

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: P583728

Luminaire Tested: **HC810D010-HM80520830-81WWWB**

Issue Date: 10/21/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P583728  
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: HC810D010-HM80520830-81WWWB  
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, BLACK BAFFLE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1096.7 lumens  
Efficiency: N/A  
Efficacy: 110.8 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

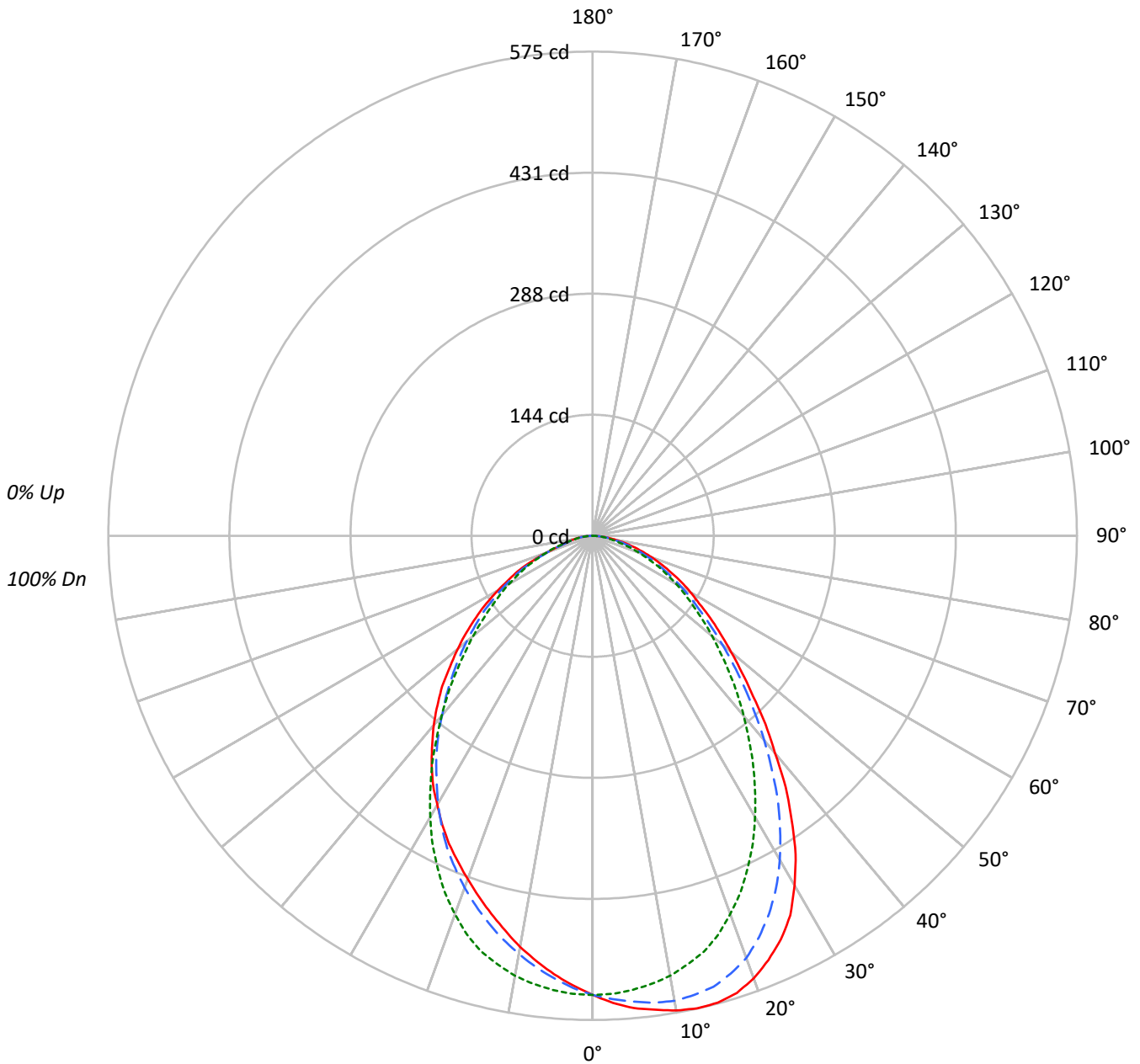
Input Watts (W): 9.9  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P583728

