

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: P584385

Luminaire Tested: **HC835D010-HM82555827-81WWBB**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P584385
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-HM82555827-81WWBB
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, WHITE BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3326.9 lumens
Efficiency: N/A
Efficacy: 98.7 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

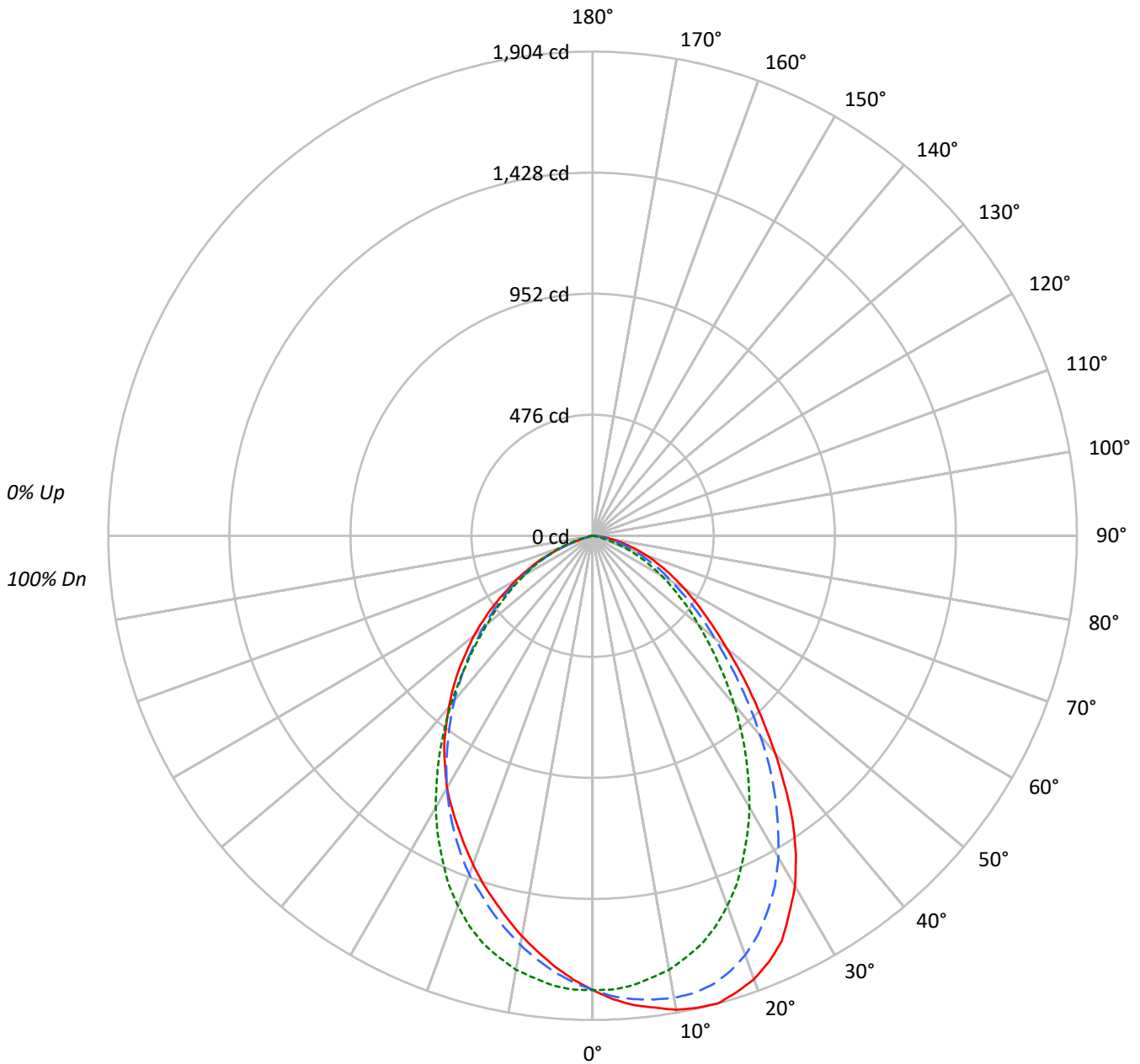
Input Watts (W): 33.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				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°	55077	55077	55077
5°	57352	54956	52644
10°	59267	54254	50074
15°	60771	53016	47474
20°	60889	50815	45118
25°	59862	47600	42782
30°	56657	43921	40780
35°	51659	39496	38292
40°	44919	34824	35359
45°	38533	30156	32367
50°	32914	26001	29076
55°	28848	22392	25263
60°	25687	19100	21240
65°	22787	15585	16950
70°	20223	11558	9620
75°	16859	6041	2871
80°	13283	1900	462
85°	9447	920	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	168.3	5.1
10°-20°	471.7	14.2
20°-30°	667.7	20.1
30°-40°	698.5	21.0
40°-50°	582.6	17.5
50°-60°	413.1	12.4
60°-70°	238.0	7.2
70°-80°	76.6	2.3
80°-90°	10.5	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°	1307.7	39.3
0°-40°	2006.2	60.3
0°-60°	3001.9	90.2
0°-90°	3326.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3326.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1786	1786	1786	1786	1786	
5°	1853	1829	1775	1722	1701	178
15°	1904	1826	1661	1530	1487	535
25°	1759	1629	1399	1287	1257	803
35°	1372	1252	1049	993	1017	851
45°	884	812	692	700	742	685
55°	537	480	416	438	470	485
65°	312	262	214	214	232	312
75°	142	104	51	24	24	153
85°	27	13	3	0	0	33
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°	1786.1	1786.1	1786.1	1786.1	1786.1	1786.1	1786.1	1786.1	1786.1	1786.1	1786.1
2.5°	1823.5	1820.8	1818.1	1820.8	1818.1	1820.8	1818.1	1818.1	1815.4	1812.8	1812.8
5°	1852.8	1850.2	1850.2	1850.2	1847.6	1844.8	1844.8	1842.2	1836.8	1834.1	1828.9
7.5°	1871.5	1874.2	1874.2	1874.2	1868.9	1868.9	1863.5	1858.2	1852.8	1847.6	1839.5
10°	1892.8	1892.8	1890.2	1887.6	1882.2	1879.5	1876.9	1871.5	1863.5	1852.8	1844.8
12.5°	1900.9	1900.9	1898.2	1892.8	1890.2	1887.6	1884.9	1876.9	1866.2	1852.8	1842.2
15°	1903.6	1898.2	1895.6	1892.8	1887.6	1879.5	1879.5	1868.9	1855.5	1839.5	1826.1
