

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: P584487

Luminaire Tested: **HC835D010-HM82555935-81WWBB**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P584487
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: HC835D010-HM82555935-81WWBB
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, WHITE BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3211.6 lumens
Efficiency: N/A
Efficacy: 95.3 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

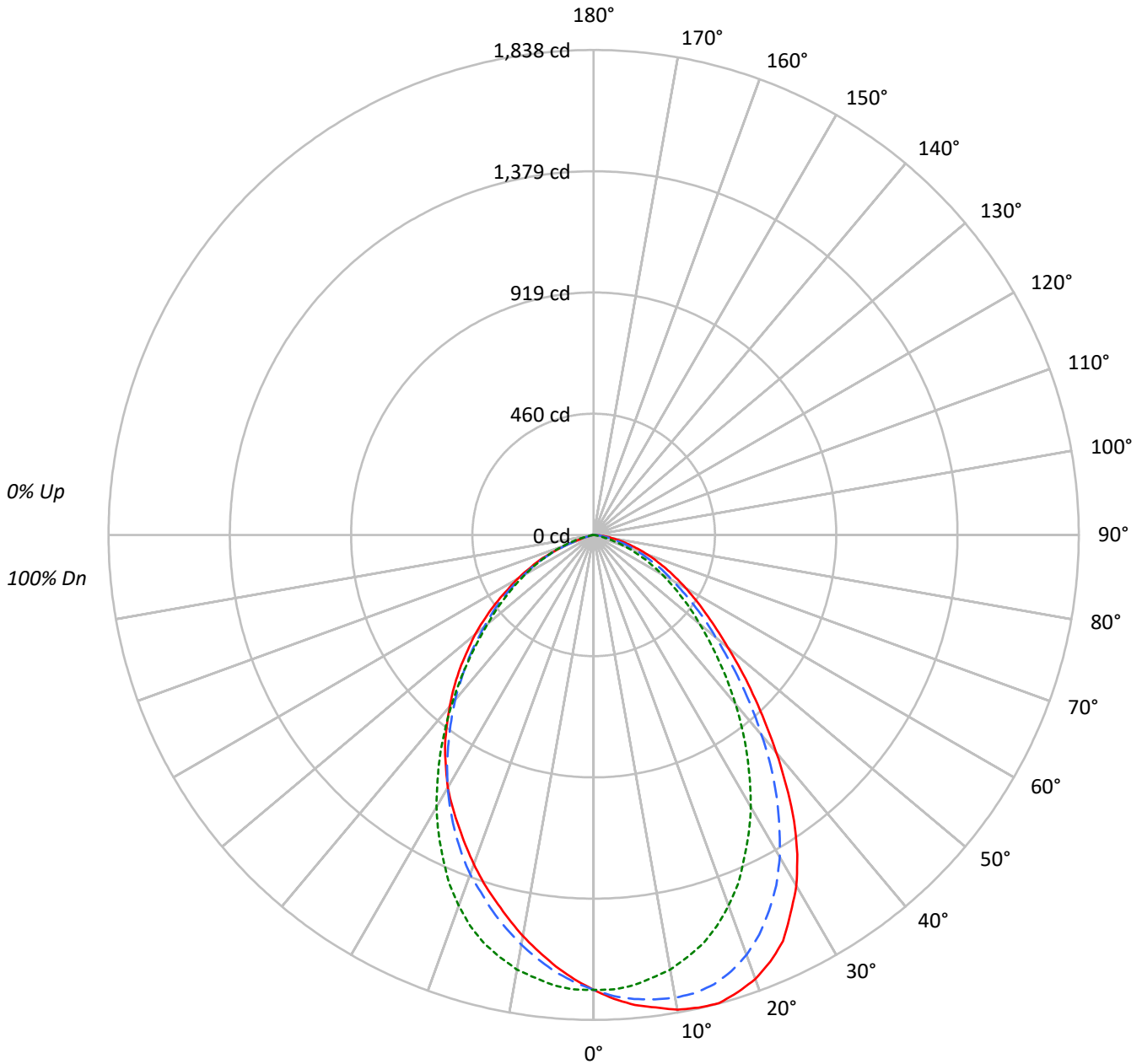
Input Watts (W): 33.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
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	86	100	94	89	85	91	86	83	88	84	81	85	82	79	77																			
3	95	86	79	74	93	85	78	73	82	76	72	79	74	71	77	73	69	67																			
4	88	78	70	64	86	76	69	64	74	68	63	72	66	62	70	65	61	59																			
5	82	70	63	57	80	69	62	56	67	61	56	65	60	55	64	59	55	53																			
6	76	64	56	51	74	63	56	50	62	55	50	60	54	50	58	53	49	47																			
7	71	59	51	45	69	58	51	45	57	50	45	55	49	45	54	49	44	43																			
8	66	54	46	41	65	53	46	41	52	46	41	51	45	41	50	44	40	39																			
9	62	50	43	37	61	50	42	37	48	42	37	47	41	37	46	41	37	35																			
10	59	47	39	34	57	46	39	34	45	39	34	44	38	34	43	38	34	32																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	53168	53168	53168
5°	55365	53052	50814
10°	57213	52372	48336
15°	58661	51174	45824
20°	58776	49049	43556
25°	57787	45946	41298
30°	54692	42397	39367
35°	49863	38126	36963
40°	43362	33612	34131
45°	37203	29109	31242
50°	31777	25099	28064
55°	27848	21612	24386
60°	24792	18434	20500
65°	21999	15045	16366
70°	19519	11162	9286
75°	16275	5838	2764
80°	12803	1829	462
85°	9128	920	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	162.5	5.1
10°-20°	455.3	14.2
20°-30°	644.5	20.1
30°-40°	674.3	21.0
40°-50°	562.4	17.5
50°-60°	398.8	12.4
60°-70°	229.7	7.2
70°-80°	73.9	2.3
80°-90°	10.2	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°	1262.3	39.3
0°-40°	1936.6	60.3
0°-60°	2897.8	90.2