CATALOG NUMBER: HC810D010-HM80520830-81WWWB

### Luminous Intensity Polar Plot





TEST NUMBER: P583728

CATALOG NUMBER: HC810D010-HM80520830-81WWWB

**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	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°	16815	16815	16815
5°	17430	16759	16186
10°	17923	16614	15521
15°	18324	16320	14835
20°	18354	15682	14235
25°	17999	14814	13729
30°	17073	13734	13128
35°	15509	12513	12539
40°	13562	11227	11815
45°	11757	9995	11011
50°	10295	8880	10031
55°	9161	7871	9080
60°	8264	7074	7974
65°	7464	6217	6954
70°	6708	5238	5166
75°	5898	4158	3884
80°	4954	3445	3711
85°	3821	3007	3290



TEST NUMBER: P583728

CATALOG NUMBER: HC810D010-HM80520830-81WWWB

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	51.4	4.7
10°-20°	144.9	13.2
20°-30°	207.1	18.9
30°-40°	220.0	20.1
40°-50°	189.4	17.3
50°-60°	141.6	12.9
60°-70°	90.3	8.2
70°-80°	41.1	3.7
80°-90°	10.8	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°	403.4	36.8
0°-40°	623.4	56.8
0°-60°	954.5	87.0
0°-90°	1096.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1096.7	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	545	545	545	545	545	
5°	563	555	541	527	523	54
15°	574	555	511	476	465	162
25°	529	496	435	409	404	242
35°	412	383	332	324	333	257
45°	270	255	229	236	252	210
55°	170	156	146	159	169	153
65°	102	91	85	89	95	102
75°	50	43	35	32	33	53
85°	11	9	8	9	9	13
90°	0	0	0	0	0	



TEST NUMBER: P583728

CATALOG NUMBER: HC810D010-HM80520830-81WWWB

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	545.3	545.3	545.3	545.3	545.3	545.3	545.3	545.3	545.3	545.3	545.3
2.5°	555.3	553.9	554.6	553.9	554.6	554.6	553.0	553.0	553.0	553.0	550.8
5°	563.1	562.3	562.3	561.6	560.9	561.6	560.9	560.0	558.4	557.7	555.3
7.5°	567.8	567.8	567.8	567.8	567.0	566.3	565.4	563.9	562.3	560.9	559.3
10°	572.4	573.2	572.4	571.7	570.8	569.3	568.5	567.0	564.7	562.3	560.9
12.5°	574.8	574.8	574.0	574.0	572.4	571.7	569.3	567.0	564.7	562.3	558.4
15°	574.0	574.0	573.2	572.4	570.1	569.3	567.8	565.4	561.6	558.4	554.6
17.5°	569.3	568.5	567.0	567.0	563.9	563.1	561.6	558.4	554.6	549.9	545.3
20°	559.3	559.3	558.4	557.7	554.6	552.3	550.8	546.9	543.8	538.4	533.7
22.5°	545.3	546.9	545.3	543.8	539.9	539.1	536.8	532.1	527.4	521.3	515.9
25°	529.0	528.3	527.4	526.0	522.9	521.3	518.2	513.5	508.9	502.0	495.7
27.5°	508.1	505.1	505.1	502.0	499.6	497.3	495.7	491.1	484.9	479.5	471.7
30°	479.5	480.2	476.4	475.6	471.7	470.2	467.1	462.4	457.0	450.8	444.6
32.5°	448.5	446.2	446.2	443.1	439.9	437.6	436.8	431.4	426.8	420.6	414.4
35°	412.0	412.0	409.8	408.9	405.9	404.4	401.9	398.9	393.5	388.1	383.4
37.5°	376.5	374.9	374.2	372.6	370.2	367.9	367.9	362.5	361.7	355.6	349.3
40°	336.9	338.5	336.9	334.6	333.8	332.4	331.5	328.4	326.1	320.7	316.8
42.5°	303.6	302.1	302.1	301.3	298.2	298.2	296.7	295.1	291.2	289.7	285.0
45°	269.6	271.1	268.8	269.6	266.5	266.5	266.5	263.4	260.2	257.9	254.8
47.5°	240.2	240.9	240.9	238.6	237.8	237.8	236.2	234.8	232.3	229.2	226.9
50°	214.6	215.3	213.8	213.0	211.4	210.7	210.7	207.6	206.0	202.9	201.3
52.5°	191.4	191.4	190.5	190.5	188.2	188.2	186.7	184.4	182.8	181.3	177.4
55°	170.4	170.4	169.6	168.9	168.9	166.5	165.8	163.5	161.9	158.8	156.5
57.5°	150.2	151.1	150.2	149.5	148.7	148.0	146.4	144.1	142.6	140.2	138.6
60°	134.0	134.0	133.2	132.5	130.9	130.2	129.3	127.8	125.5	123.9	121.6
62.5°	118.5	117.8	117.0	116.2	114.7	114.7	113.1	111.5	109.3	107.7	106.1
65°	102.3	102.3	101.4	101.4	100.7	99.2	98.3	97.6	94.5	93.8	90.6
67.5°	87.5	88.3	86.8	86.8	85.2	85.2	84.4	82.1	81.4	79.8	78.3
70°	74.4	74.4	74.4	73.6	72.0	71.3	70.4	69.0	68.2	66.6	65.0
72.5°	61.2	61.2	60.5	60.5	59.6	58.9	58.1	56.5	56.5	55.1	53.5
75°	49.5	49.5	48.8	48.1	47.2	47.2	46.5	45.7	44.1	43.4	42.6
77.5°	38.0	38.0	38.0	37.1	36.4	36.4	36.4	34.9	33.3	33.3	32.6
80°	27.9	27.9	27.2	27.2	26.3	26.3	26.3	25.6	24.8	24.0	23.2
82.5°	18.6	18.6	18.6	18.6	17.8	17.8	17.8	17.1	16.2	16.2	16.2
85°	10.8	10.8	10.8	10.8	10.1	10.1	10.1	10.1	10.1	9.3	9.3
87.5°	4.7	3.8	4.7	3.8	4.7	3.8	4.7	3.8	3.8	3.8	3.8
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: P583728

