14.2
20°-30°	575.1	20.1
30°-40°	601.6	21.0
40°-50°	501.8	17.5
50°-60°	355.9	12.4
60°-70°	205.0	7.2
70°-80°	65.9	2.3
80°-90°	9.1	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°	1126.3	39.3
0°-40°	1728.0	60.3
0°-60°	2585.6	90.2
0°-90°	2865.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2865.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1538	1538	1538	1538	1538	
5°	1596	1575	1529	1483	1465	153
15°	1640	1573	1430	1318	1281	461
25°	1515	1403	1205	1108	1083	692
35°	1182	1078	904	856	876	733
45°	761	699	596	602	639	590
55°	462	414	359	377	405	418
65°	269	225	184	184	200	269
75°	122	90	44	21	21	132
85°	23	12	2	0	0	29
90°	0	0	0	0	0	



TEST NUMBER: P584283

CATALOG NUMBER: HC830D010-HM82555835-81WWBB

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	1538.4	1538.4	1538.4	1538.4	1538.4	1538.4	1538.4	1538.4	1538.4	1538.4	1538.4
2.5°	1570.7	1568.3	1566.0	1568.3	1566.0	1568.3	1566.0	1566.0	1563.8	1561.4	1561.4
5°	1595.9	1593.6	1593.6	1593.6	1591.4	1589.0	1589.0	1586.7	1582.1	1579.8	1575.2
7.5°	1612.0	1614.3	1614.3	1614.3	1609.7	1609.7	1605.2	1600.5	1595.9	1591.4	1584.5
10°	1630.4	1630.4	1628.1	1625.8	1621.2	1618.9	1616.6	1612.0	1605.2	1595.9	1589.0
12.5°	1637.4	1637.4	1635.0	1630.4	1628.1	1625.8	1623.5	1616.6	1607.4	1595.9	1586.7
15°	1639.6	1635.0	1632.7	1630.4	1625.8	1618.9	1618.9	1609.7	1598.3	1584.5	1572.9
17.5°	1621.2	1623.5	1618.9	1614.3	1607.4	1602.8	1595.9	1589.0	1575.2	1559.1	1547.6
20°	1598.3	1595.9	1593.6	1586.7	1577.6	1575.2	1568.3	1556.9	1545.3	1526.9	1510.9
22.5°	1561.4	1559.1	1554.5	1550.0	1540.7	1536.2	1529.3	1515.4	1499.3	1480.9	1462.6
25°	1515.4	1510.9	1504.0	1494.7	1487.8	1483.3	1474.0	1460.2	1441.9	1421.1	1402.8
27.5°	1441.9	1448.8	1444.2	1430.4	1423.5	1414.2	1411.9	1393.5	1377.5	1356.8	1336.1
30°	1370.6	1370.6	1363.7	1356.8	1345.2	1338.3	1329.2	1315.4	1299.2	1274.0	1257.8
32.5°	1280.9	1278.5	1269.4	1267.1	1257.8	1244.1	1241.8	1223.4	1207.3	1188.9	1168.2
35°	1182.0	1177.3	1168.2	1161.3	1156.7	1149.8	1142.9	1126.8	1110.8	1092.3	1078.5
37.5°	1069.3	1069.3	1067.0	1055.5	1051.0	1046.3	1039.4	1023.4	1014.1	995.7	981.9
40°	961.2	958.9	952.0	949.8	945.1	938.2	933.6	924.4	910.7	896.9	883.1
42.5°	855.5	857.7	848.6	850.8	841.7	837.1	834.8	821.0	814.1	800.3	788.8
45°	761.2	758.8	754.3	751.9	747.4	742.8	738.1	731.2	719.8	706.0	699.1
47.5°	673.8	666.9	666.9	664.5	662.3	653.1	650.7	643.8	636.9	623.2	614.0
50°	591.1	591.1	591.1	588.7	581.8	579.5	574.9	568.0	561.1	551.9	538.1
52.5°	524.3	524.3	524.3	522.0	512.8	510.6	508.2	499.0	489.9	483.0	473.7
55°	462.2	464.5	462.2	457.6	450.7	450.7	443.9	439.2	430.1	423.2	413.9
57.5°	409.4	409.4	404.7	402.5	397.8	395.6	390.9	386.3	374.9	367.9	356.5
60°	358.7	356.5	356.5	351.8	347.2	342.7	340.3	333.4	328.9	317.3	308.2
62.5°	312.7	312.7	308.2	308.2	298.9	298.9	296.7	289.8	282.9	271.3	266.8
65°	269.1	269.1	266.8	264.4	257.5	255.3	252.9	246.0	239.1	232.2	225.3
67.5°	230.0	230.0	225.3	223.1	218.4	216.2	211.5	207.0	200.1	193.2	186.3
70°	193.2	190.8	188.6	186.3	181.7	179.4	174.8	170.1	163.2	158.7	151.7
72.5°	156.4	156.4	154.1	149.5	147.2	144.8	142.6	137.9	131.0	124.1	119.6
75°	121.9	121.9	121.9	117.2	112.7	110.3	110.3	105.8	101.2	94.3	89.7
77.5°	94.3	92.0	89.7	89.7	85.1	82.8	80.5	78.2	71.3	69.0	64.4
80°	64.4	66.7	64.4	62.1	59.8	57.5	57.5	52.9	50.5	46.0	41.4
82.5°	43.6	41.4	41.4	39.1	39.1	36.7	36.7	32.2	29.8	27.6	25.3
85°	22.9	22.9	20.7	20.7	20.7	18.4	18.4	16.1	16.1	13.8	11.5
87.5°	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	4.6	4.6	4.6
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: P584283