17.5°	1882.2	1884.9	1879.5	1874.2	1866.2	1860.9	1852.8	1844.8	1828.9	1810.2	1796.8
20°	1855.5	1852.8	1850.2	1842.2	1831.5	1828.9	1820.8	1807.4	1794.1	1772.8	1754.1
22.5°	1812.8	1810.2	1804.8	1799.4	1788.7	1783.5	1775.4	1759.4	1740.7	1719.4	1698.0
25°	1759.4	1754.1	1746.1	1735.4	1727.4	1722.0	1711.3	1695.3	1674.0	1649.9	1628.6
27.5°	1674.0	1682.0	1676.6	1660.7	1652.6	1642.0	1639.2	1617.9	1599.2	1575.1	1551.2
30°	1591.2	1591.2	1583.2	1575.1	1561.8	1553.8	1543.1	1527.1	1508.4	1479.1	1460.4
32.5°	1487.1	1484.4	1473.8	1471.0	1460.4	1444.3	1441.7	1420.3	1401.7	1380.3	1356.3
35°	1372.3	1366.9	1356.3	1348.2	1343.0	1334.9	1326.9	1308.2	1289.5	1268.2	1252.1
37.5°	1241.5	1241.5	1238.7	1225.4	1220.0	1214.8	1206.7	1188.1	1177.4	1156.1	1140.0
40°	1115.9	1113.3	1105.3	1102.6	1097.2	1089.2	1084.0	1073.3	1057.2	1041.2	1025.2
42.5°	993.1	995.8	985.1	987.9	977.1	971.8	969.2	953.1	945.1	929.0	915.8
45°	883.6	881.0	875.7	873.0	867.7	862.3	857.0	849.0	835.6	819.7	811.6
47.5°	782.3	774.3	774.3	771.6	768.9	758.2	755.6	747.6	739.5	723.5	712.8
50°	686.1	686.1	686.1	683.5	675.4	672.8	667.4	659.5	651.5	640.8	624.8
52.5°	608.7	608.7	608.7	606.1	595.4	592.7	590.0	579.4	568.7	560.7	550.0
55°	536.6	539.3	536.6	531.3	523.3	523.3	515.3	510.0	499.2	491.3	480.5
57.5°	475.2	475.2	469.9	467.2	461.8	459.2	453.9	448.5	435.2	427.2	413.8
60°	416.5	413.8	413.8	408.5	403.1	397.9	395.1	387.1	381.8	368.4	357.7
62.5°	363.1	363.1	357.7	357.7	347.1	347.1	344.4	336.4	328.4	315.1	309.7
65°	312.3	312.3	309.7	307.0	299.0	296.4	293.6	285.7	277.7	269.7	261.6
67.5°	267.0	267.0	261.6	259.0	253.6	251.0	245.6	240.3	232.3	224.3	216.2
70°	224.3	221.6	218.9	216.2	211.0	208.2	202.9	197.6	189.5	184.3	176.2
72.5°	181.5	181.5	178.9	173.6	170.8	168.2	165.6	160.2	152.1	144.1	138.8
75°	141.5	141.5	141.5	136.2	130.8	128.2	128.2	122.8	117.5	109.5	104.1
77.5°	109.5	106.7	104.1	104.1	98.8	96.1	93.4	90.8	82.8	80.1	74.8
80°	74.8	77.4	74.8	72.1	69.4	66.7	66.7	61.5	58.7	53.4	48.0
82.5°	50.7	48.0	48.0	45.4	45.4	42.8	42.8	37.4	34.7	32.0	29.4
85°	26.7	26.7	24.1	24.1	24.1	21.3	21.3	18.7	18.7	16.1	13.3
87.5°	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	5.4	5.4	5.4
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°	1786.1	1786.1	1786.1	1786.1	1786.1	1786.1	1786.1	1786.1	1786.1	1786.1	1786.1