0°-90°	3211.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3211.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1724	1724	1724	1724	1724	
5°	1789	1765	1714	1662	1642	172
15°	1838	1763	1603	1477	1435	517
25°	1698	1572	1350	1242	1214	775
35°	1325	1209	1013	959	982	821
45°	853	784	668	675	716	661
55°	518	464	402	423	454	468
65°	302	252	206	206	224	301
75°	137	100	49	23	23	148
85°	26	13	3	0	0	32
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°	1724.2	1724.2	1724.2	1724.2	1724.2	1724.2	1724.2	1724.2	1724.2	1724.2	1724.2
2.5°	1760.2	1757.6	1755.1	1757.6	1755.1	1757.6	1755.1	1755.1	1752.4	1749.9	1749.9
5°	1788.6	1786.0	1786.0	1786.0	1783.5	1780.8	1780.8	1778.3	1773.2	1770.5	1765.4
7.5°	1806.6	1809.2	1809.2	1809.2	1804.1	1804.1	1798.9	1793.8	1788.6	1783.5	1775.7
10°	1827.2	1827.2	1824.7	1822.0	1816.9	1814.4	1811.7	1806.6	1798.9	1788.6	1780.8
12.5°	1835.0	1835.0	1832.3	1827.2	1824.7	1822.0	1819.5	1811.7	1801.4	1788.6	1778.3
15°	1837.5	1832.3	1829.8	1827.2	1822.0	1814.4	1814.4	1804.1	1791.1	1775.7	1762.7
17.5°	1816.9	1819.5	1814.4	1809.2	1801.4	1796.3	1788.6	1780.8	1765.4	1747.3	1734.5
20°	1791.1	1788.6	1786.0	1778.3	1768.0	1765.4	1757.6	1744.8	1731.8	1711.2	1693.3
22.5°	1749.9	1747.3	1742.1	1737.0	1726.7	1721.5	1713.9	1698.4	1680.3	1659.7	1639.1
25°	1698.4	1693.3	1685.5	1675.2	1667.5	1662.2	1651.9	1636.5	1615.9	1592.7	1572.1
27.5°	1615.9	1623.6	1618.5	1603.0	1595.3	1585.0	1582.4	1561.8	1543.7	1520.5	1497.4
30°	1536.0	1536.0	1528.3	1520.5	1507.7	1499.9	1489.6	1474.1	1456.2	1427.8	1409.7
32.5°	1435.4	1432.9	1422.6	1420.0	1409.7	1394.2	1391.7	1371.1	1353.0	1332.4	1309.2
35°	1324.6	1319.5	1309.2	1301.5	1296.4	1288.6	1280.9	1262.8	1244.7	1224.1	1208.7
37.5°	1198.4	1198.4	1195.8	1182.9	1177.8	1172.6	1164.9	1146.8	1136.5	1115.9	1100.5
40°	1077.2	1074.7	1066.9	1064.4	1059.3	1051.5	1046.3	1036.0	1020.6	1005.1	989.7
42.5°	958.8	961.3	951.0	953.6	943.3	938.2	935.5	920.1	912.3	896.8	884.0
45°	853.1	850.5	845.3	842.8	837.6	832.5	827.2	819.6	806.6	791.2	783.5
47.5°	755.1	747.4	747.4	744.8	742.3	732.0	729.3	721.6	713.9	698.4	688.1
50°	662.4	662.4	662.4	659.7	652.1	649.4	644.3	636.6	628.8	618.5	603.1