CATALOG NUMBER: HC810D010-HM80520830-81WWWB

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	545.3	545.3	545.3	545.3	545.3	545.3	545.3	545.3	545.3	545.3	545.3
2.5°	551.5	550.8	549.9	549.2	549.2	548.4	546.9	546.1	545.3	544.5	544.5
5°	554.6	553.9	552.3	550.8	549.9	548.4	546.9	545.3	543.8	541.4	540.7
7.5°	556.9	554.6	553.0	549.9	549.2	547.6	545.3	542.9	539.9	536.8	534.4
10°	556.9	553.9	551.5	547.6	546.1	544.5	541.4	537.5	533.7	530.6	526.7
12.5°	555.3	551.5	547.6	543.8	541.4	539.1	534.4	530.6	526.0	521.3	518.2
15°	549.9	545.3	540.7	536.0	533.7	530.6	526.0	520.5	515.9	511.2	505.8
17.5°	539.9	535.3	529.8	524.4	521.3	519.0	512.1	508.1	501.1	496.5	491.9
20°	526.7	521.3	514.3	508.9	505.1	502.7	497.3	490.3	484.9	477.9	473.2
22.5°	509.6	502.7	495.7	490.3	486.4	483.3	476.4	469.4	464.7	458.6	453.2
25°	489.6	482.6	475.6	467.8	464.0	460.8	454.7	448.5	442.3	435.4	430.7
27.5°	465.5	457.7	451.6	444.6	440.8	436.1	429.1	422.9	416.7	412.0	405.9
30°	439.2	430.7	424.4	417.5	413.6	409.8	402.8	396.5	391.1	385.7	382.6
32.5°	407.5	401.2	395.1	388.1	385.0	382.6	375.6	369.5	363.2	358.7	356.3
35°	377.2	370.2	364.8	358.7	354.7	352.4	346.3	340.8	337.8	332.4	329.2
37.5°	345.5	340.0	333.8	327.7	325.4	323.0	318.4	312.9	308.3	304.5	302.9
40°	312.2	307.5	302.1	298.2	295.9	293.5	289.7	285.8	282.7	278.9	277.3
42.5°	280.4	277.3	272.6	268.0	265.6	264.9	260.2	257.1	255.7	254.1	252.5
45°	251.7	247.1	244.0	240.9	238.6	237.0	234.8	232.3	230.8	229.2	227.8
47.5°	223.8	220.0	216.8	214.6	212.3	211.4	209.9	207.6	206.0	206.0	206.0
50°	198.3	195.2	192.1	190.5	189.8	188.2	186.7	185.9	185.1	185.1	185.1
52.5°	175.9	172.7	170.4	168.9	168.9	167.3	165.8	165.0	165.0	165.0	165.0
55°	154.9	152.5	151.1	149.5	148.0	147.1	147.1	147.1	146.4	146.4	147.1
57.5°	136.3	134.7	132.5	130.9	130.2	130.2	129.3	128.6	129.3	130.2	130.9
60°	119.2	117.8	117.0	114.7	114.7	114.7	113.8	113.8	113.8	114.7	115.4
62.5°	103.9	103.0	101.4	100.7	99.9	99.9	99.2	99.2	99.2	99.2	99.9
65°	89.9	88.3	86.8	86.8	86.8	85.9	85.9	84.4	85.2	85.2	84.4
67.5°	76.7	75.1	74.4	73.6	72.8	72.8	72.0	71.3	70.4	70.4	70.4
70°	64.3	62.7	62.7	61.2	61.2	60.5	59.6	59.6	58.9	58.1	57.3
72.5°	51.9	51.1	50.4	49.5	49.5	49.5	48.8	48.1	47.2	46.5	45.0
75°	41.1	41.1	39.5	38.7	38.7	38.0	37.1	36.4	35.6	34.9	34.1
77.5°	31.7	31.0	29.4	28.6	28.6	28.6	27.9	27.2	26.3	25.6	24.8
80°	23.2	22.5	21.6	20.9	20.9	20.9	20.2	20.2	19.4	19.4	19.4
82.5°	15.5	15.5	14.7	14.7	14.7	14.7	13.9	13.9	13.9	13.9	13.9
85°	9.3	9.3	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5
87.5°	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
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: P583728

