

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: P584181

Luminaire Tested: **HC825D010-HM82555927-81WWBB**

Issue Date: 10/21/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P584181  
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: HC825D010-HM82555927-81WWBB  
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, WHITE BAFFLE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1658.9 lumens  
Efficiency: N/A  
Efficacy: 61.9 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

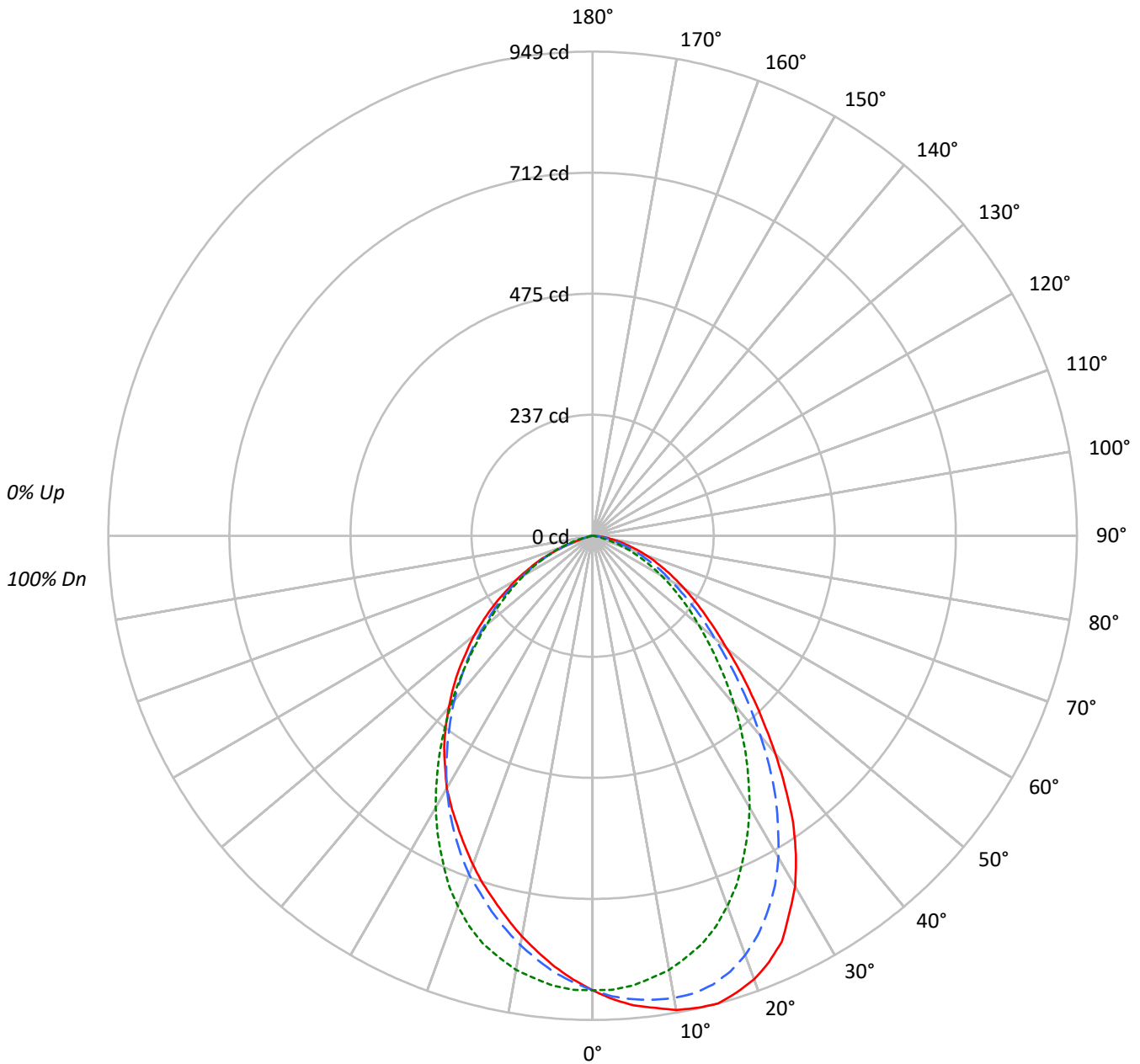
Input Watts (W): 26.8  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P584181

