

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: P583642

Luminaire Tested: **HC807D010-HM80520927-81WWW**

Issue Date: 10/21/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P583642  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2109-368-16)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 10/21/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC807D010-HM80520927-81WWW  
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, WHITE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 691.1 lumens  
Efficiency: N/A  
Efficacy: 86.4 lumens/watt  
Spacing Criteria (0/90/45): 1.09 / 1.04 / 1.13  
Luminous Opening: Circular (Dia: 0.67' x H: 0')  
CIE Type: Direct

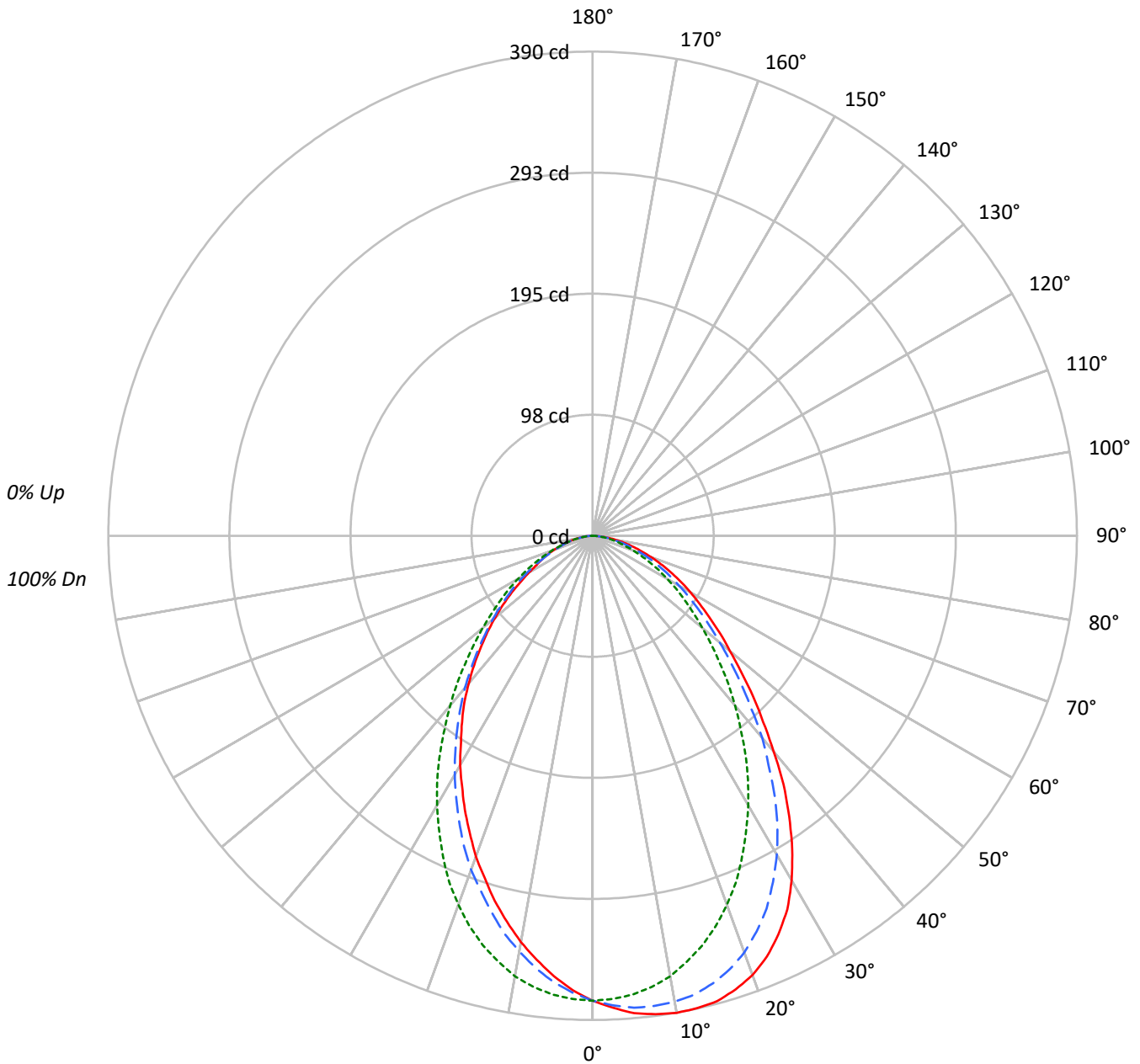
Input Watts (W): 8  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	110	106	103	99	108	104	101	98	100	97	95	96	94	92	93	91	89	87			87
2	102	95	89	84	99	93	88	83	90	85	81	86	83	79	83	80	78	76			76
3	94	85	78	72	92	83	77	71	81	75	70	78	73	69	75	71	68	66			66
4	87	76	69	63	85	75	68	62	73	67	62	71	65	61	68	64	60	58			58
5	81	69	61	55	79	68	61	55	66	60	54	64	59	54	63	57	53	51			51
6	75	63	55	49	73	62	55	49	61	54	49	59	53	48	57	52	48	46			46
7	70	58	50	44	69	57	50	44	56	49	44	54	48	44	53	48	43	41			41
8	66	53	46	40	64	53	45	40	51	45	40	50	44	40	49	44	39	38			38
9	62	49	42	37	60	49	42	37	48	41	36	47	41	36	46	40	36	34			34
10	58	46	39	34	57	45	38	34	44	38	33	44	38	33	43	37	33	32			32

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°
0°	11548	11548	11548
5°	11951	11481	11026
10°	12218	11282	10405
15°	12390	10899	9718
20°	12355	10373	9018
25°	12051	9697	8281
30°	11416	8919	7598
35°	10386	8071	6904
40°	9122	7177	6239
45°	7954	6315	5560
50°	6927	5531	4903
55°	6172	4865	4258
60°	5606	4262	3633
65°	5042	3707	3298
70°	4490	3156	2975
75°	3932	2657	2550
80°	3338	2166	2255
85°	2547	1592	1804



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	35.1	5.1
10°-20°	96.6	14.0
20°-30°	134.1	19.4
30°-40°	138.7	20.1
40°-50°	116.1	16.8
50°-60°	84.3	12.2
60°-70°	53.2	7.7
70°-80°	26.4	3.8
80°-90°	6.5	0.9
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°	265.9	38.5
0°-40°	404.6	58.5
0°-60°	605.0	87.5
0°-90°	691.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	691.1	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	374	374	374	374	374	
5°	386	382	371	361	356	37
