

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: P583456

Luminaire Tested: **HC805D010-HM80520830-81WWWB**

Issue Date: 10/21/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P583456  
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: HC805D010-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: 668.1 lumens  
Efficiency: N/A  
Efficacy: 111.3 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

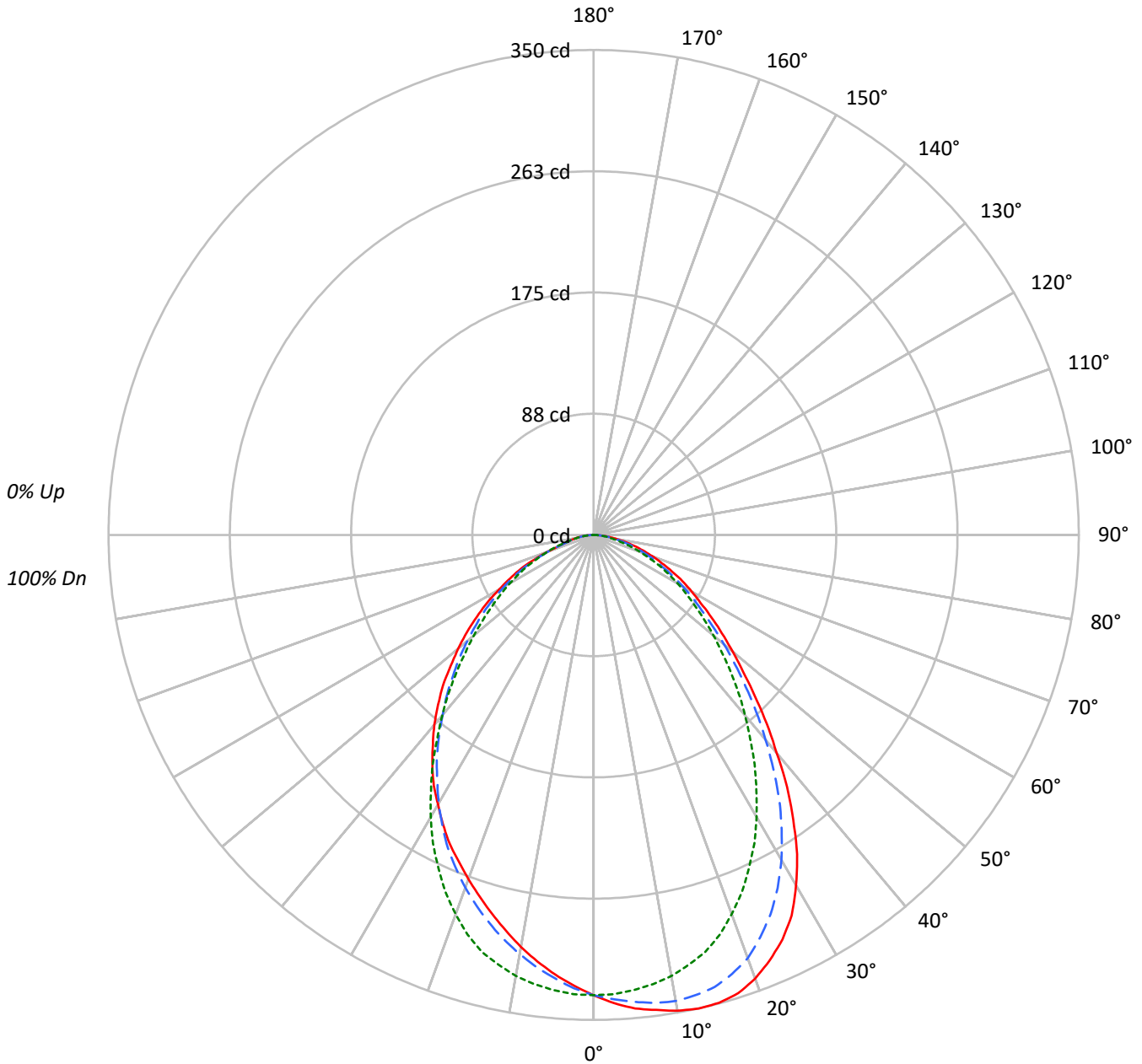
Input Watts (W): 6  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P583456