CATALOG NUMBER: HC830D010-HM82555835-81WWBB

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	1538.4	1538.4	1538.4	1538.4	1538.4	1538.4	1538.4	1538.4	1538.4	1538.4	1538.4
2.5°	1559.1	1554.5	1552.2	1552.2	1550.0	1547.6	1545.3	1543.1	1538.4	1538.4	1533.8
5°	1570.7	1566.0	1563.8	1556.9	1552.2	1552.2	1543.1	1540.7	1533.8	1529.3	1524.7
7.5°	1579.8	1570.7	1563.8	1556.9	1552.2	1547.6	1538.4	1529.3	1520.0	1510.9	1506.2
10°	1579.8	1570.7	1559.1	1547.6	1543.1	1538.4	1526.9	1513.1	1501.6	1492.4	1480.9
12.5°	1575.2	1561.4	1547.6	1538.4	1529.3	1522.3	1508.5	1494.7	1480.9	1462.6	1453.3
15°	1561.4	1543.1	1529.3	1513.1	1506.2	1494.7	1483.3	1462.6	1446.4	1430.4	1418.8
17.5°	1533.8	1510.9	1494.7	1478.6	1467.1	1460.2	1441.9	1423.5	1405.0	1386.6	1372.8
20°	1492.4	1471.7	1453.3	1432.6	1423.5	1414.2	1391.2	1372.8	1354.5	1333.8	1320.0
22.5°	1441.9	1421.1	1395.9	1379.7	1365.9	1354.5	1333.8	1313.0	1294.7	1276.3	1257.8
25°	1379.7	1359.0	1336.1	1310.8	1301.6	1290.1	1267.1	1246.4	1225.7	1204.9	1188.9
27.5°	1313.0	1285.4	1267.1	1239.5	1230.3	1218.8	1193.5	1170.5	1152.1	1136.0	1117.7
30°	1232.6	1211.9	1186.6	1161.3	1152.1	1140.6	1119.9	1099.2	1080.8	1062.4	1044.1
32.5°	1145.2	1124.6	1099.2	1080.8	1067.0	1057.9	1037.2	1018.7	1000.3	981.9	965.8
35°	1053.2	1030.3	1011.8	993.4	981.9	970.5	949.8	933.6	919.8	903.8	887.6
37.5°	958.9	942.9	924.4	903.8	892.2	883.1	866.9	848.6	837.1	823.3	811.7
40°	866.9	848.6	832.4	814.1	804.8	797.9	781.9	768.1	756.6	745.0	738.1
42.5°	772.6	756.6	740.5	729.0	722.1	715.2	703.7	687.6	680.7	669.2	662.3
45°	685.3	671.4	660.0	643.8	639.3	634.7	620.9	609.4	602.5	595.6	591.1
47.5°	602.5	593.3	579.5	570.2	563.3	558.8	549.6	540.4	533.5	528.9	524.3
50°	531.2	519.7	510.6	501.3	496.8	489.9	480.6	476.1	471.4	466.8	466.8
52.5°	464.5	453.0	443.9	437.0	432.3	427.7	420.8	418.5	413.9	413.9	411.6
55°	402.5	395.6	386.3	377.2	374.9	372.5	367.9	363.4	361.0	358.7	361.0
57.5°	349.6	342.7	333.4	326.5	324.2	322.0	319.6	315.1	312.7	312.7	312.7
60°	301.3	294.4	287.5	280.6	280.6	276.0	273.7	271.3	269.1	266.8	266.8
62.5°	257.5	250.6	243.7	239.1	236.8	234.6	230.0	227.7	225.3	225.3	223.1
65°	218.4	209.3	207.0	200.1	197.7	195.5	193.2	188.6	186.3	183.9	181.7
67.5°	179.4	174.8	167.9	163.2	161.0	158.7	156.4	151.7	149.5	147.2	142.6
70°	144.8	140.3	135.7	131.0	128.8	126.5	121.9	117.2	115.0	110.3	103.4
72.5°	112.7	108.1	103.4	98.9	96.5	94.3	89.7	85.1	80.5	75.9	71.3
75°	85.1	80.5	73.6	69.0	66.7	66.7	59.8	55.2	50.5	43.6	39.1
77.5°	59.8	52.9	50.5	46.0	43.6	39.1	34.5	29.8	25.3	22.9	18.4
80°	39.1	34.5	29.8	27.6	25.3	22.9	20.7	16.1	11.5	9.2	6.9
82.5°	22.9	20.7	18.4	16.1	13.8	11.5	9.2	9.2	6.9	4.6	2.3
85°	11.5	9.2	6.9	6.9	4.6	4.6	4.6	2.3	2.3	2.3	2.3
87.5°	4.6	2.3	2.3	2.3	2.3	2.3	2.3	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: P584283