15°	388	373	341	314	304	109
25°	354	331	285	254	243	162
35°	276	256	214	190	183	172
45°	182	169	145	131	128	141
55°	115	105	90	83	79	104
65°	69	60	51	45	45	69
75°	33	28	22	21	21	35
85°	7	6	4	5	5	9
90°	0	0	0	0	0	



TEST NUMBER: P583642

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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	374.5	374.5	374.5	374.5	374.5	374.5	374.5	374.5	374.5	374.5	374.5
2.5°	380.6	380.6	381.1	380.6	380.6	380.6	380.0	380.0	379.5	379.5	378.6
5°	386.1	385.1	386.1	385.1	385.1	385.1	384.7	383.6	383.1	382.0	381.6
7.5°	388.7	388.1	388.1	387.7	387.7	387.2	386.7	386.1	384.1	383.6	382.0
10°	390.2	389.7	389.7	389.2	388.1	388.1	387.2	386.7	384.1	383.1	381.1
12.5°	389.7	389.7	389.7	389.2	387.7	387.2	386.1	384.7	382.6	380.6	378.6
15°	388.1	388.1	387.2	386.7	385.1	384.1	383.6	381.1	379.1	376.5	373.4
17.5°	383.1	383.1	382.6	381.6	380.0	379.1	378.0	375.5	373.4	369.4	366.4
20°	376.5	375.9	375.5	373.9	372.5	371.9	370.5	366.9	364.4	361.2	357.2
22.5°	366.9	366.4	365.8	364.8	362.3	361.2	360.3	357.7	353.1	350.1	345.0
25°	354.2	354.2	353.1	351.6	349.1	348.1	346.6	343.9	339.9	335.3	331.3
27.5°	339.4	338.9	337.3	336.4	334.4	332.8	330.3	327.2	323.1	319.5	314.5
30°	320.6	320.6	319.5	318.1	315.5	314.5	312.5	308.9	304.8	300.3	296.7
32.5°	299.2	299.2	297.8	296.7	295.2	292.7	292.2	288.1	284.5	280.9	276.9
35°	275.9	276.4	275.3	273.3	270.8	270.8	269.8	266.2	262.2	258.6	255.6
37.5°	252.5	251.0	250.5	249.5	248.0	245.9	244.9	243.4	239.8	237.3	232.7
40°	226.6	227.2	226.1	225.1	224.5	223.1	222.5	220.0	217.5	214.4	212.4
42.5°	203.3	203.3	203.3	202.2	201.2	199.7	199.2	197.7	194.5	192.5	189.5
45°	182.4	180.9	180.9	180.3	179.8	178.9	177.3	176.3	174.2	172.8	169.2
47.5°	162.0	162.6	162.0	161.6	160.0	159.5	159.1	157.0	155.0	153.4	150.9
50°	144.4	145.3	144.4	144.4	143.3	142.8	141.7	140.3	138.7	136.1	133.6
52.5°	129.5	129.5	129.1	128.6	127.0	126.0	125.5	125.0	122.5	120.5	118.4
55°	114.8	115.3	115.3	113.8	113.3	112.3	111.7	110.3	109.2	106.2	104.7
57.5°	102.2	101.6	102.2	101.1	100.1	99.1	98.6	97.5	96.1	94.0	92.0
60°	90.9	90.0	90.0	89.4	88.4	88.0	86.9	85.3	83.9	81.9	80.3
62.5°	79.8	79.2	78.8	78.3	77.2	76.7	76.2	74.7	73.1	71.7	70.1
65°	69.1	69.1	68.6	67.5	67.0	66.6	66.1	65.0	63.0	62.0	60.5
67.5°	59.4	58.9	58.9	58.0	56.9	56.4	56.4	55.3	53.9	52.3	51.3
70°	49.8	50.3	49.8	49.2	48.3	48.3	47.2	46.7	44.7	44.2	42.7