2.5°	1810.2	1804.8	1802.2	1802.2	1799.4	1796.8	1794.1	1791.5	1786.1	1786.1	1780.7
5°	1823.5	1818.1	1815.4	1807.4	1802.2	1802.2	1791.5	1788.7	1780.7	1775.4	1770.0
7.5°	1834.1	1823.5	1815.4	1807.4	1802.2	1796.8	1786.1	1775.4	1764.8	1754.1	1748.7
10°	1834.1	1823.5	1810.2	1796.8	1791.5	1786.1	1772.8	1756.7	1743.3	1732.7	1719.4
12.5°	1828.9	1812.8	1796.8	1786.1	1775.4	1767.4	1751.4	1735.4	1719.4	1698.0	1687.3
15°	1812.8	1791.5	1775.4	1756.7	1748.7	1735.4	1722.0	1698.0	1679.4	1660.7	1647.2
17.5°	1780.7	1754.1	1735.4	1716.7	1703.3	1695.3	1674.0	1652.6	1631.2	1609.9	1593.8
20°	1732.7	1708.7	1687.3	1663.3	1652.6	1642.0	1615.3	1593.8	1572.5	1548.5	1532.5
22.5°	1674.0	1649.9	1620.5	1601.8	1585.9	1572.5	1548.5	1524.5	1503.1	1481.7	1460.4
25°	1601.8	1577.9	1551.2	1521.8	1511.2	1497.7	1471.0	1447.1	1423.0	1399.0	1380.3
27.5°	1524.5	1492.5	1471.0	1439.0	1428.4	1415.0	1385.6	1358.9	1337.6	1318.9	1297.6
30°	1431.0	1406.9	1377.6	1348.2	1337.6	1324.3	1300.2	1276.1	1254.8	1233.5	1212.1
32.5°	1329.5	1305.6	1276.1	1254.8	1238.7	1228.1	1204.1	1182.7	1161.3	1140.0	1121.3
35°	1222.8	1196.1	1174.8	1153.3	1140.0	1126.6	1102.6	1084.0	1067.9	1049.2	1030.5
37.5°	1113.3	1094.6	1073.3	1049.2	1035.9	1025.2	1006.6	985.1	971.8	955.8	942.5
40°	1006.6	985.1	966.4	945.1	934.4	926.4	907.7	891.7	878.4	865.1	857.0
42.5°	897.1	878.4	859.7	846.4	838.4	830.3	816.9	798.2	790.3	776.9	768.9
45°	795.6	779.5	766.2	747.6	742.2	736.9	720.8	707.5	699.5	691.5	686.1
47.5°	699.5	688.8	672.8	662.1	654.1	648.7	638.1	627.4	619.4	614.1	608.7
50°	616.7	603.4	592.7	582.0	576.7	568.7	558.0	552.6	547.4	542.0	542.0
52.5°	539.3	525.9	515.3	507.2	502.0	496.6	488.5	485.9	480.5	480.5	477.9
55°	467.2	459.2	448.5	437.9	435.2	432.5	427.2	421.8	419.2	416.5	419.2
57.5°	405.8	397.9	387.1	379.2	376.4	373.8	371.1	365.7	363.1	363.1	363.1
60°	349.7	341.8	333.8	325.7	325.7	320.3	317.7	315.1	312.3	309.7	309.7
62.5°	299.0	291.0	283.0	277.7	274.9	272.3	267.0	264.3	261.6	261.6	259.0
65°	253.6	243.0	240.3	232.3	229.7	226.9	224.3	218.9	216.2	213.6	211.0
67.5°	208.2	202.9	194.9	189.5	186.9	184.3	181.5	176.2	173.6	170.8	165.6
70°	168.2	162.8	157.5	152.1	149.5	146.9	141.5	136.2	133.5	128.2	120.2
72.5°	130.8	125.4	120.2	114.8	112.1	109.5	104.1	98.8	93.4	88.1	82.8
75°	98.8	93.4	85.4	80.1	77.4	77.4	69.4	64.1	58.7	50.7	45.4
77.5°	69.4	61.5	58.7	53.4	50.7	45.4	40.0	34.7	29.4	26.7	21.3