CATALOG NUMBER: HC825D010-HM82555927-81WWBB

### Luminous Intensity Polar Plot





TEST NUMBER: P584181

CATALOG NUMBER: HC825D010-HM82555927-81WWBB

**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°	27466	27466	27466
5°	28598	27404	26249
10°	29552	27054	24971
15°	30302	26436	23672
20°	30361	25337	22501
25°	29849	23735	21333
30°	28250	21898	20339
35°	25760	19695	19093
40°	22401	17362	17631
45°	19214	15036	16140
50°	16416	12967	14497
55°	14387	11166	12596
60°	12809	9522	10589
65°	11368	7771	8449
70°	10080	5761	4805
75°	8400	3014	1430
80°	6606	959	231
85°	4706	460	0



TEST NUMBER: P584181

CATALOG NUMBER: HC825D010-HM82555927-81WWBB

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	83.9	5.1
10°-20°	235.2	14.2
20°-30°	332.9	20.1
30°-40°	348.3	21.0
40°-50°	290.5	17.5
50°-60°	206.0	12.4
60°-70°	118.6	7.2
70°-80°	38.2	2.3
80°-90°	5.3	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°	652.1	39.3
0°-40°	1000.4	60.3
0°-60°	1496.9	90.2
0°-90°	1658.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1658.9	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	891	891	891	891	891	
5°	924	912	885	859	848	89
15°	949	911	828	763	742	267
25°	877	812	698	642	627	400
35°	684	624	523	495	507	424
45°	441	405	345	349	370	341
55°	268	240	208	218	234	242
65°	156	130	106	106	116	156
75°	70	52	25	12	12	76
85°	13	7	1	0	0	17
90°	0	0	0	0	0	



TEST NUMBER: P584181

CATALOG NUMBER: HC825D010-HM82555927-81WWBB

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	890.7	890.7	890.7	890.7	890.7	890.7	890.7	890.7	890.7	890.7	890.7
2.5°	909.3	907.9	906.6	907.9	906.6	907.9	906.6	906.6	905.2	903.9	903.9
5°	923.9	922.6	922.6	922.6	921.3	919.9	919.9	918.6	915.9	914.6	912.0
7.5°	933.3	934.5	934.5	934.5	931.9	931.9	929.2	926.6	923.9	921.3	917.2
10°	943.8	943.8	942.6	941.2	938.6	937.2	935.9	933.3	929.2	923.9	919.9
12.5°	947.9	947.9	946.5	943.8	942.6	941.2	939.9	935.9	930.6	923.9	918.6
15°	949.2	946.5	945.2	943.8	941.2	937.2	937.2	931.9	925.2	917.2	910.6
17.5°	938.6	939.9	937.2	934.5	930.6	927.9	923.9	919.9	912.0	902.7	895.9
20°	925.2	923.9	922.6	918.6	913.2	912.0	907.9	901.3	894.6	883.9	874.6
22.5°	903.9	902.7	900.0	897.3	892.0	889.3	885.3	877.3	868.0	857.4	846.7
25°	877.3	874.6	870.7	865.3	861.4	858.7	853.3	845.4	834.7	822.7	812.1
27.5°	834.7	838.7	836.0	828.1	824.1	818.8	817.4	806.8	797.5	785.5	773.5
30°	793.4	793.4	789.4	785.5	778.7	774.8	769.4	761.5	752.2	737.6	728.2
32.5°	741.5	740.2	734.9	733.5	728.2	720.2	718.9	708.2	698.9	688.2	676.2
35°	684.3	681.6	676.2	672.3	669.6	665.6	661.7	652.4	643.0	632.4	624.3
37.5°	619.0	619.0	617.7	611.1	608.4	605.7	601.8	592.5	587.1	576.4	568.5
40°	556.5	555.1	551.2	549.8	547.2	543.1	540.5	535.2	527.2	519.2	511.2
42.5°	495.2	496.6	491.2	492.5	487.3	484.6	483.2	475.3	471.2	463.3	456.7
45°	440.6	439.3	436.7	435.3	432.7	430.0	427.4	423.4	416.7	408.7	404.7
47.5°	390.0	386.1	386.1	384.8	383.4	378.0	376.7	372.8	368.7	360.8	355.5
50°	342.2	342.2	342.2	340.8	336.8	335.4	332.8	328.8	324.9	319.5	311.5
52.5°	303.6	303.6	303.6	302.2	296.9	295.5	294.2	288.9	283.6	279.6	274.2
55°	267.6	268.9	267.6	264.9	261.0	261.0	256.9	254.2	249.0	244.9	239.7
57.5°	237.0	237.0	234.3	232.9	230.3	229.0	226.3	223.6	217.0	213.0	206.3
60°	207.7	206.3	206.3	203.7	201.1	198.4	197.0	193.0	190.4	183.7	178.4
62.5°	181.0	181.0	178.4	178.4	173.0	173.0	171.7	167.8	163.7	157.1	154.4
65°	155.8	155.8	154.4	153.1	149.1	147.8	146.5	142.4	138.5	134.5	130.4
67.5°	133.1	133.1	130.4	129.1	126.5	125.2	122.5	119.8	115.8	111.8	107.9
70°	111.8	110.5	109.1	107.9	105.2	103.8	101.2	98.5	94.5	91.8	87.8
72.5°	90.5	90.5	89.2	86.6	85.2	83.9	82.5	79.9	75.9	71.9	69.2
75°	70.5	70.5	70.5	67.9	65.3	63.9	63.9	61.2	58.5	54.6	51.9
77.5°	54.6	53.3	51.9	51.9	49.2	47.9	46.5	45.3	41.3	39.9	37.2
80°	37.2	38.6	37.2	36.0	34.6	33.3	33.3	30.6	29.3	26.6	24.0
82.5°	25.3	24.0	24.0	22.7	22.7	21.3	21.3	18.6	17.3	15.9	14.7
85°	13.3	13.3	12.0	12.0	12.0	10.7	10.7	9.3	9.3	8.0	6.6
87.5°	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	2.7	2.7	2.7
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: P584181