CATALOG NUMBER: HC810D010-HM80520830-81WWWB

**CANDELA DISTRIBUTION (continued):**

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	545.3	545.3	545.3	545.3	545.3	545.3	545.3	545.3	545.3	545.3	545.3
2.5°	542.9	542.9	541.4	540.7	539.9	540.7	539.1	538.4	537.5	537.5	536.8
5°	538.4	537.5	534.4	533.7	533.0	532.1	530.6	529.0	527.4	526.7	526.0
7.5°	532.1	529.8	526.7	526.0	525.2	522.9	520.5	519.0	516.6	515.9	514.3
10°	523.6	520.5	518.2	515.9	514.3	512.1	509.6	507.4	504.2	503.5	501.1
12.5°	513.5	509.6	505.1	504.2	502.0	498.8	495.7	493.4	491.1	489.6	487.2
15°	501.1	497.3	492.6	490.3	488.0	485.6	481.8	478.6	476.4	474.1	471.7
17.5°	486.4	481.8	477.9	475.6	474.1	470.2	467.1	463.3	460.8	458.6	456.3
20°	468.7	464.7	459.3	457.0	456.3	453.2	449.3	447.7	444.6	442.3	440.8
22.5°	448.5	444.6	439.9	438.4	435.4	433.8	429.8	428.4	426.8	424.4	423.7
25°	426.0	422.1	418.3	417.5	415.2	413.6	411.3	408.9	408.9	406.6	406.6
27.5°	402.8	398.9	395.8	394.3	393.5	392.0	389.6	388.8	388.1	387.3	387.3
30°	378.0	373.3	371.8	371.1	370.2	368.7	367.9	366.4	367.2	367.9	367.2
32.5°	351.7	350.1	347.0	345.5	346.3	345.5	343.9	345.5	344.7	346.3	347.0
35°	326.1	324.5	323.0	323.0	321.4	321.4	321.4	322.3	323.8	324.5	326.1
37.5°	301.3	298.9	298.2	297.5	298.2	298.2	298.2	299.8	301.3	302.9	305.2
40°	275.0	273.5	273.5	273.5	273.5	275.7	275.0	276.6	278.0	280.4	282.7
42.5°	250.1	250.1	251.0	251.0	251.0	251.0	252.5	254.8	257.1	259.5	261.8
45°	226.9	226.9	226.9	228.5	228.5	229.2	232.3	233.9	235.5	237.8	240.2
47.5°	205.3	205.3	206.0	206.9	207.6	209.1	210.7	213.0	215.3	216.8	219.2
50°	185.1	185.9	187.4	189.0	189.0	189.8	192.1	193.6	195.2	197.5	198.3
52.5°	165.8	167.3	168.9	169.6	170.4	172.0	172.7	175.0	175.9	178.1	179.0
55°	148.0	148.7	151.1	151.8	151.8	153.4	154.9	156.5	158.8	158.8	160.3
57.5°	131.7	132.5	134.0	134.7	134.0	136.3	137.1	138.6	139.4	141.0	141.7
60°	115.4	117.0	117.8	117.8	118.5	119.2	120.8	120.8	122.4	123.9	123.9
62.5°	99.9	100.7	101.4	102.3	103.0	102.3	104.6	104.6	106.1	106.9	108.4
65°	85.2	85.9	85.9	86.8	86.8	87.5	87.5	88.3	89.1	90.6	91.4
67.5°	70.4	70.4	70.4	71.3	70.4	71.3	71.3	72.0	72.0	73.6	74.4
70°	57.3	56.5	55.8	55.8	55.8	55.8	55.1	55.8	55.8	56.5	56.5
72.5°	44.1	43.4	42.6	41.8	41.8	41.1	40.3	41.1	41.1	41.8	41.8
75°	33.3	31.7	31.7	31.7	31.0	31.0	31.0	31.7	31.7	31.7	32.6
77.5°	24.8	24.8	24.0	24.0	24.0	24.8	24.8	25.6	25.6	25.6	25.6
80°	18.6	19.4	19.4	19.4	19.4	20.2	20.2	20.2	20.2	20.9	20.9
82.5°	13.9	13.9	13.9	13.9	14.7	14.7	14.7	14.7	14.7	14.7	14.7
85°	8.5	9.3	9.3	8.5	9.3	9.3	9.3	9.3	9.3	9.3	9.3
87.5°	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
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: P583728

