

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: P584285

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

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P584285
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2109-368-18)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 10/21/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HC830D010-HM82555835-81WWWB
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, BLACK BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3256.6 lumens
Efficiency: N/A
Efficacy: 116.3 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 1.09 / 1.18
Luminous Opening: Circular (Dia: 0.67' x H: 0')
CIE Type: Direct

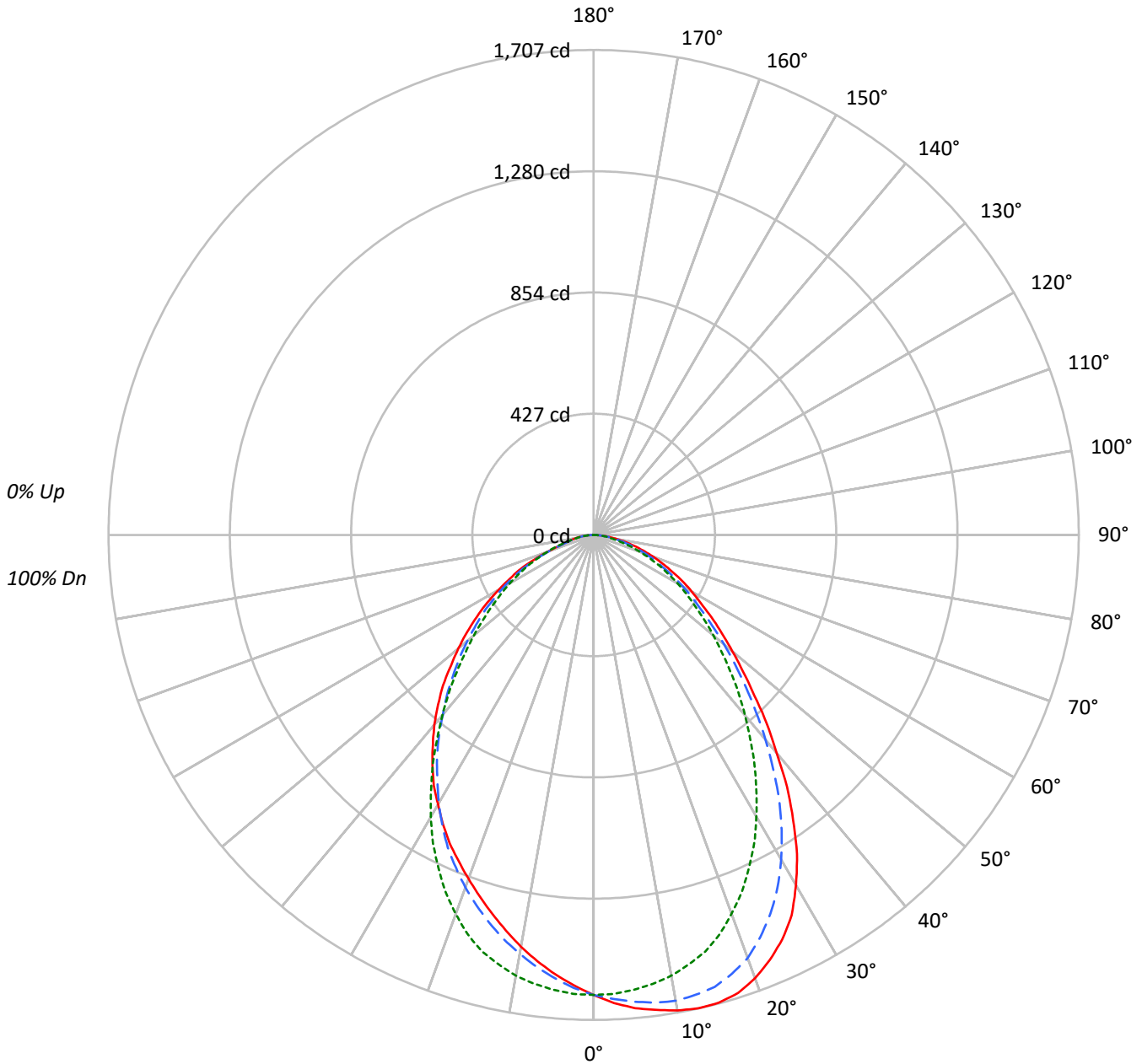
Input Watts (W): 28
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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								
1	110	106	103	99	108	104	101	98	100	97	95	96	94	92	92	91	89	87								
2	102	94	88	83	99	93	87	82	89	85	81	86	82	79	83	80	77	75								
3	94	84	77	71	91	83	76	71	80	74	69	77	72	68	75	71	67	65								
4	87	76	68	62	84	75	67	61	72	66	61	70	64	60	68	63	59	57								
5	80	69	60	54	78	67	60	54	65	59	54	64	58	53	62	57	52	50								
6	75	62	54	48	73	61	54	48	60	53	48	58	52	47	57	51	47	45								
7	70	57	49	43	68	56	49	43	55	48	43	53	47	43	52	47	42	40								
8	65	52	45	39	64	52	44	39	51	44	39	49	43	39	48	43	38	37								
9	61	48	41	36	60	48	41	36	47	40	35	46	40	35	45	39	35	33								
10	57	45	38	33	56	44	37	33	44	37	32	43	37	32	42	36	32	30								

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	49930	49930	49930
5°	51758	49762	48056
10°	53221	49332	46091
15°	54408	48461	44055
20°	54493	46568	42266
25°	53448	43980	40771
30°	50693	40784	38982
35°	46061	37147	37230
40°	40274	33330	35089
45°	34905	29689	32698
50°	30563	26371	29791
55°	27203	23370	26956
60°	24533	20993	23682
65°	22152	18460	20642
70°	19907	15552	15336
75°	17538	12319	11497
80°	14704	10211	11028
85°	11393	8951	9765



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	152.7	4.7
10°-20°	430.2	13.2
20°-30°	614.9	18.9
30°-40°	653.3	20.1
40°-50°	562.5	17.3
50°-60°	420.6	12.9
60°-70°	268.2	8.2
70°-80°	122.1	3.7
80°-90°	32.0	1.0