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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	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°	10244	10244	10244
5°	10620	10209	9859
10°	10918	10120	9456
15°	11161	9944	9038
20°	11180	9553	8670
25°	10963	9020	8367
30°	10401	8368	7997
35°	9449	7619	7638
40°	8264	6839	7197
45°	7161	6092	6707
50°	6270	5411	6112
55°	5580	4796	5527
60°	5032	4305	4860
65°	4538	3787	4239
70°	4075	3192	3156
75°	3598	2526	2371
80°	3019	2113	2255
85°	2335	1804	1981



TEST NUMBER: P583456

CATALOG NUMBER: HC805D010-HM80520830-81WWWB

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	31.3	4.7
10°-20°	88.3	13.2
20°-30°	126.1	18.9
30°-40°	134.0	20.1
40°-50°	115.4	17.3
50°-60°	86.3	12.9
60°-70°	55.0	8.2
70°-80°	25.0	3.7
80°-90°	6.6	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°	245.7	36.8
0°-40°	379.8	56.8
0°-60°	581.4	87.0
0°-90°	668.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	668.1	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	332	332	332	332	332	
5°	343	338	330	321	318	33
15°	350	338	312	290	283	98
25°	322	302	265	249	246	148
35°	251	234	202	197	203	156
45°	164	155	140	143	154	128
55°	104	95	89	97	103	93
65°	62	55	52	54	58	62
75°	30	26	21	19	20	32
85°	7	6	5	6	6	8
90°	0	0	0	0	0	



TEST NUMBER: P583456

CATALOG NUMBER: HC805D010-HM80520830-81WWWB

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	332.2	332.2	332.2	332.2	332.2	332.2	332.2	332.2	332.2	332.2	332.2
2.5°	338.3	337.3	337.8	337.3	337.8	337.8	336.8	336.8	336.8	336.8	335.5
5°	343.1	342.6	342.6	342.1	341.6	342.1	341.6	341.1	340.2	339.7	338.3
7.5°	345.8	345.8	345.8	345.8	345.3	344.9	344.4	343.5	342.6	341.6	340.7
10°	348.7	349.2	348.7	348.2	347.7	346.8	346.3	345.3	344.0	342.6	341.6
12.5°	350.1	350.1	349.6	349.6	348.7	348.2	346.8	345.3	344.0	342.6	340.2
15°	349.6	349.6	349.2	348.7	347.2	346.8	345.8	344.4	342.1	340.2	337.8
17.5°	346.8	346.3	345.3	345.3	343.5	343.1	342.1	340.2	337.8	335.0	332.2
20°	340.7	340.7	340.2	339.7	337.8	336.4	335.5	333.1	331.2	327.9	325.1
22.5°	332.2	333.1	332.2	331.2	328.8	328.3	327.0	324.1	321.3	317.6	314.2
25°	322.2	321.8	321.3	320.3	318.5	317.6	315.6	312.8	310.0	305.7	302.0
27.5°	309.5	307.6	307.6	305.7	304.3	303.0	302.0	299.1	295.4	292.1	287.4
30°	292.1	292.5	290.2	289.7	287.4	286.4	284.5	281.7	278.4	274.6	270.9
32.5°	273.2	271.7	271.7	269.9	268.0	266.6	266.1	262.9	260.0	256.2	252.4
35°	251.0	251.0	249.6	249.1	247.2	246.3	244.9	243.0	239.6	236.4	233.5
37.5°	229.3	228.4	227.9	227.0	225.5	224.1	224.1	220.8	220.4	216.5	212.8
40°	205.3	206.2	205.3	203.8	203.4	202.4	201.9	200.0	198.6	195.4	193.0
42.5°	184.9	184.0	184.0	183.5	181.7	181.7	180.7	179.8	177.4	176.4	173.7
45°	164.2	165.2	163.7	164.2	162.3	162.3	162.3	160.4	158.5	157.2	155.3
47.5°	146.3	146.8	146.8	145.3	144.8	144.8	143.9	142.9	141.6	139.7	138.3
50°	130.7	131.2	130.2	129.8	128.8	128.3	128.3	126.4	125.4	123.7	122.7
52.5°	116.6	116.6	116.1	116.1	114.7	114.7	113.7	112.3	111.3	110.4	108.1
55°	103.8	103.8	103.3	102.8	102.8	101.4	101.0	99.6	98.6	96.7	95.3
57.5°	91.6	92.0	91.6	91.1	90.6	90.1	89.2	87.7	86.8	85.3	84.5
60°	81.6	81.6	81.2	80.7	79.7	79.2	78.8	77.8	76.5	75.5	74.1
62.5°	72.2	71.7	71.2	70.7	69.8	69.8	68.8	68.0	66.6	65.6	64.6
65°	62.2	62.2	61.8	61.8	61.3	60.4	60.0	59.5	57.6	57.1	55.2
67.5°	53.3	53.7	52.8	52.8	51.9	51.9	51.5	50.0	49.6	48.6	47.6
70°	45.2	45.2	45.2	44.8	43.9	43.5	43.0	42.0	41.5	40.6	39.6
72.5°	37.2	37.2	36.7	36.7	36.4	35.9	35.4	34.5	34.5	33.5	32.6
75°	30.2	30.2	29.7	29.2	28.7	28.7	28.4	27.9	26.9	26.5	26.0
77.5°	23.1	23.1	23.1	22.6	22.1	22.1	22.1	21.2	20.2	20.2	19.9
80°	17.0	17.0	16.5	16.5	16.0	16.0	16.0	15.6	15.1	14.6	14.1
82.5°	11.4	11.4	11.4	11.4	10.9	10.9	10.9	10.4	9.9	9.9	9.9
85°	6.6	6.6	6.6	6.6	6.1	6.1	6.1	6.1	6.1	5.6	5.6
87.5°	2.9	2.4	2.9	2.4	2.9	2.4	2.9	2.4	2.4	2.4	2.4
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: P583456