CATALOG NUMBER: HC810D010-HM80520830-81WWWB

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	545.3	545.3	545.3	545.3	545.3	545.3	545.3	545.3
2.5°	536.0	536.0	536.0	536.0	535.3	535.3	535.3	534.4
5°	524.4	524.4	524.4	522.9	523.6	523.6	522.0	522.9
7.5°	512.8	512.1	511.2	511.2	510.5	509.6	508.9	509.6
10°	499.6	497.3	497.3	496.5	496.5	495.0	495.0	495.7
12.5°	484.9	483.3	483.3	482.6	481.8	481.0	480.2	480.2
15°	470.2	468.7	467.8	467.1	466.3	464.7	465.5	464.7
17.5°	455.4	453.2	453.2	452.3	451.6	450.0	450.0	449.3
20°	438.4	437.6	436.1	436.8	436.1	434.5	433.8	433.8
22.5°	421.4	421.4	420.6	420.6	419.9	419.0	418.3	418.3
25°	405.1	404.4	405.1	405.1	402.8	402.8	402.8	403.5
27.5°	386.6	387.3	386.6	386.6	386.6	386.6	387.3	386.6
30°	367.9	367.9	367.9	368.7	370.2	369.5	369.5	368.7
32.5°	347.7	348.6	348.6	349.3	350.1	351.7	351.7	352.4
35°	327.7	329.2	329.9	329.2	331.5	331.5	333.1	333.1
37.5°	306.8	307.5	309.0	309.9	311.4	312.2	312.9	312.9
40°	284.3	287.4	288.1	289.0	291.2	291.2	292.0	293.5
42.5°	263.4	266.5	267.2	268.0	269.6	271.9	271.1	272.6
45°	243.2	245.6	246.3	247.1	249.4	250.1	250.1	252.5
47.5°	221.5	223.1	223.8	225.4	226.9	228.5	230.1	229.2
50°	199.9	202.2	203.7	204.5	206.9	207.6	208.3	209.1
52.5°	180.4	182.0	182.8	183.5	185.9	186.7	187.4	189.0
55°	161.9	162.6	164.2	163.5	165.8	166.5	167.3	168.9
57.5°	143.3	144.1	144.8	144.8	146.4	148.0	148.7	149.5
60°	125.5	127.1	127.8	127.8	127.8	129.3	129.3	129.3
62.5°	109.3	109.3	110.0	110.0	111.5	111.5	111.5	111.5
65°	92.2	92.9	93.8	93.8	95.3	94.5	96.0	95.3
67.5°	74.4	74.4	76.0	76.0	75.1	76.0	76.0	76.0
70°	56.5	56.5	57.3	57.3	57.3	57.3	57.3	57.3
72.5°	41.8	41.8	41.8	42.6	41.8	41.8	42.6	41.8
75°	32.6	32.6	32.6	32.6	32.6	32.6	32.6	32.6
77.5°	25.6	25.6	26.3	26.3	26.3	26.3	26.3	26.3
80°	20.9	20.9	20.9	20.9	21.6	20.9	20.9	20.9
82.5°	15.5	14.7	15.5	14.7	15.5	15.5	15.5	15.5
85°	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3
87.5°	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
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)