52.5°	587.6	587.6	587.6	585.0	574.7	572.2	569.5	559.2	548.9	541.3	531.0
55°	518.0	520.7	518.0	512.9	505.1	505.1	497.4	492.3	482.0	474.2	463.9
57.5°	458.7	458.7	453.6	451.0	445.9	443.3	438.1	433.0	420.1	412.4	399.4
60°	402.0	399.4	399.4	394.3	389.1	384.0	381.4	373.7	368.5	355.7	345.4
62.5°	350.5	350.5	345.4	345.4	335.1	335.1	332.4	324.8	317.0	304.1	298.9
65°	301.5	301.5	298.9	296.4	288.6	286.1	283.4	275.8	268.0	260.3	252.5
67.5°	257.7	257.7	252.5	250.0	244.9	242.2	237.1	231.9	224.3	216.5	208.8
70°	216.5	214.0	211.3	208.8	203.5	201.0	195.9	190.7	182.9	177.8	170.1
72.5°	175.3	175.3	172.6	167.5	165.0	162.3	159.8	154.7	146.9	139.2	134.1
75°	136.6	136.6	136.6	131.4	126.3	123.8	123.8	118.6	113.5	105.7	100.5
77.5°	105.7	103.0	100.5	100.5	95.4	92.7	90.2	87.6	79.9	77.3	72.1
80°	72.1	74.8	72.1	69.6	67.0	64.5	64.5	59.3	56.7	51.5	46.4
82.5°	49.0	46.4	46.4	43.8	43.8	41.2	41.2	36.1	33.5	30.9	28.4
85°	25.8	25.8	23.2	23.2	23.2	20.6	20.6	18.1	18.1	15.5	12.9
87.5°	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	5.2	5.2	5.2
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°	1724.2	1724.2	1724.2	1724.2	1724.2	1724.2	1724.2	1724.2	1724.2	1724.2	1724.2
2.5°	1747.3	1742.1	1739.6	1739.6	1737.0	1734.5	1731.8	1729.3	1724.2	1724.2	1719.0
5°	1760.2	1755.1	1752.4	1744.8	1739.6	1739.6	1729.3	1726.7	1719.0	1713.9	1708.7
7.5°	1770.5	1760.2	1752.4	1744.8	1739.6	1734.5	1724.2	1713.9	1703.6	1693.3	1688.1
10°	1770.5	1760.2	1747.3	1734.5	1729.3	1724.2	1711.2	1695.8	1683.0	1672.6	1659.7
12.5°	1765.4	1749.9	1734.5	1724.2	1713.9	1706.1	1690.6	1675.2	1659.7	1639.1	1628.8
15°	1749.9	1729.3	1713.9	1695.8	1688.1	1675.2	1662.2	1639.1	1621.0	1603.0	1590.1
17.5°	1719.0	1693.3	1675.2	1657.1	1644.3	1636.5	1615.9	1595.3	1574.7	1554.0	1538.6
20°	1672.6	1649.4	1628.8	1605.6	1595.3	1585.0	1559.2	1538.6	1518.0	1494.7	1479.3
22.5°	1615.9	1592.7	1564.3	1546.3	1530.8	1518.0	1494.7	1471.6	1450.9	1430.3	1409.7
25°	1546.3	1523.1	1497.4	1469.0	1458.7	1445.7	1420.0	1396.9	1373.6	1350.4	1332.4
27.5°	1471.6	1440.6	1420.0	1389.1	1378.8	1366.0	1337.6	1311.8	1291.2	1273.1	1252.5
30°	1381.4	1358.2	1329.8	1301.5	1291.2	1278.3	1255.1	1231.9	1211.3	1190.7	1170.1