80°	45.4	40.0	34.7	32.0	29.4	26.7	24.1	18.7	13.3	10.7	8.0
82.5°	26.7	24.1	21.3	18.7	16.1	13.3	10.7	10.7	8.0	5.4	2.6
85°	13.3	10.7	8.0	8.0	5.4	5.4	5.4	2.6	2.6	2.6	2.6
87.5°	5.4	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°	1786.1	1786.1	1786.1	1786.1	1786.1	1786.1	1786.1	1786.1	1786.1	1786.1	1786.1
2.5°	1778.1	1775.4	1772.8	1770.0	1770.0	1764.8	1764.8	1762.0	1756.7	1754.1	1754.1
5°	1762.0	1754.1	1748.7	1746.1	1743.3	1735.4	1732.7	1727.4	1722.0	1716.7	1714.0
7.5°	1738.1	1724.6	1719.4	1716.7	1708.7	1700.7	1695.3	1687.3	1679.4	1671.3	1668.6
10°	1708.7	1695.3	1682.0	1676.6	1668.6	1663.3	1652.6	1642.0	1634.0	1625.9	1617.9
12.5°	1671.3	1655.3	1642.0	1636.6	1628.6	1617.9	1601.8	1596.6	1583.2	1577.9	1567.2
15°	1628.6	1609.9	1596.6	1588.5	1580.5	1564.5	1553.8	1543.1	1529.8	1524.5	1513.8
17.5°	1575.1	1553.8	1540.5	1532.5	1527.1	1513.8	1497.7	1484.4	1471.0	1465.8	1457.7
20°	1511.2	1497.7	1479.1	1471.0	1465.8	1449.7	1433.6	1428.4	1417.7	1406.9	1399.0
22.5°	1439.0	1425.6	1406.9	1399.0	1396.3	1383.0	1369.6	1361.6	1353.6	1345.6	1337.6
25°	1364.3	1348.2	1332.2	1326.9	1321.5	1310.9	1300.2	1294.8	1286.9	1281.5	1276.1
27.5°	1284.1	1268.2	1254.8	1246.8	1241.5	1233.5	1228.1	1222.8	1217.4	1212.1	1209.4
30°	1198.7	1182.7	1172.0	1166.7	1161.3	1158.7	1150.7	1148.0	1145.3	1140.0	1142.7
32.5°	1113.3	1100.0	1089.2	1081.3	1081.3	1075.9	1073.3	1073.3	1070.5	1070.5	1070.5
35°	1019.9	1011.8	1003.8	1001.2	998.5	995.8	993.1	995.8	993.1	995.8	998.5
37.5°	934.4	926.4	921.0	918.4	915.8	918.4	915.8	915.8	918.4	923.8	926.4
40°	846.4	841.0	835.6	838.4	835.6	835.6	835.6	843.6	846.4	849.0	851.7
42.5°	763.6	758.2	755.6	755.6	758.2	755.6	760.8	763.6	768.9	776.9	782.3
45°	683.5	680.8	680.8	683.5	680.8	686.1	686.1	691.5	699.5	704.8	710.2
47.5°	608.7	608.7	608.7	611.3	611.3	614.1	619.4	622.1	627.4	632.8	638.1
50°	539.3	542.0	544.6	544.6	544.6	550.0	555.3	558.0	560.7	563.3	571.3
52.5°	477.9	480.5	480.5	483.3	485.9	488.5	491.3	496.6	499.2	504.6	507.2
55°	419.2	419.2	424.5	427.2	427.2	427.2	432.5	432.5	437.9	440.5	445.9
57.5°	363.1	365.7	365.7	368.4	368.4	371.1	373.8	376.4	379.2	381.8	384.4
60°	309.7	309.7	309.7	312.3	315.1	317.7	315.1	320.3	320.3	325.7	328.4
62.5°	259.0	261.6	261.6	261.6	261.6	261.6	261.6	264.3	267.0	269.7	272.3
65°	211.0	211.0	211.0	208.2	211.0	208.2	211.0	213.6	213.6	216.2	218.9
