

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: P584259

Luminaire Tested: **HC830D010-HM82555830-81RWWC**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P584259
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-HM82555830-81RWWC
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, SPECULAR TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3089.6 lumens
Efficiency: N/A
Efficacy: 110.3 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

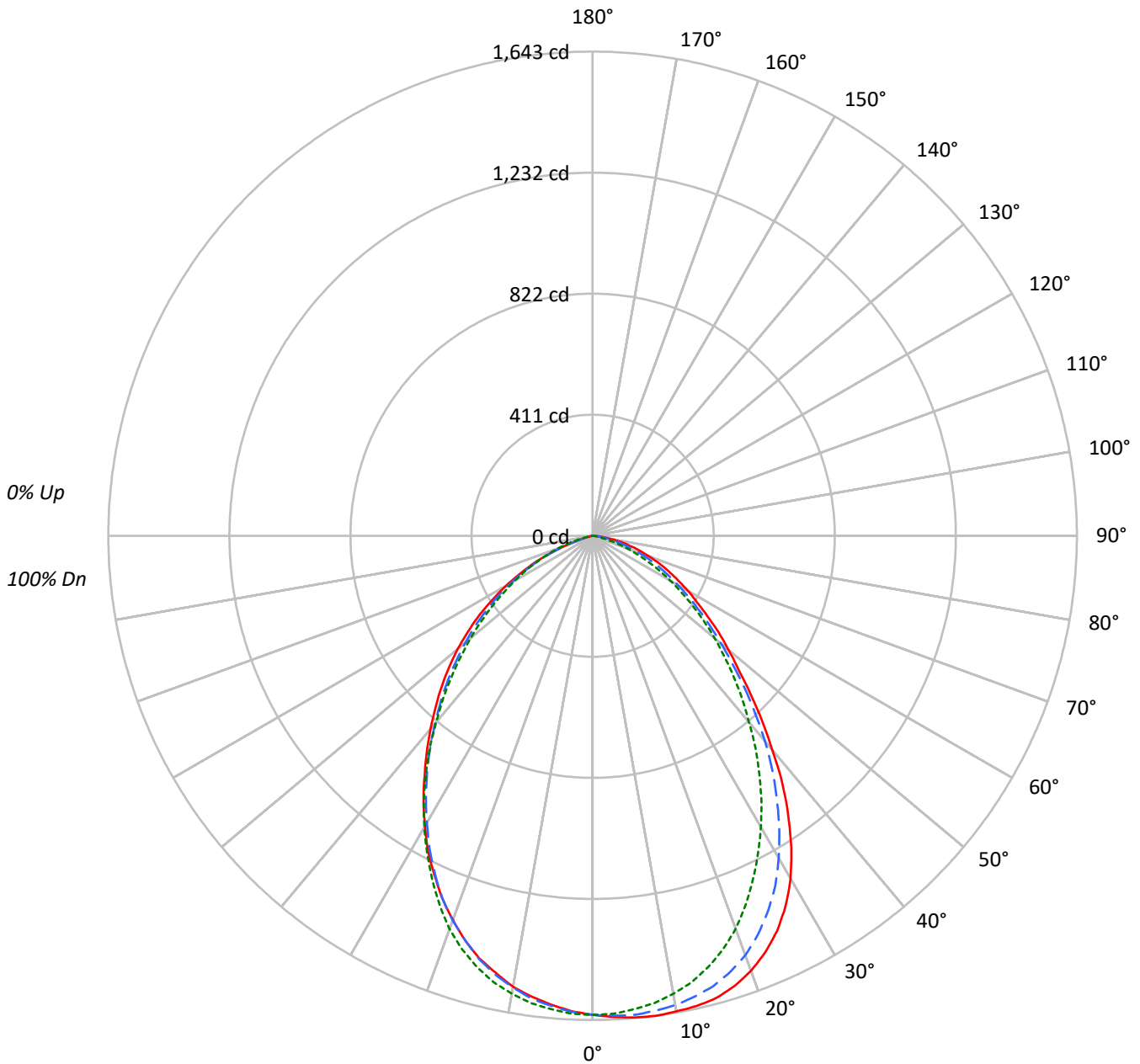
Input Watts (W): 28
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	50128	50128	50128
5°	50789	49917	49446
10°	51311	49404	48659
15°	51829	48362	47395
20°	51566	46578	45508
25°	50362	43789	43197
30°	47838	40649	40496
35°	43547	37091	37418
40°	38181	33197	34421
45°	32938	29528	31612
50°	28841	25924	28635
55°	25558	22284	25203
60°	23022	18742	20882
65°	20744	15045	16001
70°	18203	10954	8800
75°	15512	5695	2323
80°	11951	1545	373
85°	7713	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	153.4	5.0
10°-20°	431.2	14.0
20°-30°	612.0	19.8
30°-40°	644.2	20.9
40°-50°	548.0	17.7
50°-60°	396.0	12.8
60°-70°	225.3	7.3
70°-80°	71.0	2.3
80°-90°	8.6	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°	1196.5	38.7
0°-40°	1840.7	59.6
0°-60°	2784.7	90.1
0°-90°	3089.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3089.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1626	1626	1626	1626	1626	
5°	1641	1632	1613	1602	1597	157
15°	1624	1582	1515	1487	1485	457
25°	1480	1406	1287	1265	1270	678
35°	1157	1090	985	979	994	720
45°	755	727	677	694	725	587
55°	475	441	414	438	469	429
65°	284	245	206	204	219	282
75°	130	100	48	22	20	140
85°	22	13	0	0	0	28
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°	1625.6	1625.6	1625.6	1625.6	1625.6	1625.6	1625.6	1625.6	1625.6	1625.6	1625.6
2.5°	1634.3	1636.4	1632.1	1632.1	1636.4	1632.1	1634.3	1634.3	1632.1	1632.1	1630.0
5°	1640.8	1638.7	1638.7	1638.7	1640.8	1636.4	1634.3	1636.4	1632.1	1632.1	1632.1
7.5°	1643.0	1643.0	1640.8	1638.7	1638.7	1638.7	1636.4	1634.3	1632.1	1627.7	1625.6
10°	1638.7	1638.7	1640.8	1636.4	1636.4	1632.1	1632.1	1627.7	1627.7	1623.5	1616.9
12.5°	1634.3	1632.1	1632.1	1627.7	1627.7	1623.5	1623.5	1616.9	1614.8	1608.2	1601.7
15°	1623.5	1621.3	1616.9	1614.8	1612.6	1610.4	1606.1	1604.0	1597.4	1588.7	1582.2