CATALOG NUMBER: HC825D010-HM82555927-81WWBB

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	890.7	890.7	890.7	890.7	890.7	890.7	890.7	890.7	890.7	890.7	890.7
2.5°	902.7	900.0	898.6	898.6	897.3	895.9	894.6	893.2	890.7	890.7	888.0
5°	909.3	906.6	905.2	901.3	898.6	898.6	893.2	892.0	888.0	885.3	882.6
7.5°	914.6	909.3	905.2	901.3	898.6	895.9	890.7	885.3	880.0	874.6	871.9
10°	914.6	909.3	902.7	895.9	893.2	890.7	883.9	876.0	869.4	864.0	857.4
12.5°	912.0	903.9	895.9	890.7	885.3	881.4	873.3	865.3	857.4	846.7	841.3
15°	903.9	893.2	885.3	876.0	871.9	865.3	858.7	846.7	837.4	828.1	821.4
17.5°	888.0	874.6	865.3	856.0	849.4	845.4	834.7	824.1	813.4	802.7	794.8
20°	864.0	852.0	841.3	829.4	824.1	818.8	805.4	794.8	784.1	772.1	764.2
22.5°	834.7	822.7	808.1	798.8	790.7	784.1	772.1	760.1	749.5	738.8	728.2
25°	798.8	786.8	773.5	758.8	753.5	746.9	733.5	721.5	709.6	697.6	688.2
27.5°	760.1	744.2	733.5	717.5	712.2	705.6	690.9	677.6	666.9	657.6	647.0
30°	713.6	701.6	686.9	672.3	666.9	660.3	648.3	636.3	625.7	615.0	604.4
32.5°	663.0	651.0	636.3	625.7	617.7	612.4	600.4	589.8	579.1	568.5	559.2
35°	609.7	596.4	585.7	575.1	568.5	561.8	549.8	540.5	532.5	523.2	513.9
37.5°	555.1	545.8	535.2	523.2	516.5	511.2	501.9	491.2	484.6	476.6	469.9
40°	501.9	491.2	481.9	471.2	466.0	461.9	452.6	444.7	438.0	431.3	427.4
42.5°	447.3	438.0	428.6	422.0	418.0	414.0	407.3	398.0	394.1	387.4	383.4
45°	396.8	388.7	382.1	372.8	370.1	367.4	359.4	352.8	348.8	344.8	342.2
47.5°	348.8	343.5	335.4	330.2	326.1	323.5	318.2	312.9	308.9	306.2	303.6
50°	307.5	300.9	295.5	290.2	287.5	283.6	278.2	275.5	273.0	270.3	270.3
52.5°	268.9	262.3	256.9	252.9	250.3	247.6	243.6	242.2	239.7	239.7	238.3
55°	232.9	229.0	223.6	218.3	217.0	215.7	213.0	210.4	209.0	207.7	209.0
57.5°	202.3	198.4	193.0	189.1	187.7	186.4	185.0	182.4	181.0	181.0	181.0
60°	174.4	170.5	166.4	162.4	162.4	159.8	158.5	157.1	155.8	154.4	154.4
62.5°	149.1	145.1	141.1	138.5	137.2	135.8	133.1	131.8	130.4	130.4	129.1
65°	126.5	121.1	119.8	115.8	114.5	113.2	111.8	109.1	107.9	106.5	105.2
67.5°	103.8	101.2	97.2	94.5	93.2	91.8	90.5	87.8	86.6	85.2	82.5
70°	83.9	81.2	78.5	75.9	74.6	73.2	70.5	67.9	66.6	63.9	59.9
72.5°	65.3	62.6	59.9	57.2	56.0	54.6	51.9	49.2	46.5	44.0	41.3
75°	49.2	46.5	42.6	39.9	38.6	38.6	34.6	32.0	29.3	25.3	22.7
77.5°	34.6	30.6	29.3	26.6	25.3	22.7	20.0	17.3	14.7	13.3	10.7
80°	22.7	20.0	17.3	15.9	14.7	13.3	12.0	9.3	6.6	5.4	4.0
82.5°	13.3	12.0	10.7	9.3	8.0	6.6	5.4	5.4	4.0	2.7	1.3
85°	6.6	5.4	4.0	4.0	2.7	2.7	2.7	1.3	1.3	1.3	1.3
87.5°	2.7	1.3	1.3	1.3	1.3	1.3	1.3	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: P584181