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°	1197.9	36.8
0°-40°	1851.2	56.8
0°-60°	2834.2	87.0
0°-90°	3256.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3256.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1619	1619	1619	1619	1619	
5°	1672	1649	1608	1566	1552	160
15°	1704	1647	1518	1415	1380	480
25°	1571	1472	1293	1214	1198	719
35°	1224	1138	987	961	989	762
45°	800	757	681	699	750	622
55°	506	464	435	472	501	455
65°	304	269	253	265	283	303
75°	147	126	103	94	96	156
85°	32	28	25	28	28	39
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°	1619.2	1619.2	1619.2	1619.2	1619.2	1619.2	1619.2	1619.2	1619.2	1619.2	1619.2
2.5°	1649.1	1644.5	1646.8	1644.5	1646.8	1646.8	1642.2	1642.2	1642.2	1642.2	1635.4
5°	1672.1	1669.8	1669.8	1667.5	1665.2	1667.5	1665.2	1662.9	1658.3	1656.0	1649.1
7.5°	1685.9	1685.9	1685.9	1685.9	1683.6	1681.2	1679.0	1674.3	1669.8	1665.2	1660.6
10°	1699.7	1701.9	1699.7	1697.4	1695.0	1690.5	1688.1	1683.6	1676.7	1669.8	1665.2
12.5°	1706.6	1706.6	1704.3	1704.3	1699.7	1697.4	1690.5	1683.6	1676.7	1669.8	1658.3
15°	1704.3	1704.3	1701.9	1699.7	1692.8	1690.5	1685.9	1679.0	1667.5	1658.3	1646.8
17.5°	1690.5	1688.1	1683.6	1683.6	1674.3	1672.1	1667.5	1658.3	1646.8	1633.0	1619.2
20°	1660.6	1660.6	1658.3	1656.0	1646.8	1639.9	1635.4	1623.8	1614.5	1598.5	1584.7
22.5°	1619.2	1623.8	1619.2	1614.5	1603.1	1600.8	1593.9	1580.1	1566.3	1547.8	1531.8
25°	1570.9	1568.6	1566.3	1561.8	1552.5	1547.8	1538.7	1524.9	1511.1	1490.4	1472.0
27.5°	1508.8	1499.6	1499.6	1490.4	1483.5	1476.6	1472.0	1458.2	1439.8	1423.7	1400.6
30°	1423.7	1426.0	1414.6	1412.2	1400.6	1396.1	1386.8	1373.1	1357.0	1338.6	1320.1
32.5°	1331.7	1324.8	1324.8	1315.6	1306.4	1299.5	1297.2	1281.1	1267.2	1248.9	1230.5
35°	1223.6	1223.6	1216.7	1214.4	1205.2	1200.7	1193.6	1184.5	1168.4	1152.3	1138.5
37.5°	1117.8	1113.1	1110.9	1106.2	1099.3	1092.5	1092.5	1076.4	1074.1	1055.7	1037.3
40°	1000.5	1005.1	1000.5	993.6	991.3	986.8	984.4	975.2	968.3	952.2	940.7
42.5°	901.6	897.0	897.0	894.7	885.4	885.4	880.9	876.3	864.8	860.2	846.4
45°	800.4	805.0	798.1	800.4	791.2	791.2	791.2	782.0	772.8	766.0	756.7
47.5°	713.0	715.3	715.3	708.4	706.1	706.1	701.5	696.9	690.0	680.8	673.9