17.5°	1601.7	1599.6	1597.4	1593.0	1588.7	1586.5	1584.3	1577.8	1569.1	1562.7	1551.8
20°	1571.4	1569.1	1569.1	1562.7	1560.4	1554.0	1551.8	1543.1	1536.7	1523.6	1514.9
22.5°	1530.1	1532.3	1528.0	1523.6	1519.3	1512.8	1508.4	1499.7	1488.9	1475.9	1465.0
25°	1480.2	1482.3	1478.0	1473.6	1467.2	1462.8	1458.5	1445.5	1434.6	1419.4	1406.3
27.5°	1417.3	1417.3	1417.3	1412.9	1402.1	1399.9	1395.5	1382.6	1367.4	1354.3	1341.3
30°	1343.5	1341.3	1341.3	1334.8	1330.5	1321.8	1315.3	1304.3	1293.5	1278.3	1263.2
32.5°	1254.5	1256.7	1250.1	1245.8	1239.3	1239.3	1230.6	1221.9	1208.9	1193.8	1178.5
35°	1156.8	1158.9	1154.6	1152.5	1141.6	1139.4	1137.3	1126.5	1117.8	1106.8	1089.5
37.5°	1057.0	1054.8	1052.6	1052.6	1046.1	1041.8	1037.4	1031.0	1017.9	1009.2	1000.5
40°	948.5	948.5	948.5	946.3	944.1	939.8	937.6	933.2	924.6	915.9	909.3
42.5°	850.7	850.7	848.6	846.4	842.0	844.3	839.9	835.6	826.9	820.4	816.0
45°	755.3	755.3	755.3	757.5	753.1	746.6	746.6	742.3	737.9	733.6	727.1
47.5°	670.6	677.1	672.9	670.6	672.9	664.2	664.2	659.8	655.5	651.1	642.4
50°	601.2	601.2	601.2	596.9	594.7	594.7	588.2	583.8	581.7	577.3	568.6
52.5°	538.3	533.9	533.9	531.7	529.6	525.2	525.2	520.9	512.2	507.8	501.4
55°	475.4	475.4	473.1	471.0	468.8	466.7	464.4	458.0	453.6	447.1	440.6
57.5°	418.9	423.2	421.0	416.7	412.3	412.3	408.1	403.7	397.1	390.7	384.2
60°	373.3	371.1	371.1	368.9	364.7	362.4	360.3	353.7	347.3	340.8	334.2
62.5°	325.5	325.5	325.5	321.3	316.9	314.7	312.6	308.2	299.5	293.0	288.7
65°	284.3	282.1	280.0	277.8	275.6	271.3	269.1	264.8	258.3	251.7	245.3
67.5°	243.0	240.9	240.9	238.8	232.2	230.1	230.1	223.5	217.0	210.6	204.0
70°	201.9	201.9	201.9	197.5	195.4	193.2	191.0	186.7	180.1	173.6	167.2
72.5°	167.2	164.9	164.9	162.8	156.2	154.1	152.0	147.6	141.0	136.7	132.3
75°	130.2	130.2	128.1	125.9	123.7	121.5	119.4	115.0	108.6	102.0	99.9
77.5°	99.9	97.6	97.6	95.5	91.2	88.9	88.9	84.7	78.1	73.8	69.4
80°	67.3	69.4	67.3	65.2	62.9	60.8	58.6	56.5	52.1	47.8	43.4
82.5°	41.3	43.4	41.3	41.3	39.1	36.9	36.9	32.6	30.4	28.2	26.0
85°	21.8	21.8	21.8	21.8	19.5	19.5	19.5	17.4	15.2	13.1	13.1
87.5°	6.5	8.7	6.5	6.5	6.5	6.5	6.5	6.5	4.4	4.4	4.4
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°	1625.6	1625.6	1625.6	1625.6	1625.6	1625.6	1625.6	1625.6	1625.6	1625.6	1625.6
2.5°	1632.1	1630.0	1627.7	1627.7	1627.7	1627.7	1627.7	1625.6	1623.5	1623.5	1623.5