CATALOG NUMBER: HC825D010-HM82555927-81WWBB

**CANDELA DISTRIBUTION (continued):**

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	890.7	890.7	890.7	890.7	890.7	890.7	890.7	890.7	890.7	890.7	890.7
2.5°	886.6	885.3	883.9	882.6	882.6	880.0	880.0	878.7	876.0	874.6	874.6
5°	878.7	874.6	871.9	870.7	869.4	865.3	864.0	861.4	858.7	856.0	854.7
7.5°	866.7	860.0	857.4	856.0	852.0	848.0	845.4	841.3	837.4	833.4	832.0
10°	852.0	845.4	838.7	836.0	832.0	829.4	824.1	818.8	814.7	810.7	806.8
12.5°	833.4	825.4	818.8	816.1	812.1	806.8	798.8	796.1	789.4	786.8	781.4
15°	812.1	802.7	796.1	792.1	788.2	780.1	774.8	769.4	762.8	760.1	754.9
17.5°	785.5	774.8	768.2	764.2	761.5	754.9	746.9	740.2	733.5	730.9	726.9
20°	753.5	746.9	737.6	733.5	730.9	722.9	714.9	712.2	706.9	701.6	697.6
22.5°	717.5	710.9	701.6	697.6	696.2	689.6	683.0	678.9	675.0	671.0	666.9
25°	680.3	672.3	664.3	661.7	659.0	653.7	648.3	645.6	641.7	639.0	636.3
27.5°	640.4	632.4	625.7	621.7	619.0	615.0	612.4	609.7	607.0	604.4	603.1
30°	597.7	589.8	584.4	581.8	579.1	577.8	573.7	572.4	571.2	568.5	569.8
32.5°	555.1	548.5	543.1	539.2	539.2	536.5	535.2	535.2	533.8	533.8	533.8
35°	508.6	504.5	500.5	499.3	497.9	496.6	495.2	496.6	495.2	496.6	497.9
37.5°	466.0	461.9	459.2	458.0	456.7	458.0	456.7	456.7	458.0	460.6	461.9
40°	422.0	419.3	416.7	418.0	416.7	416.7	416.7	420.7	422.0	423.4	424.7
42.5°	380.7	378.0	376.7	376.7	378.0	376.7	379.4	380.7	383.4	387.4	390.0
45°	340.8	339.5	339.5	340.8	339.5	342.2	342.2	344.8	348.8	351.5	354.2
47.5°	303.6	303.6	303.6	304.8	304.8	306.2	308.9	310.2	312.9	315.5	318.2
50°	268.9	270.3	271.6	271.6	271.6	274.2	276.9	278.2	279.6	280.9	284.9
52.5°	238.3	239.7	239.7	241.0	242.2	243.6	244.9	247.6	249.0	251.7	252.9
55°	209.0	209.0	211.6	213.0	213.0	213.0	215.7	215.7	218.3	219.7	222.3
57.5°	181.0	182.4	182.4	183.7	183.7	185.0	186.4	187.7	189.1	190.4	191.7
60°	154.4	154.4	154.4	155.8	157.1	158.5	157.1	159.8	159.8	162.4	163.7
62.5°	129.1	130.4	130.4	130.4	130.4	130.4	130.4	131.8	133.1	134.5	135.8
65°	105.2	105.2	105.2	103.8	105.2	103.8	105.2	106.5	106.5	107.9	109.1
67.5°	81.2	81.2	78.5	78.5	79.9	79.9	79.9	79.9	78.5	81.2	81.2
70°	58.5	57.2	56.0	54.6	54.6	53.3	53.3	51.9	51.9	51.9	51.9
72.5°	38.6	36.0	33.3	32.0	30.6	30.6	27.9	26.6	27.9	27.9	27.9
75°	20.0	17.3	15.9	14.7	13.3	13.3	12.0	12.0	12.0	12.0	12.0
77.5°	8.0	6.6	5.4	5.4	4.0	4.0	4.0	4.0	4.0	4.0	4.0
80°	2.7	2.7	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
82.5°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
85°	1.3	0.0	0.0	1.3	0.0	1.3	1.3	1.3	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: P584181