CATALOG NUMBER: HC805D010-HM80520830-81WWWB

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	332.2	332.2	332.2	332.2	332.2	332.2	332.2	332.2	332.2	332.2	332.2
2.5°	335.9	335.5	335.0	334.6	334.6	334.1	333.1	332.6	332.2	331.7	331.7
5°	337.8	337.3	336.4	335.5	335.0	334.1	333.1	332.2	331.2	329.8	329.3
7.5°	339.2	337.8	336.8	335.0	334.6	333.6	332.2	330.7	328.8	327.0	325.6
10°	339.2	337.3	335.9	333.6	332.6	331.7	329.8	327.5	325.1	323.2	320.8
12.5°	338.3	335.9	333.6	331.2	329.8	328.3	325.6	323.2	320.3	317.6	315.6
15°	335.0	332.2	329.3	326.5	325.1	323.2	320.3	317.1	314.2	311.5	308.1
17.5°	328.8	326.1	322.7	319.5	317.6	316.1	311.8	309.5	305.2	302.5	299.6
20°	320.8	317.6	313.3	310.0	307.6	306.2	303.0	298.7	295.4	291.1	288.2
22.5°	310.5	306.2	302.0	298.7	296.3	294.5	290.2	286.0	283.1	279.3	276.0
25°	298.2	294.0	289.7	285.0	282.6	280.7	277.0	273.2	269.4	265.1	262.4
27.5°	283.6	278.9	275.1	270.9	268.5	265.6	261.4	257.6	253.9	251.0	247.2
30°	267.5	262.4	258.6	254.4	252.0	249.6	245.4	241.6	238.3	235.0	233.1
32.5°	248.1	244.4	240.6	236.4	234.5	233.1	228.9	225.0	221.3	218.5	217.0
35°	229.8	225.5	222.3	218.5	216.1	214.6	210.9	207.6	205.8	202.4	200.5
37.5°	210.4	207.1	203.4	199.5	198.2	196.8	193.9	190.6	187.8	185.4	184.5
40°	190.2	187.3	184.0	181.7	180.3	178.8	176.4	174.0	172.2	169.9	168.9
42.5°	170.8	168.9	166.0	163.3	161.8	161.4	158.5	156.7	155.7	154.8	153.8
45°	153.3	150.5	148.7	146.8	145.3	144.4	142.9	141.6	140.6	139.7	138.7
47.5°	136.3	133.9	132.1	130.7	129.3	128.8	127.8	126.4	125.4	125.4	125.4
50°	120.8	118.9	117.1	116.1	115.6	114.7	113.7	113.2	112.8	112.8	112.8
52.5°	107.1	105.2	103.8	102.8	102.8	101.9	101.0	100.5	100.5	100.5	100.5
55°	94.3	93.0	92.0	91.1	90.1	89.7	89.7	89.7	89.2	89.2	89.7
57.5°	83.1	82.1	80.7	79.7	79.2	79.2	78.8	78.3	78.8	79.2	79.7
60°	72.7	71.7	71.2	69.8	69.8	69.8	69.3	69.3	69.3	69.8	70.3
62.5°	63.2	62.7	61.8	61.3	60.8	60.8	60.4	60.4	60.4	60.4	60.8
65°	54.7	53.7	52.8	52.8	52.8	52.4	52.4	51.5	51.9	51.9	51.5
67.5°	46.7	45.7	45.2	44.8	44.4	44.4	43.9	43.5	43.0	43.0	43.0
70°	39.1	38.2	38.2	37.2	37.2	36.7	36.4	36.4	35.9	35.4	35.0
72.5°	31.6	31.1	30.6	30.2	30.2	30.2	29.7	29.2	28.7	28.4	27.4
75°	25.0	25.0	24.1	23.6	23.6	23.1	22.6	22.1	21.7	21.2	20.7
77.5°	19.4	18.9	18.0	17.5	17.5	17.5	17.0	16.5	16.0	15.6	15.1
80°	14.1	13.6	13.2	12.7	12.7	12.7	12.2	12.2	11.9	11.9	11.9
82.5°	9.5	9.5	9.0	9.0	9.0	9.0	8.5	8.5	8.5	8.5	8.5
85°	5.6	5.6	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
87.5°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
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: P583456