50°	637.1	639.4	634.8	632.5	627.9	625.7	625.7	616.4	611.7	602.6	597.9
52.5°	568.1	568.1	565.8	565.8	558.9	558.9	554.3	547.4	542.8	538.1	526.7
55°	506.0	506.0	503.7	501.4	501.4	494.5	492.2	485.3	480.7	471.6	464.5
57.5°	446.2	448.5	446.2	443.9	441.6	439.3	434.7	427.8	423.2	416.3	411.8
60°	397.8	397.8	395.6	393.3	388.7	386.4	384.0	379.5	372.6	368.0	361.1
62.5°	351.9	349.6	347.3	345.0	340.4	340.4	335.8	331.3	324.2	319.7	315.1
65°	303.6	303.6	301.3	301.3	299.0	294.4	292.1	289.8	280.6	278.3	269.1
67.5°	259.9	262.2	257.7	257.7	253.0	253.0	250.6	243.7	241.5	236.8	232.3
70°	220.8	220.8	220.8	218.5	213.9	211.6	209.3	204.7	202.4	197.8	193.2
72.5°	181.7	181.7	179.4	179.4	177.0	174.8	172.5	167.9	167.9	163.2	158.7
75°	147.2	147.2	144.9	142.6	140.3	140.3	138.0	135.7	131.1	128.8	126.5
77.5°	112.7	112.7	112.7	110.5	108.1	108.1	108.1	103.4	98.9	98.9	96.5
80°	82.8	82.8	80.5	80.5	78.2	78.2	78.2	75.9	73.6	71.3	69.0
82.5°	55.2	55.2	55.2	55.2	52.9	52.9	52.9	50.7	48.3	48.3	48.3
85°	32.2	32.2	32.2	32.2	29.8	29.8	29.8	29.8	29.8	27.6	27.6
87.5°	13.8	11.5	13.8	11.5	13.8	11.5	13.8	11.5	11.5	11.5	11.5
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°	1619.2	1619.2	1619.2	1619.2	1619.2	1619.2	1619.2	1619.2	1619.2	1619.2	1619.2
2.5°	1637.6	1635.4	1633.0	1630.7	1630.7	1628.3	1623.8	1621.4	1619.2	1616.9	1616.9
5°	1646.8	1644.5	1639.9	1635.4	1633.0	1628.3	1623.8	1619.2	1614.5	1607.6	1605.4
7.5°	1653.7	1646.8	1642.2	1633.0	1630.7	1626.1	1619.2	1612.3	1603.1	1593.9	1587.0
10°	1653.7	1644.5	1637.6	1626.1	1621.4	1616.9	1607.6	1596.2	1584.7	1575.5	1564.0
12.5°	1649.1	1637.6	1626.1	1614.5	1607.6	1600.8	1587.0	1575.5	1561.8	1547.8	1538.7
15°	1633.0	1619.2	1605.4	1591.6	1584.7	1575.5	1561.8	1545.6	1531.8	1518.0	1501.9
17.5°	1603.1	1589.3	1573.2	1557.1	1547.8	1540.9	1520.3	1508.8	1488.2	1474.2	1460.4
20°	1564.0	1547.8	1527.2	1511.1	1499.6	1492.7	1476.6	1455.9	1439.8	1419.1	1405.3
22.5°	1513.4	1492.7	1472.0	1455.9	1444.4	1435.2	1414.6	1393.7	1380.0	1361.6	1345.5
25°	1453.6	1432.9	1412.2	1389.2	1377.7	1368.5	1350.1	1331.7	1313.3	1292.6	1278.8
27.5°	1382.3	1359.3	1340.8	1320.1	1308.7	1294.9	1274.3	1255.8	1237.4	1223.6	1205.2
30°	1304.1	1278.8	1260.3	1239.7	1228.2	1216.7	1196.0	1177.6	1161.5	1145.4	1136.2