CATALOG NUMBER: HC830D010-HM82555835-81WWBB

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	1538.4	1538.4	1538.4	1538.4	1538.4	1538.4	1538.4	1538.4	1538.4	1538.4	1538.4
2.5°	1531.6	1529.3	1526.9	1524.7	1524.7	1520.0	1520.0	1517.8	1513.1	1510.9	1510.9
5°	1517.8	1510.9	1506.2	1504.0	1501.6	1494.7	1492.4	1487.8	1483.3	1478.6	1476.4
7.5°	1497.1	1485.5	1480.9	1478.6	1471.7	1464.8	1460.2	1453.3	1446.4	1439.5	1437.3
10°	1471.7	1460.2	1448.8	1444.2	1437.3	1432.6	1423.5	1414.2	1407.3	1400.4	1393.5
12.5°	1439.5	1425.7	1414.2	1409.7	1402.8	1393.5	1379.7	1375.2	1363.7	1359.0	1349.9
15°	1402.8	1386.6	1375.2	1368.3	1361.4	1347.6	1338.3	1329.2	1317.6	1313.0	1303.9
17.5°	1356.8	1338.3	1326.9	1320.0	1315.4	1303.9	1290.1	1278.5	1267.1	1262.5	1255.6
20°	1301.6	1290.1	1274.0	1267.1	1262.5	1248.7	1234.9	1230.3	1221.1	1211.9	1204.9
22.5°	1239.5	1228.0	1211.9	1204.9	1202.7	1191.1	1179.7	1172.8	1165.9	1159.0	1152.1
25°	1175.1	1161.3	1147.5	1142.9	1138.3	1129.1	1119.9	1115.3	1108.4	1103.7	1099.2
27.5°	1106.1	1092.3	1080.8	1073.9	1069.3	1062.4	1057.9	1053.2	1048.6	1044.1	1041.7
30°	1032.5	1018.7	1009.6	1004.9	1000.3	998.0	991.2	988.8	986.5	981.9	984.3
32.5°	958.9	947.4	938.2	931.3	931.3	926.7	924.4	924.4	922.2	922.2	922.2
35°	878.4	871.5	864.6	862.4	860.0	857.7	855.5	857.7	855.5	857.7	860.0
37.5°	804.8	797.9	793.4	791.0	788.8	791.0	788.8	788.8	791.0	795.7	797.9
40°	729.0	724.3	719.8	722.1	719.8	719.8	719.8	726.7	729.0	731.2	733.6
42.5°	657.6	653.1	650.7	650.7	653.1	650.7	655.4	657.6	662.3	669.2	673.8
45°	588.7	586.4	586.4	588.7	586.4	591.1	591.1	595.6	602.5	607.1	611.7
47.5°	524.3	524.3	524.3	526.6	526.6	528.9	533.5	535.8	540.4	545.0	549.6
50°	464.5	466.8	469.1	469.1	469.1	473.7	478.3	480.6	483.0	485.2	492.1
52.5°	411.6	413.9	413.9	416.3	418.5	420.8	423.2	427.7	430.1	434.6	437.0
55°	361.0	361.0	365.6	367.9	367.9	367.9	372.5	372.5	377.2	379.4	384.0
57.5°	312.7	315.1	315.1	317.3	317.3	319.6	322.0	324.2	326.5	328.9	331.1
60°	266.8	266.8	266.8	269.1	271.3	273.7	271.3	276.0	276.0	280.6	282.9
62.5°	223.1	225.3	225.3	225.3	225.3	225.3	225.3	227.7	230.0	232.2	234.6
65°	181.7	181.7	181.7	179.4	181.7	179.4	181.7	183.9	183.9	186.3	188.6
67.5°	140.3	140.3	135.7	135.7	137.9	137.9	137.9	137.9	135.7	140.3	140.3
70°	101.2	98.9	96.5	94.3	94.3	92.0	92.0	89.7	89.7	89.7	89.7
72.5°	66.7	62.1	57.5	55.2	52.9	52.9	48.3	46.0	48.3	48.3	48.3
75°	34.5	29.8	27.6	25.3	22.9	22.9	20.7	20.7	20.7	20.7	20.7
77.5°	13.8	11.5	9.2	9.2	6.9	6.9	6.9	6.9	6.9	6.9	6.9
80°	4.6	4.6	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
82.5°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
85°	2.3	0.0	0.0	2.3	0.0	2.3	2.3	2.3	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: P584283