67.5°	162.8	162.8	157.5	157.5	160.2	160.2	160.2	160.2	157.5	162.8	162.8
70°	117.5	114.8	112.1	109.5	109.5	106.7	106.7	104.1	104.1	104.1	104.1
72.5°	77.4	72.1	66.7	64.1	61.5	61.5	56.1	53.4	56.1	56.1	56.1
75°	40.0	34.7	32.0	29.4	26.7	26.7	24.1	24.1	24.1	24.1	24.1
77.5°	16.1	13.3	10.7	10.7	8.0	8.0	8.0	8.0	8.0	8.0	8.0
80°	5.4	5.4	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: P584385

CATALOG NUMBER: HC835D010-HM82555827-81WWBB

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1786.1	1786.1	1786.1	1786.1	1786.1	1786.1	1786.1	1786.1
2.5°	1751.4	1751.4	1748.7	1751.4	1746.1	1748.7	1746.1	1746.1
5°	1711.3	1706.0	1706.0	1706.0	1703.3	1703.3	1700.7	1700.7
7.5°	1663.3	1660.7	1657.9	1655.3	1652.6	1649.9	1649.9	1649.9
10°	1615.3	1609.9	1609.9	1607.2	1601.8	1599.2	1599.2	1599.2
12.5°	1559.2	1556.4	1553.8	1553.8	1543.1	1545.8	1543.1	1543.1
15°	1505.8	1503.1	1503.1	1495.1	1489.7	1489.7	1489.7	1487.1
17.5°	1449.7	1447.1	1444.3	1439.0	1433.6	1433.6	1431.0	1433.6
20°	1391.0	1388.2	1383.0	1383.0	1380.3	1377.6	1372.3	1374.9
22.5°	1332.2	1326.9	1324.3	1324.3	1321.5	1321.5	1316.2	1316.2
25°	1270.8	1268.2	1265.4	1268.2	1262.8	1262.8	1257.4	1257.4
27.5°	1206.7	1204.1	1204.1	1204.1	1201.4	1204.1	1201.4	1201.4
30°	1142.7	1142.7	1140.0	1140.0	1142.7	1140.0	1142.7	1145.3
32.5°	1073.3	1073.3	1075.9	1075.9	1078.6	1078.6	1078.6	1078.6
35°	1001.2	1006.6	1006.6	1009.2	1011.8	1014.5	1014.5	1017.2
37.5°	934.4	937.1	939.7	942.5	947.7	947.7	947.7	947.7
40°	862.3	865.1	870.3	867.7	878.4	881.0	878.4	878.4
42.5°	787.6	793.0	795.6	801.0	803.6	809.0	811.6	811.6
45°	718.2	720.8	726.2	731.5	734.3	742.2	742.2	742.2
47.5°	646.1	651.5	654.1	659.5	662.1	670.2	672.8	670.2
50°	576.7	582.0	587.4	587.4	595.4	598.0	603.4	606.1
52.5°	510.0	512.6	517.9	520.7	525.9	531.3	533.9	536.6
55°	445.9	448.5	453.9	453.9	461.8	464.6	469.9	469.9
57.5°	387.1	389.8	395.1	392.5	397.9	403.1	403.1	400.5
60°	331.0	331.0	331.0	336.4	339.0	341.8	344.4	344.4
62.5°	272.3	277.7	280.3	280.3	283.0	285.7	285.7	283.0
65°	218.9	224.3	226.9	226.9	229.7	229.7	229.7	232.3
67.5°	165.6	165.6	165.6	168.2	165.6	165.6	165.6	165.6
70°	104.1	104.1	104.1	104.1	101.5	104.1	104.1	106.7
72.5°	56.1	56.1	56.1	56.1	56.1	56.1	56.1	56.1
75°	24.1	24.1	24.1	26.7	24.1	24.1	24.1	24.1
77.5°	10.7	8.0	10.7	10.7	8.0	8.0	8.0	8.0
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)