32.5°	1283.4	1260.3	1231.9	1211.3	1195.8	1185.5	1162.3	1141.7	1121.1	1100.5	1082.4
35°	1180.4	1154.6	1133.9	1113.3	1100.5	1087.5	1064.4	1046.3	1030.9	1012.8	994.8
37.5°	1074.7	1056.6	1036.0	1012.8	1000.0	989.7	971.6	951.0	938.2	922.6	909.8
40°	971.6	951.0	932.9	912.3	902.0	894.3	876.2	860.8	847.9	835.0	827.2
42.5°	865.9	847.9	829.9	816.9	809.2	801.5	788.6	770.6	762.9	749.9	742.3
45°	768.0	752.6	739.6	721.6	716.4	711.3	695.8	683.0	675.2	667.5	662.4
47.5°	675.2	664.9	649.4	639.1	631.5	626.3	615.9	605.6	597.9	592.8	587.6
50°	595.3	582.5	572.2	561.9	556.7	548.9	538.6	533.5	528.3	523.2	523.2
52.5°	520.7	507.7	497.4	489.6	484.5	479.3	471.7	469.0	463.9	463.9	461.3
55°	451.0	443.3	433.0	422.7	420.1	417.5	412.4	407.2	404.6	402.0	404.6
57.5°	391.7	384.0	373.7	366.0	363.4	360.8	358.2	353.1	350.5	350.5	350.5
60°	337.6	329.9	322.1	314.5	314.5	309.2	306.7	304.1	301.5	298.9	298.9
62.5°	288.6	280.9	273.1	268.0	265.5	262.8	257.7	255.2	252.5	252.5	250.0
65°	244.9	234.6	231.9	224.3	221.6	219.1	216.5	211.3	208.8	206.2	203.5
67.5°	201.0	195.9	188.1	182.9	180.4	177.8	175.3	170.1	167.5	165.0	159.8
70°	162.3	157.2	152.0	146.9	144.4	141.7	136.6	131.4	128.9	123.8	116.0
72.5°	126.3	121.1	116.0	110.8	108.3	105.7	100.5	95.4	90.2	85.1	79.9
75°	95.4	90.2	82.4	77.3	74.8	74.8	67.0	61.8	56.7	49.0	43.8
77.5°	67.0	59.3	56.7	51.5	49.0	43.8	38.7	33.5	28.4	25.8	20.6
80°	43.8	38.7	33.5	30.9	28.4	25.8	23.2	18.1	12.9	10.3	7.8
82.5°	25.8	23.2	20.6	18.1	15.5	12.9	10.3	10.3	7.8	5.2	2.6
85°	12.9	10.3	7.8	7.8	5.2	5.2	5.2	2.6	2.6	2.6	2.6
87.5°	5.2	2.6	2.6	2.6	2.6	2.6	2.6	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°	1724.2	1724.2	1724.2	1724.2	1724.2	1724.2	1724.2	1724.2	1724.2	1724.2	1724.2
2.5°	1716.4	1713.9	1711.2	1708.7	1708.7	1703.6	1703.6	1700.9	1695.8	1693.3	1693.3
5°	1700.9	1693.3	1688.1	1685.5	1683.0	1675.2	1672.6	1667.5	1662.2	1657.1	1654.6
7.5°	1677.8	1664.9	1659.7	1657.1	1649.4	1641.6	1636.5	1628.8	1621.0	1613.3	1610.7
10°	1649.4	1636.5	1623.6	1618.5	1610.7	1605.6	1595.3	1585.0	1577.3	1569.5	1561.8
12.5°	1613.3	1597.9	1585.0	1579.8	1572.1	1561.8	1546.3	1541.1	1528.3	1523.1	1512.8