32.5°	1209.8	1191.4	1172.9	1152.3	1143.1	1136.2	1115.5	1097.1	1078.7	1064.9	1058.0
35°	1120.0	1099.3	1083.3	1064.9	1053.5	1046.4	1028.1	1012.0	1002.8	986.8	977.5
37.5°	1025.8	1009.7	991.3	972.8	965.9	959.0	945.3	929.2	915.4	903.9	899.2
40°	926.9	913.2	897.0	885.4	878.6	871.7	860.2	848.7	839.6	828.0	823.4
42.5°	832.5	823.4	809.6	795.8	788.9	786.6	772.8	763.6	758.9	754.4	749.8
45°	747.5	733.7	724.5	715.3	708.4	703.8	696.9	690.0	685.3	680.8	676.2
47.5°	664.7	653.2	644.0	637.1	630.2	627.9	623.3	616.4	611.7	611.7	611.7
50°	588.8	579.6	570.4	565.8	563.5	558.9	554.3	552.1	549.7	549.7	549.7
52.5°	522.1	512.9	506.0	501.4	501.4	496.8	492.2	489.9	489.9	489.9	489.9
55°	460.0	453.1	448.5	443.9	439.3	437.0	437.0	437.0	434.7	434.7	437.0
57.5°	404.9	400.2	393.3	388.7	386.4	386.4	384.0	381.8	384.0	386.4	388.7
60°	354.2	349.6	347.3	340.4	340.4	340.4	338.2	338.2	338.2	340.4	342.7
62.5°	308.2	305.9	301.3	299.0	296.7	296.7	294.4	294.4	294.4	294.4	296.7
65°	266.8	262.2	257.7	257.7	257.7	255.3	255.3	250.6	253.0	253.0	250.6
67.5°	227.7	223.1	220.8	218.5	216.2	216.2	213.9	211.6	209.3	209.3	209.3
70°	191.0	186.3	186.3	181.7	181.7	179.4	177.0	177.0	174.8	172.5	170.1
72.5°	154.1	151.8	149.5	147.2	147.2	147.2	144.9	142.6	140.3	138.0	133.4
75°	121.9	121.9	117.4	115.0	115.0	112.7	110.5	108.1	105.8	103.4	101.2
77.5°	94.3	92.0	87.4	85.1	85.1	85.1	82.8	80.5	78.2	75.9	73.6
80°	69.0	66.7	64.4	62.1	62.1	62.1	59.8	59.8	57.5	57.5	57.5
82.5°	46.0	46.0	43.8	43.8	43.8	43.8	41.4	41.4	41.4	41.4	41.4
85°	27.6	27.6	25.3	25.3	25.3	25.3	25.3	25.3	25.3	25.3	25.3
87.5°	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5
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°	1619.2	1619.2	1619.2	1619.2	1619.2	1619.2	1619.2	1619.2	1619.2	1619.2	1619.2
2.5°	1612.3	1612.3	1607.6	1605.4	1603.1	1605.4	1600.8	1598.5	1596.2	1596.2	1593.9
5°	1598.5	1596.2	1587.0	1584.7	1582.4	1580.1	1575.5	1570.9	1566.3	1564.0	1561.8
7.5°	1580.1	1573.2	1564.0	1561.8	1559.4	1552.5	1545.6	1540.9	1534.0	1531.8	1527.2
10°	1554.7	1545.6	1538.7	1531.8	1527.2	1520.3	1513.4	1506.5	1497.3	1495.0	1488.2
12.5°	1524.9	1513.4	1499.6	1497.3	1490.4	1481.1	1472.0	1465.1	1458.2	1453.6	1446.7