CATALOG NUMBER: HC825D010-HM82555927-81WWBB

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	890.7	890.7	890.7	890.7	890.7	890.7	890.7	890.7
2.5°	873.3	873.3	871.9	873.3	870.7	871.9	870.7	870.7
5°	853.3	850.6	850.6	850.6	849.4	849.4	848.0	848.0
7.5°	829.4	828.1	826.7	825.4	824.1	822.7	822.7	822.7
10°	805.4	802.7	802.7	801.4	798.8	797.5	797.5	797.5
12.5°	777.5	776.2	774.8	774.8	769.4	770.8	769.4	769.4
15°	750.8	749.5	749.5	745.5	742.9	742.9	742.9	741.5
17.5°	722.9	721.5	720.2	717.5	714.9	714.9	713.6	714.9
20°	693.6	692.3	689.6	689.6	688.2	686.9	684.3	685.7
22.5°	664.3	661.7	660.3	660.3	659.0	659.0	656.3	656.3
25°	633.7	632.4	631.0	632.4	629.7	629.7	627.0	627.0
27.5°	601.8	600.4	600.4	600.4	599.1	600.4	599.1	599.1
30°	569.8	569.8	568.5	568.5	569.8	568.5	569.8	571.2
32.5°	535.2	535.2	536.5	536.5	537.9	537.9	537.9	537.9
35°	499.3	501.9	501.9	503.2	504.5	505.9	505.9	507.2
37.5°	466.0	467.3	468.7	469.9	472.6	472.6	472.6	472.6
40°	430.0	431.3	434.0	432.7	438.0	439.3	438.0	438.0
42.5°	392.7	395.4	396.8	399.4	400.7	403.4	404.7	404.7
45°	358.1	359.4	362.1	364.8	366.2	370.1	370.1	370.1
47.5°	322.2	324.9	326.1	328.8	330.2	334.2	335.4	334.2
50°	287.5	290.2	292.9	292.9	296.9	298.2	300.9	302.2
52.5°	254.2	255.6	258.3	259.6	262.3	264.9	266.2	267.6
55°	222.3	223.6	226.3	226.3	230.3	231.7	234.3	234.3
57.5°	193.0	194.4	197.0	195.7	198.4	201.1	201.1	199.7
60°	165.1	165.1	165.1	167.8	169.1	170.5	171.7	171.7
62.5°	135.8	138.5	139.7	139.7	141.1	142.4	142.4	141.1
65°	109.1	111.8	113.2	113.2	114.5	114.5	114.5	115.8
67.5°	82.5	82.5	82.5	83.9	82.5	82.5	82.5	82.5
70°	51.9	51.9	51.9	51.9	50.6	51.9	51.9	53.3
72.5°	27.9	27.9	27.9	27.9	27.9	27.9	27.9	27.9
75°	12.0	12.0	12.0	13.3	12.0	12.0	12.0	12.0
77.5°	5.4	4.0	5.4	5.4	4.0	4.0	4.0	4.0
80°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
82.5°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
85°	0.0	1.3	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)