15°	1572.1	1554.0	1541.1	1533.4	1525.7	1510.2	1499.9	1489.6	1476.8	1471.6	1461.3
17.5°	1520.5	1499.9	1487.1	1479.3	1474.1	1461.3	1445.7	1432.9	1420.0	1414.8	1407.2
20°	1458.7	1445.7	1427.8	1420.0	1414.8	1399.4	1383.9	1378.8	1368.5	1358.2	1350.4
22.5°	1389.1	1376.3	1358.2	1350.4	1347.9	1334.9	1322.1	1314.3	1306.7	1298.9	1291.2
25°	1317.0	1301.5	1286.1	1280.9	1275.8	1265.4	1255.1	1250.0	1242.2	1237.1	1231.9
27.5°	1239.6	1224.1	1211.3	1203.5	1198.4	1190.7	1185.5	1180.4	1175.2	1170.1	1167.5
30°	1157.1	1141.7	1131.4	1126.2	1121.1	1118.5	1110.8	1108.1	1105.6	1100.5	1103.0
32.5°	1074.7	1061.8	1051.5	1043.8	1043.8	1038.5	1036.0	1036.0	1033.4	1033.4	1033.4
35°	984.5	976.7	969.1	966.4	963.9	961.3	958.8	961.3	958.8	961.3	963.9
37.5°	902.0	894.3	889.2	886.5	884.0	886.5	884.0	884.0	886.5	891.7	894.3
40°	816.9	811.8	806.6	809.2	806.6	806.6	806.6	814.4	816.9	819.6	822.1
42.5°	737.1	732.0	729.3	729.3	732.0	729.3	734.5	737.1	742.3	749.9	755.1
45°	659.7	657.2	657.2	659.7	657.2	662.4	662.4	667.5	675.2	680.3	685.5
47.5°	587.6	587.6	587.6	590.1	590.1	592.8	597.9	600.4	605.6	610.7	615.9
50°	520.7	523.2	525.8	525.8	525.8	531.0	536.1	538.6	541.3	543.8	551.6
52.5°	461.3	463.9	463.9	466.5	469.0	471.7	474.2	479.3	482.0	487.1	489.6
55°	404.6	404.6	409.7	412.4	412.4	412.4	417.5	417.5	422.7	425.3	430.4
57.5°	350.5	353.1	353.1	355.7	355.7	358.2	360.8	363.4	366.0	368.5	371.1
60°	298.9	298.9	298.9	301.5	304.1	306.7	304.1	309.2	309.2	314.5	317.0
62.5°	250.0	252.5	252.5	252.5	252.5	252.5	252.5	255.2	257.7	260.3	262.8
65°	203.5	203.5	203.5	201.0	203.5	201.0	203.5	206.2	206.2	208.8	211.3
67.5°	157.2	157.2	152.0	152.0	154.7	154.7	154.7	154.7	152.0	157.2	157.2
70°	113.5	110.8	108.3	105.7	105.7	103.0	103.0	100.5	100.5	100.5	100.5
72.5°	74.8	69.6	64.5	61.8	59.3	59.3	54.1	51.5	54.1	54.1	54.1
75°	38.7	33.5	30.9	28.4	25.8	25.8	23.2	23.2	23.2	23.2	23.2
77.5°	15.5	12.9	10.3	10.3	7.8	7.8	7.8	7.8	7.8	7.8	7.8
80°	5.2	5.2	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
82.5°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
85°	2.6	0.0	0.0	2.6	0.0	2.6	2.6	2.6	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: P584487