72.5°	41.1	41.1	40.6	40.6	39.7	39.1	39.1	38.1	37.0	36.1	35.0
75°	33.0	33.0	33.0	32.5	32.0	31.0	31.0	30.5	29.5	28.4	27.5
77.5°	25.9	25.5	25.5	24.9	24.4	23.9	23.9	23.4	22.3	21.9	20.8
80°	18.8	18.3	18.3	18.3	17.3	17.8	17.3	16.7	16.3	15.8	15.3
82.5°	12.2	12.7	12.7	12.2	11.7	11.7	11.7	11.2	11.2	10.6	10.2
85°	7.2	7.2	7.2	7.2	6.6	6.6	6.6	6.1	6.1	6.1	5.6
87.5°	3.1	3.1	3.1	3.1	3.1	3.1	2.5	2.5	2.5	2.5	2.5
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°	374.5	374.5	374.5	374.5	374.5	374.5	374.5	374.5	374.5	374.5	374.5
2.5°	378.6	377.5	377.0	376.5	376.5	375.9	375.5	374.5	374.5	373.4	373.0
5°	380.6	379.1	378.0	377.0	376.5	375.5	374.5	373.0	372.5	370.9	369.4
7.5°	381.1	378.6	377.5	375.5	374.5	373.4	371.4	369.9	367.8	366.4	364.4
10°	379.1	377.0	374.5	371.9	371.4	369.9	366.9	364.8	362.3	360.3	357.2
12.5°	375.9	373.0	370.5	367.3	365.8	364.4	361.2	358.3	354.7	351.1	348.1
15°	370.9	367.3	363.8	360.3	358.3	356.7	353.1	349.5	346.0	341.4	338.4
17.5°	363.3	359.2	355.6	351.1	349.1	347.5	343.0	338.9	334.4	329.7	326.7
20°	353.6	348.6	344.5	339.4	337.8	335.3	330.8	326.2	321.1	316.1	312.5
22.5°	340.9	335.8	331.3	326.2	323.6	321.1	316.6	310.9	305.9	301.9	298.3
25°	326.2	321.6	316.1	311.4	308.4	305.3	300.3	295.8	291.1	285.0	281.5
27.5°	310.0	304.4	300.3	294.2	291.1	289.1	283.6	277.4	273.3	267.8	263.7
30°	291.7	286.6	282.0	275.9	272.8	270.8	265.8	260.2	256.1	250.5	246.4
32.5°	272.3	266.7	261.1	257.0	253.6	251.5	245.9	242.3	237.3	232.7	228.1
35°	251.5	245.9	241.9	236.3	234.2	232.2	227.6	223.1	218.4	214.4	210.9
37.5°	229.2	225.1	220.5	216.4	215.0	212.9	207.3	203.3	199.7	195.6	192.5
40°	207.3	203.7	200.6	196.6	194.1	192.5	188.5	185.0	180.9	178.3	175.3
42.5°	187.5	183.4	180.3	177.3	174.8	173.3	169.7	167.2	164.1	161.6	158.0
45°	166.7	164.7	161.1	158.6	157.0	155.0	152.5	149.4	146.9	144.8	142.3
47.5°	148.4	146.4	143.8	140.8	139.7	138.1	135.6	133.6	131.6	129.5	127.0
50°	131.6	129.1	127.0	125.0	123.9	122.5	119.9	118.9	117.3	115.3	113.8
52.5°	116.4	114.4	112.3	109.7	109.2	108.3	106.7	104.7	103.1	102.2	101.1
55°	102.7	100.6	99.1	97.0	96.6	95.5	93.4	92.5	91.4	90.5	89.4
57.5°	90.5	88.4	86.4	85.3	84.4	83.3	82.8	81.3	80.3	79.8	78.8
60°	79.2	77.2	75.8	74.2	73.7	73.1	72.2	71.1	70.1	69.1	68.6
62.5°	68.6	66.6	65.5	64.5	63.5	63.5	62.5	61.4	60.5	60.0	58.9
65°	58.9	58.0	56.4	54.9	54.4	54.4	52.8	52.3	51.9	50.8	49.8