5°	1627.7	1627.7	1627.7	1625.6	1623.5	1623.5	1619.1	1616.9	1614.8	1612.6	1610.4
7.5°	1623.5	1619.1	1616.9	1614.8	1612.6	1612.6	1608.2	1604.0	1604.0	1599.6	1595.2
10°	1610.4	1608.2	1604.0	1599.6	1597.4	1595.2	1590.9	1584.3	1582.2	1577.8	1573.5
12.5°	1595.2	1590.9	1586.5	1577.8	1575.7	1573.5	1564.8	1558.3	1554.0	1551.8	1540.9
15°	1575.7	1567.0	1560.4	1549.6	1547.5	1543.1	1536.7	1530.1	1521.4	1514.9	1510.6
17.5°	1540.9	1532.3	1521.4	1510.6	1506.2	1506.2	1495.4	1486.7	1475.9	1471.5	1462.8
20°	1499.7	1488.9	1480.2	1467.2	1460.7	1454.1	1447.6	1434.6	1426.0	1419.4	1408.6
22.5°	1452.0	1436.8	1426.0	1412.9	1402.1	1395.5	1384.7	1373.9	1363.0	1356.5	1347.9
25°	1391.2	1378.2	1360.8	1347.9	1341.3	1332.6	1319.6	1308.7	1297.9	1287.0	1282.7
27.5°	1324.0	1306.6	1291.4	1276.2	1269.6	1263.2	1248.0	1234.9	1226.2	1215.4	1211.1
30°	1250.1	1232.8	1215.4	1202.4	1195.9	1185.1	1176.4	1161.2	1150.2	1141.6	1130.7
32.5°	1165.5	1152.5	1137.3	1117.8	1113.4	1104.7	1091.7	1085.2	1072.1	1065.7	1057.0
35°	1074.4	1065.7	1050.5	1035.3	1028.7	1024.4	1013.5	1000.5	991.9	985.3	981.0
37.5°	987.5	976.6	961.4	950.6	946.3	939.8	926.7	920.3	911.6	907.2	898.5
40°	894.2	883.3	872.5	865.9	859.4	855.1	846.4	839.9	831.2	824.7	822.6
42.5°	803.1	796.5	787.8	779.2	777.0	770.5	766.2	759.7	753.1	751.0	744.4
45°	720.5	714.0	705.3	696.6	694.5	690.2	688.0	681.5	677.1	677.1	677.1
47.5°	638.1	631.6	622.9	618.5	620.8	612.1	612.1	609.8	605.6	605.6	607.7
50°	564.3	555.6	553.5	549.1	544.8	540.4	542.5	536.1	536.1	540.4	538.3
52.5°	494.9	486.2	484.0	479.6	477.5	477.5	475.4	475.4	473.1	475.4	475.4
55°	431.8	425.4	421.0	416.7	414.5	414.5	414.5	412.3	410.2	414.5	416.7
57.5°	375.5	373.3	368.9	362.4	360.3	358.1	356.0	356.0	356.0	356.0	358.1
60°	325.5	321.3	316.9	310.3	310.3	308.2	306.0	303.9	303.9	303.9	303.9
62.5°	282.1	275.6	269.1	264.8	262.7	260.4	258.3	254.0	254.0	254.0	254.0
65°	238.8	232.2	227.9	223.5	219.3	219.3	214.9	212.7	208.3	206.2	201.9
67.5°	197.5	193.2	188.8	182.3	180.1	178.0	173.6	171.5	164.9	162.8	160.6
70°	160.6	154.1	149.8	145.4	143.3	138.9	134.6	130.2	125.9	121.5	117.2
72.5°	125.9	119.4	115.0	110.7	106.3	106.3	99.9	95.5	88.9	84.7	78.1
75°	93.3	86.8	82.5	76.0	73.8	71.6	65.2	60.8	54.2	47.8	43.4
77.5°	62.9	58.6	54.2	47.8	43.4	43.4	36.9	32.6	28.2	21.8	19.5
80°	39.1	34.7	30.4	26.0	26.0	21.8	19.5	15.2	10.8	8.7	6.5
82.5°	21.8	19.5	17.4	13.1	13.1	10.8	8.7	6.5	4.4	2.1	2.1