CATALOG NUMBER: HC805D010-HM80520830-81WWWB

**CANDELA DISTRIBUTION (continued):**

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	332.2	332.2	332.2	332.2	332.2	332.2	332.2	332.2	332.2	332.2	332.2
2.5°	330.7	330.7	329.8	329.3	328.8	329.3	328.3	327.9	327.5	327.5	327.0
5°	327.9	327.5	325.6	325.1	324.6	324.1	323.2	322.2	321.3	320.8	320.3
7.5°	324.1	322.7	320.8	320.3	319.8	318.5	317.1	316.1	314.7	314.2	313.3
10°	319.0	317.1	315.6	314.2	313.3	311.8	310.5	309.1	307.2	306.7	305.2
12.5°	312.8	310.5	307.6	307.2	305.7	303.8	302.0	300.6	299.1	298.2	296.7
15°	305.2	303.0	300.1	298.7	297.2	295.8	293.5	291.6	290.2	288.7	287.4
17.5°	296.3	293.5	291.1	289.7	288.7	286.4	284.5	282.1	280.7	279.3	277.9
20°	285.5	283.1	279.7	278.4	277.9	276.0	273.6	272.7	270.9	269.4	268.5
22.5°	273.2	270.9	268.0	267.1	265.1	264.2	261.9	260.9	260.0	258.6	258.1
25°	259.5	257.1	254.8	254.4	252.9	252.0	250.5	249.1	249.1	247.7	247.7
27.5°	245.4	243.0	241.1	240.1	239.6	238.8	237.4	236.9	236.4	235.9	235.9
30°	230.3	227.4	226.5	226.0	225.5	224.6	224.1	223.1	223.6	224.1	223.6
32.5°	214.3	213.3	211.4	210.4	210.9	210.4	209.5	210.4	210.0	210.9	211.4
35°	198.6	197.7	196.8	196.8	195.8	195.8	195.8	196.3	197.3	197.7	198.6
37.5°	183.5	182.1	181.7	181.2	181.7	181.7	181.7	182.5	183.5	184.5	185.9
40°	167.5	166.5	166.5	166.5	166.5	167.9	167.5	168.4	169.4	170.8	172.2
42.5°	152.4	152.4	152.9	152.9	152.9	152.9	153.8	155.3	156.7	158.0	159.4
45°	138.3	138.3	138.3	139.2	139.2	139.7	141.6	142.4	143.4	144.8	146.3
47.5°	125.1	125.1	125.4	125.9	126.4	127.4	128.3	129.8	131.2	132.1	133.6
50°	112.8	113.2	114.2	115.2	115.2	115.6	117.1	117.9	118.9	120.3	120.8
52.5°	101.0	101.9	102.8	103.3	103.8	104.7	105.2	106.7	107.1	108.6	109.0
55°	90.1	90.6	92.0	92.5	92.5	93.4	94.3	95.3	96.7	96.7	97.7
57.5°	80.2	80.7	81.6	82.1	81.6	83.1	83.6	84.5	85.0	85.8	86.3
60°	70.3	71.2	71.7	71.7	72.2	72.7	73.6	73.6	74.6	75.5	75.5
62.5°	60.8	61.3	61.8	62.2	62.7	62.2	63.7	63.7	64.6	65.1	66.1
65°	51.9	52.4	52.4	52.8	52.8	53.3	53.3	53.7	54.2	55.2	55.7
67.5°	43.0	43.0	43.0	43.5	43.0	43.5	43.5	43.9	43.9	44.8	45.2
70°	35.0	34.5	34.0	34.0	34.0	34.0	33.5	34.0	34.0	34.5	34.5
72.5°	26.9	26.5	26.0	25.5	25.5	25.0	24.5	25.0	25.0	25.5	25.5
75°	20.2	19.4	19.4	19.4	18.9	18.9	18.9	19.4	19.4	19.4	19.9
77.5°	15.1	15.1	14.6	14.6	14.6	15.1	15.1	15.6	15.6	15.6	15.6
80°	11.4	11.9	11.9	11.9	11.9	12.2	12.2	12.2	12.2	12.7	12.7
82.5°	8.5	8.5	8.5	8.5	9.0	9.0	9.0	9.0	9.0	9.0	9.0
85°	5.1	5.6	5.6	5.1	5.6	5.6	5.6	5.6	5.6	5.6	5.6
87.5°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
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: P583456