67.5°	49.8	48.8	47.2	46.7	46.2	45.8	45.2	44.2	43.1	42.7	41.7
70°	41.7	40.6	39.7	39.1	38.6	38.1	37.0	36.6	35.6	35.0	34.5
72.5°	33.6	33.0	32.0	31.5	31.0	30.5	30.0	29.5	28.4	28.0	27.5
75°	26.9	26.4	25.5	24.9	24.4	24.4	23.9	22.8	22.3	22.3	21.9
77.5°	20.3	19.8	19.4	18.8	18.3	18.3	17.8	17.3	16.7	16.7	16.3
80°	14.7	14.2	13.7	13.7	13.7	13.3	12.7	12.7	12.2	12.2	11.7
82.5°	9.7	9.7	9.2	9.2	9.2	8.6	8.6	8.1	8.1	8.1	8.1
85°	5.6	5.6	5.6	5.1	5.1	5.1	5.1	5.1	5.1	4.5	5.1
87.5°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.0	2.0	2.0
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°	374.5	374.5	374.5	374.5	374.5	374.5	374.5	374.5	374.5	374.5	374.5
2.5°	372.5	371.9	370.9	370.9	369.9	369.9	369.4	368.9	368.4	367.8	367.3
5°	368.9	366.9	365.8	365.3	364.4	363.8	362.3	361.2	360.8	359.7	358.7
7.5°	362.3	360.3	358.3	357.7	357.2	355.2	353.6	352.2	351.1	350.1	349.1
10°	354.7	352.6	350.1	349.1	348.1	345.5	343.4	341.9	339.9	337.8	337.3
12.5°	345.5	342.5	339.4	338.4	336.9	334.4	332.3	329.7	328.3	325.6	325.2
15°	334.8	331.3	328.7	326.2	325.2	322.7	319.1	317.0	314.0	313.0	310.5
17.5°	322.2	318.6	315.0	314.0	312.5	308.9	305.3	302.8	299.8	298.3	296.7
20°	308.9	304.4	300.8	299.8	297.8	294.7	291.1	288.6	286.1	283.0	281.5
22.5°	293.7	288.6	285.6	283.0	282.5	278.9	274.8	272.8	270.8	268.3	266.2
25°	276.9	272.3	268.8	266.7	265.8	262.7	259.7	257.0	254.1	252.5	250.0
27.5°	259.7	256.6	252.0	250.0	248.4	245.9	242.3	240.8	237.8	235.8	234.2
30°	242.8	238.3	235.8	233.3	231.7	229.2	226.1	224.5	222.0	220.0	218.4
32.5°	224.5	221.6	218.0	217.0	215.0	212.4	210.3	207.8	205.8	203.7	203.3
35°	207.8	203.7	200.2	199.2	197.7	195.1	194.1	192.5	190.0	189.5	187.5
37.5°	189.5	187.5	183.4	181.9	181.4	179.4	177.3	176.3	174.8	173.3	172.8
40°	172.2	169.7	167.7	166.1	165.1	163.6	161.6	161.1	160.0	158.0	157.5
42.5°	155.9	153.4	151.4	150.9	149.4	147.8	146.9	145.3	144.8	144.4	143.3
45°	140.3	138.7	136.7	136.1	135.6	133.6	132.6	131.6	130.6	130.0	129.1
47.5°	126.0	124.5	123.0	122.5	121.4	120.9	119.4	118.9	117.3	116.9	116.4
50°	112.3	111.3	110.3	109.7	108.7	108.3	107.2	106.2	105.2	104.7	104.2
52.5°	100.1	99.1	98.1	97.5	97.0	96.1	95.0	94.0	93.4	93.0	92.5
55°	88.4	87.4	86.9	86.4	85.9	85.3	83.9	83.3	82.8	82.3	81.3
57.5°	77.8	76.7	75.8	75.8	75.2	74.7	73.7	72.7	72.7	71.7	70.6
60°	68.1	67.0	66.1	65.5	65.0	64.1	63.5	63.0	62.5	62.0	60.9
62.5°	58.0	57.4	56.4	56.4	55.3	54.9	54.4	53.9	53.3	52.3	51.9