85°	10.8	8.7	6.5	6.5	4.4	4.4	4.4	2.1	2.1	0.0	0.0
87.5°	4.4	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



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CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	1625.6	1625.6	1625.6	1625.6	1625.6	1625.6	1625.6	1625.6	1625.6	1625.6	1625.6
2.5°	1621.3	1621.3	1619.1	1619.1	1619.1	1616.9	1619.1	1616.9	1616.9	1616.9	1619.1
5°	1612.6	1608.2	1608.2	1606.1	1606.1	1604.0	1606.1	1604.0	1601.7	1599.6	1601.7
7.5°	1595.2	1590.9	1588.7	1586.5	1586.5	1586.5	1584.3	1582.2	1584.3	1577.8	1582.2
10°	1571.4	1569.1	1564.8	1562.7	1560.4	1562.7	1560.4	1556.2	1556.2	1556.2	1554.0
12.5°	1540.9	1536.7	1534.4	1532.3	1528.0	1528.0	1530.1	1525.7	1525.7	1521.4	1521.4
15°	1504.1	1499.7	1495.4	1495.4	1491.0	1491.0	1488.9	1488.9	1486.7	1484.6	1484.6
17.5°	1458.5	1452.0	1447.6	1449.7	1447.6	1445.5	1445.5	1441.1	1438.9	1441.1	1441.1
20°	1404.2	1399.9	1395.5	1397.7	1393.4	1391.2	1393.4	1386.8	1389.0	1389.0	1389.0
22.5°	1343.5	1341.3	1334.8	1334.8	1330.5	1328.2	1330.5	1330.5	1332.6	1330.5	1330.5
25°	1276.2	1271.9	1267.5	1267.5	1265.3	1263.2	1265.3	1267.5	1265.3	1267.5	1267.5
27.5°	1204.6	1198.0	1198.0	1193.8	1193.8	1195.9	1193.8	1195.9	1198.0	1198.0	1202.4
30°	1126.5	1124.2	1122.1	1119.9	1119.9	1122.1	1122.1	1122.1	1124.2	1128.6	1128.6
32.5°	1052.6	1048.3	1043.9	1043.9	1048.3	1046.1	1048.3	1048.3	1052.6	1052.6	1057.0
35°	972.4	972.4	968.0	970.1	970.1	970.1	970.1	974.5	978.8	981.0	985.3
37.5°	898.5	892.0	894.2	894.2	896.4	894.2	900.7	900.7	905.1	905.1	909.3
40°	818.3	818.3	820.4	818.3	820.4	820.4	824.7	829.1	831.2	835.6	837.8
42.5°	742.3	746.6	742.3	744.4	746.6	748.8	751.0	753.1	761.8	766.2	772.6
45°	672.9	675.0	677.1	679.3	677.1	681.5	683.7	688.0	694.5	696.6	698.9
47.5°	605.6	607.7	609.8	612.1	612.1	616.4	618.5	622.9	627.2	629.5	631.6
50°	540.4	544.8	546.9	546.9	549.1	553.5	557.8	557.8	562.2	568.6	570.8
52.5°	481.8	481.8	486.2	488.3	490.5	490.5	497.0	499.1	501.4	505.7	510.1
55°	416.7	423.2	425.4	425.4	429.7	434.1	436.2	438.4	438.4	447.1	447.1
57.5°	360.3	362.4	366.8	366.8	366.8	373.3	373.3	377.6	379.8	382.0	386.3
60°	303.9	308.2	308.2	310.3	308.2	312.6	314.7	319.0	321.3	323.4	325.5
62.5°	251.7	251.7	254.0	254.0	254.0	254.0	258.3	258.3	262.7	264.8	266.9
65°	201.9	201.9	201.9	201.9	201.9	201.9	201.9	201.9	204.0	204.0	208.3