15°	1488.2	1476.6	1462.8	1455.9	1449.0	1442.1	1430.6	1421.4	1414.6	1407.5	1400.6
17.5°	1444.4	1430.6	1419.1	1412.2	1407.5	1396.1	1386.8	1375.4	1368.5	1361.6	1354.7
20°	1391.5	1380.0	1363.9	1357.0	1354.7	1345.5	1333.9	1329.4	1320.1	1313.3	1308.7
22.5°	1331.7	1320.1	1306.4	1301.8	1292.6	1288.0	1276.5	1271.9	1267.2	1260.3	1258.1
25°	1265.0	1253.4	1242.0	1239.7	1232.8	1228.2	1221.3	1214.4	1214.4	1207.5	1207.5
27.5°	1196.0	1184.5	1175.3	1170.7	1168.4	1163.8	1156.9	1154.6	1152.3	1150.0	1150.0
30°	1122.4	1108.6	1104.0	1101.7	1099.3	1094.8	1092.5	1087.9	1090.2	1092.5	1090.2
32.5°	1044.2	1039.5	1030.4	1025.8	1028.1	1025.8	1021.2	1025.8	1023.5	1028.1	1030.4
35°	968.3	963.7	959.0	959.0	954.5	954.5	954.5	956.8	961.4	963.7	968.3
37.5°	894.7	887.8	885.4	883.2	885.4	885.4	885.4	890.1	894.7	899.2	906.1
40°	816.5	811.8	811.8	811.8	811.8	818.7	816.5	821.1	825.6	832.5	839.6
42.5°	742.9	742.9	745.1	745.1	745.1	745.1	749.8	756.7	763.6	770.5	777.4
45°	673.9	673.9	673.9	678.4	678.4	680.8	690.0	694.6	699.3	706.1	713.0
47.5°	609.5	609.5	611.7	614.1	616.4	621.0	625.7	632.5	639.4	644.0	650.9
50°	549.7	552.1	556.6	561.2	561.2	563.5	570.4	575.0	579.6	586.5	588.8
52.5°	492.2	496.8	501.4	503.7	506.0	510.6	512.9	519.8	522.1	529.0	531.2
55°	439.3	441.6	448.5	450.7	450.7	455.4	460.0	464.5	471.6	471.6	476.1
57.5°	390.9	393.3	397.8	400.2	397.8	404.9	407.1	411.8	414.0	418.6	420.9
60°	342.7	347.3	349.6	349.6	351.9	354.2	358.8	358.8	363.4	368.0	368.0
62.5°	296.7	299.0	301.3	303.6	305.9	303.6	310.4	310.4	315.1	317.3	322.0
65°	253.0	255.3	255.3	257.7	257.7	259.9	259.9	262.2	264.6	269.1	271.4
67.5°	209.3	209.3	209.3	211.6	209.3	211.6	211.6	213.9	213.9	218.5	220.8
70°	170.1	167.9	165.6	165.6	165.6	165.6	163.2	165.6	165.6	167.9	167.9
72.5°	131.1	128.8	126.5	124.3	124.3	121.9	119.6	121.9	121.9	124.3	124.3
75°	98.9	94.3	94.3	94.3	92.0	92.0	92.0	94.3	94.3	94.3	96.5
77.5°	73.6	73.6	71.3	71.3	71.3	73.6	73.6	75.9	75.9	75.9	75.9
80°	55.2	57.5	57.5	57.5	57.5	59.8	59.8	59.8	59.8	62.1	62.1
82.5°	41.4	41.4	41.4	41.4	43.8	43.8	43.8	43.8	43.8	43.8	43.8
85°	25.3	27.6	27.6	25.3	27.6	27.6	27.6	27.6	27.6	27.6	27.6
87.5°	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5