CATALOG NUMBER: HC835D010-HM82555935-81WWBB

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1724.2	1724.2	1724.2	1724.2	1724.2	1724.2	1724.2	1724.2
2.5°	1690.6	1690.6	1688.1	1690.6	1685.5	1688.1	1685.5	1685.5
5°	1651.9	1646.8	1646.8	1646.8	1644.3	1644.3	1641.6	1641.6
7.5°	1605.6	1603.0	1600.4	1597.9	1595.3	1592.7	1592.7	1592.7
10°	1559.2	1554.0	1554.0	1551.4	1546.3	1543.7	1543.7	1543.7
12.5°	1505.0	1502.5	1499.9	1499.9	1489.6	1492.2	1489.6	1489.6
15°	1453.5	1450.9	1450.9	1443.2	1438.1	1438.1	1438.1	1435.4
17.5°	1399.4	1396.9	1394.2	1389.1	1383.9	1383.9	1381.4	1383.9
20°	1342.7	1340.1	1334.9	1334.9	1332.4	1329.8	1324.6	1327.3
22.5°	1286.1	1280.9	1278.3	1278.3	1275.8	1275.8	1270.6	1270.6
25°	1226.8	1224.1	1221.6	1224.1	1219.0	1219.0	1213.8	1213.8
27.5°	1164.9	1162.3	1162.3	1162.3	1159.8	1162.3	1159.8	1159.8
30°	1103.0	1103.0	1100.5	1100.5	1103.0	1100.5	1103.0	1105.6
32.5°	1036.0	1036.0	1038.5	1038.5	1041.2	1041.2	1041.2	1041.2
35°	966.4	971.6	971.6	974.2	976.7	979.4	979.4	981.9
37.5°	902.0	904.6	907.1	909.8	914.9	914.9	914.9	914.9
40°	832.5	835.0	840.2	837.6	847.9	850.5	847.9	847.9
42.5°	760.3	765.4	768.0	773.2	775.7	780.9	783.5	783.5
45°	693.3	695.8	700.9	706.1	708.7	716.4	716.4	716.4
47.5°	623.7	628.8	631.5	636.6	639.1	646.9	649.4	646.9
50°	556.7	561.9	567.0	567.0	574.7	577.3	582.5	585.0
52.5°	492.3	494.8	499.9	502.6	507.7	512.9	515.4	518.0
55°	430.4	433.0	438.1	438.1	445.9	448.4	453.6	453.6
57.5°	373.7	376.3	381.4	378.8	384.0	389.1	389.1	386.6
60°	319.6	319.6	319.6	324.8	327.3	329.9	332.4	332.4
62.5°	262.8	268.0	270.6	270.6	273.1	275.8	275.8	273.1
65°	211.3	216.5	219.1	219.1	221.6	221.6	221.6	224.3
67.5°	159.8	159.8	159.8	162.3	159.8	159.8	159.8	159.8
70°	100.5	100.5	100.5	100.5	97.9	100.5	100.5	103.0
72.5°	54.1	54.1	54.1	54.1	54.1	54.1	54.1	54.1
75°	23.2	23.2	23.2	25.8	23.2	23.2	23.2	23.2
77.5°	10.3	7.8	10.3	10.3	7.8	7.8	7.8	7.8
80°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
82.5°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
85°	0.0	2.6	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)