67.5°	156.2	154.1	149.8	152.0	149.8	149.8	147.6	147.6	149.8	149.8	154.1
70°	112.8	110.7	106.3	106.3	104.2	102.0	99.9	97.6	95.5	95.5	95.5
72.5°	73.8	69.4	62.9	60.8	60.8	56.5	52.1	49.9	49.9	49.9	49.9
75°	36.9	32.6	28.2	26.0	26.0	21.8	23.9	21.8	21.8	21.8	21.8
77.5°	15.2	10.8	8.7	8.7	8.7	6.5	6.5	6.5	6.5	6.5	6.5
80°	4.4	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: P584259

CATALOG NUMBER: HC830D010-HM82555830-81RWWC

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1625.6	1625.6	1625.6	1625.6	1625.6	1625.6	1625.6	1625.6
2.5°	1616.9	1616.9	1612.6	1614.8	1614.8	1614.8	1614.8	1614.8
5°	1597.4	1599.6	1597.4	1599.6	1599.6	1597.4	1597.4	1597.4
7.5°	1577.8	1580.1	1577.8	1580.1	1580.1	1580.1	1577.8	1577.8
10°	1554.0	1554.0	1554.0	1554.0	1554.0	1551.8	1554.0	1554.0
12.5°	1521.4	1521.4	1521.4	1523.6	1523.6	1521.4	1521.4	1519.3
15°	1486.7	1482.3	1484.6	1486.7	1484.6	1484.6	1484.6	1484.6
17.5°	1438.9	1441.1	1438.9	1438.9	1438.9	1438.9	1441.1	1438.9
20°	1389.0	1389.0	1391.2	1389.0	1389.0	1389.0	1389.0	1386.8
22.5°	1332.6	1330.5	1330.5	1332.6	1332.6	1330.5	1332.6	1332.6
25°	1269.6	1271.9	1269.6	1269.6	1271.9	1271.9	1271.9	1269.6
27.5°	1202.4	1204.6	1206.7	1204.6	1204.6	1204.6	1206.7	1208.9
30°	1132.9	1137.3	1132.9	1132.9	1137.3	1135.1	1137.3	1137.3
32.5°	1059.2	1065.7	1061.3	1065.7	1065.7	1067.8	1065.7	1067.8
35°	985.3	991.9	991.9	991.9	994.0	996.1	996.1	994.0
37.5°	915.9	918.0	918.0	922.4	924.6	926.7	926.7	924.6
40°	844.3	848.6	850.7	850.7	850.7	855.1	859.4	855.1
42.5°	774.9	777.0	779.2	779.2	783.6	785.7	787.8	787.8
45°	707.6	711.9	714.0	716.3	718.4	722.7	720.5	724.9
47.5°	638.1	644.6	646.8	649.0	653.2	655.5	657.6	659.8
50°	575.1	579.5	579.5	583.8	590.3	590.3	594.7	596.9
52.5°	512.2	514.4	516.5	518.8	523.0	527.4	527.4	531.7
55°	451.5	453.6	453.6	455.7	458.0	466.7	468.8	468.8
57.5°	388.4	388.4	392.8	395.0	397.1	401.5	401.5	401.5
60°	327.7	329.9	329.9	332.1	334.2	338.6	340.8	338.6
62.5°	266.9	269.1	269.1	271.3	275.6	277.8	275.6	275.6
65°	210.6	212.7	212.7	214.9	219.3	219.3	217.0	219.3
67.5°	154.1	154.1	154.1	154.1	154.1	154.1	154.1	154.1
70°	97.6	95.5	93.3	95.5	95.5	95.5	93.3	97.6
72.5°	47.8	49.9	49.9	49.9	49.9	49.9	49.9	47.8
75°	21.8	21.8	19.5	19.5	19.5	21.8	21.8	19.5
77.5°	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
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)