CATALOG NUMBER: HC830D010-HM82555835-81WWBB

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1538.4	1538.4	1538.4	1538.4	1538.4	1538.4	1538.4	1538.4
2.5°	1508.5	1508.5	1506.2	1508.5	1504.0	1506.2	1504.0	1504.0
5°	1474.0	1469.5	1469.5	1469.5	1467.1	1467.1	1464.8	1464.8
7.5°	1432.6	1430.4	1428.1	1425.7	1423.5	1421.1	1421.1	1421.1
10°	1391.2	1386.6	1386.6	1384.4	1379.7	1377.5	1377.5	1377.5
12.5°	1343.0	1340.7	1338.3	1338.3	1329.2	1331.4	1329.2	1329.2
15°	1297.0	1294.7	1294.7	1287.8	1283.2	1283.2	1283.2	1280.9
17.5°	1248.7	1246.4	1244.1	1239.5	1234.9	1234.9	1232.6	1234.9
20°	1198.0	1195.8	1191.1	1191.1	1188.9	1186.6	1182.0	1184.2
22.5°	1147.5	1142.9	1140.6	1140.6	1138.3	1138.3	1133.7	1133.7
25°	1094.6	1092.3	1090.0	1092.3	1087.7	1087.7	1083.1	1083.1
27.5°	1039.4	1037.2	1037.2	1037.2	1034.8	1037.2	1034.8	1034.8
30°	984.3	984.3	981.9	981.9	984.3	981.9	984.3	986.5
32.5°	924.4	924.4	926.7	926.7	929.1	929.1	929.1	929.1
35°	862.4	866.9	866.9	869.3	871.5	873.8	873.8	876.2
37.5°	804.8	807.2	809.5	811.7	816.4	816.4	816.4	816.4
40°	742.8	745.0	749.7	747.4	756.6	758.8	756.6	756.6
42.5°	678.3	683.0	685.3	689.9	692.2	696.8	699.1	699.1
45°	618.6	620.9	625.5	630.1	632.4	639.3	639.3	639.3
47.5°	556.5	561.1	563.3	568.0	570.2	577.1	579.5	577.1
50°	496.8	501.3	505.9	505.9	512.8	515.1	519.7	522.0
52.5°	439.2	441.5	446.1	448.4	453.0	457.6	459.9	462.2
55°	384.0	386.3	390.9	390.9	397.8	400.1	404.7	404.7
57.5°	333.4	335.8	340.3	338.0	342.7	347.2	347.2	344.9
60°	285.1	285.1	285.1	289.8	292.0	294.4	296.7	296.7
62.5°	234.6	239.1	241.5	241.5	243.7	246.0	246.0	243.7
65°	188.6	193.2	195.5	195.5	197.7	197.7	197.7	200.1
67.5°	142.6	142.6	142.6	144.8	142.6	142.6	142.6	142.6
70°	89.7	89.7	89.7	89.7	87.4	89.7	89.7	92.0
72.5°	48.3	48.3	48.3	48.3	48.3	48.3	48.3	48.3
75°	20.7	20.7	20.7	22.9	20.7	20.7	20.7	20.7
77.5°	9.2	6.9	9.2	9.2	6.9	6.9	6.9	6.9
80°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
82.5°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
85°	0.0	2.3	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)