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: P584285

CATALOG NUMBER: HC830D010-HM82555835-81WWWB

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1619.2	1619.2	1619.2	1619.2	1619.2	1619.2	1619.2	1619.2
2.5°	1591.6	1591.6	1591.6	1591.6	1589.3	1589.3	1589.3	1587.0
5°	1557.1	1557.1	1557.1	1552.5	1554.7	1554.7	1550.2	1552.5
7.5°	1522.6	1520.3	1518.0	1518.0	1515.7	1513.4	1511.1	1513.4
10°	1483.5	1476.6	1476.6	1474.2	1474.2	1469.7	1469.7	1472.0
12.5°	1439.8	1435.2	1435.2	1432.9	1430.6	1428.3	1426.0	1426.0
15°	1396.1	1391.5	1389.2	1386.8	1384.6	1380.0	1382.3	1380.0
17.5°	1352.4	1345.5	1345.5	1343.2	1340.8	1336.3	1336.3	1333.9
20°	1301.8	1299.5	1294.9	1297.2	1294.9	1290.3	1288.0	1288.0
22.5°	1251.2	1251.2	1248.9	1248.9	1246.5	1244.3	1242.0	1242.0
25°	1202.9	1200.7	1202.9	1202.9	1196.0	1196.0	1196.0	1198.3
27.5°	1147.7	1150.0	1147.7	1147.7	1147.7	1147.7	1150.0	1147.7
30°	1092.5	1092.5	1092.5	1094.8	1099.3	1097.1	1097.1	1094.8
32.5°	1032.6	1035.0	1035.0	1037.3	1039.5	1044.2	1044.2	1046.4
35°	972.8	977.5	979.9	977.5	984.4	984.4	989.0	989.0
37.5°	910.8	913.2	917.7	920.0	924.6	926.9	929.2	929.2
40°	844.1	853.3	855.6	857.9	864.8	864.8	867.1	871.7
42.5°	782.0	791.2	793.5	795.8	800.4	807.3	805.0	809.6
45°	722.2	729.1	731.4	733.7	740.6	742.9	742.9	749.8
47.5°	657.8	662.4	664.7	669.3	673.9	678.4	683.1	680.8
50°	593.4	600.3	604.8	607.2	614.1	616.4	618.8	621.0
52.5°	535.9	540.5	542.8	545.2	552.1	554.3	556.6	561.2
55°	480.7	483.0	487.6	485.3	492.2	494.5	496.8	501.4
57.5°	425.5	427.8	430.1	430.1	434.7	439.3	441.6	443.9
60°	372.6	377.2	379.5	379.5	379.5	384.0	384.0	384.0
62.5°	324.2	324.2	326.6	326.6	331.3	331.3	331.3	331.3
65°	273.7	276.0	278.3	278.3	282.9	280.6	285.2	282.9
67.5°	220.8	220.8	225.4	225.4	223.1	225.4	225.4	225.4
70°	167.9	167.9	170.1	170.1	170.1	170.1	170.1	170.1
72.5°	124.3	124.3	124.3	126.5	124.3	124.3	126.5	124.3
75°	96.5	96.5	96.5	96.5	96.5	96.5	96.5	96.5
77.5°	75.9	75.9	78.2	78.2	78.2	78.2	78.2	78.2
80°	62.1	62.1	62.1	62.1	64.4	62.1	62.1	62.1
82.5°	46.0	43.8	46.0	43.8	46.0	46.0	46.0	46.0
85°	27.6	27.6	27.6	27.6	27.6	27.6	27.6	27.6
87.5°	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5
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)