CATALOG NUMBER: HC805D010-HM80520830-81WWWB

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	332.2	332.2	332.2	332.2	332.2	332.2	332.2	332.2
2.5°	326.5	326.5	326.5	326.5	326.1	326.1	326.1	325.6
5°	319.5	319.5	319.5	318.5	319.0	319.0	318.0	318.5
7.5°	312.3	311.8	311.5	311.5	311.0	310.5	310.0	310.5
10°	304.3	303.0	303.0	302.5	302.5	301.5	301.5	302.0
12.5°	295.4	294.5	294.5	294.0	293.5	293.0	292.5	292.5
15°	286.4	285.5	285.0	284.5	284.0	283.1	283.6	283.1
17.5°	277.5	276.0	276.0	275.5	275.1	274.1	274.1	273.6
20°	267.1	266.6	265.6	266.1	265.6	264.7	264.2	264.2
22.5°	256.6	256.6	256.2	256.2	255.7	255.2	254.8	254.8
25°	246.8	246.3	246.8	246.8	245.4	245.4	245.4	245.9
27.5°	235.4	235.9	235.4	235.4	235.4	235.4	235.9	235.4
30°	224.1	224.1	224.1	224.6	225.5	225.0	225.0	224.6
32.5°	211.9	212.3	212.3	212.8	213.3	214.3	214.3	214.6
35°	199.5	200.5	201.0	200.5	201.9	201.9	202.9	202.9
37.5°	186.9	187.3	188.3	188.8	189.7	190.2	190.6	190.6
40°	173.2	175.0	175.5	176.0	177.4	177.4	177.9	178.8
42.5°	160.4	162.3	162.8	163.3	164.2	165.7	165.2	166.0
45°	148.2	149.6	150.0	150.5	151.9	152.4	152.4	153.8
47.5°	134.9	135.9	136.3	137.3	138.3	139.2	140.2	139.7
50°	121.7	123.2	124.1	124.6	125.9	126.4	126.9	127.4
52.5°	109.9	110.8	111.3	111.8	113.2	113.7	114.2	115.2
55°	98.6	99.1	100.1	99.6	101.0	101.4	101.9	102.8
57.5°	87.3	87.7	88.2	88.2	89.2	90.1	90.6	91.1
60°	76.5	77.3	77.8	77.8	77.8	78.8	78.8	78.8
62.5°	66.6	66.6	67.0	67.0	68.0	68.0	68.0	68.0
65°	56.1	56.6	57.1	57.1	58.1	57.6	58.5	58.1
67.5°	45.2	45.2	46.2	46.2	45.7	46.2	46.2	46.2
70°	34.5	34.5	35.0	35.0	35.0	35.0	35.0	35.0
72.5°	25.5	25.5	25.5	26.0	25.5	25.5	26.0	25.5
75°	19.9	19.9	19.9	19.9	19.9	19.9	19.9	19.9
77.5°	15.6	15.6	16.0	16.0	16.0	16.0	16.0	16.0
80°	12.7	12.7	12.7	12.7	13.2	12.7	12.7	12.7
82.5°	9.5	9.0	9.5	9.0	9.5	9.5	9.5	9.5
85°	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
87.5°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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— 0°-180°    - - 45°-225°    - - - - 90°-270°















(END OF REPORT)