65°	49.2	48.8	47.8	47.2	47.2	46.7	45.8	45.2	44.7	44.7	44.2
67.5°	41.1	40.6	39.7	39.1	39.1	38.6	38.1	38.1	37.6	37.0	37.6
70°	34.1	33.0	33.0	32.5	32.5	32.0	31.5	31.5	31.5	32.0	32.0
72.5°	26.9	26.4	25.9	25.9	25.9	25.9	25.5	25.5	25.9	26.4	26.4
75°	21.4	20.8	20.8	20.8	20.3	20.3	20.8	20.8	21.4	21.4	21.4
77.5°	15.8	15.8	15.8	15.8	15.8	15.8	16.3	16.3	16.7	16.7	16.7
80°	11.7	11.7	11.7	11.7	11.7	12.2	12.2	12.2	12.2	12.2	12.7
82.5°	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.6	8.6	8.6	8.6
85°	4.5	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
87.5°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
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):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	374.5	374.5	374.5	374.5	374.5	374.5	374.5	374.5
2.5°	366.9	366.9	366.9	367.3	366.4	366.4	366.4	366.4
5°	358.3	357.7	357.2	357.7	356.7	356.7	356.2	356.2
7.5°	347.5	347.0	346.6	346.6	345.5	345.5	345.0	344.5
10°	335.8	334.8	335.3	334.4	333.8	333.3	332.8	332.3
12.5°	323.1	322.2	321.6	320.6	319.5	319.1	319.5	318.6
15°	309.4	308.0	307.4	306.4	305.3	304.8	304.8	304.4
17.5°	294.2	293.1	292.7	291.7	291.1	290.1	289.7	289.1
20°	280.0	277.4	278.0	276.9	276.4	274.4	274.4	274.8
22.5°	264.2	262.7	261.7	260.6	260.2	259.1	259.1	258.6
25°	248.4	246.9	246.4	245.5	244.9	243.9	243.4	243.4
27.5°	233.3	231.2	231.2	230.2	229.2	228.6	228.1	227.6
30°	217.0	215.5	215.0	215.0	214.4	214.4	212.9	213.4
32.5°	201.7	200.6	200.2	199.2	199.2	198.6	198.6	197.2
35°	186.4	185.0	185.5	184.4	183.9	183.4	183.9	183.4
37.5°	171.7	170.8	170.8	169.7	169.7	169.2	168.7	169.7
40°	157.0	156.5	155.9	155.5	155.9	155.5	154.5	155.0
42.5°	142.3	142.3	141.7	141.7	141.2	141.2	141.2	141.2
45°	129.1	128.6	128.6	128.0	128.0	128.0	128.0	127.5
47.5°	115.8	115.3	115.3	115.3	114.8	114.8	114.4	114.8
50°	103.1	103.1	102.7	102.7	103.1	102.7	102.2	102.2
52.5°	91.4	91.4	90.9	90.9	90.5	90.0	90.5	90.5
55°	80.8	80.3	79.8	79.8	79.2	78.8	78.8	79.2
57.5°	70.6	70.1	69.7	69.7	68.6	68.1	68.1	68.1
60°	60.9	60.0	60.0	59.4	59.4	58.9	58.9	58.9
62.5°	51.9	51.3	51.3	51.3	51.3	50.8	50.8	50.8
65°	44.2	44.2	44.2	44.7	44.7	45.2	45.2	45.2
67.5°	38.1	38.6	38.6	38.6	39.1	39.1	39.1	38.6
70°	32.5	32.5	32.5	33.0	33.0	33.0	33.0	33.0
72.5°	26.9	26.9	26.9	26.9	26.9	26.9	26.9	26.9
75°	21.4	21.9	21.9	21.9	21.4	21.9	21.9	21.4
77.5°	16.7	16.7	16.7	16.7	16.7	16.7	16.7	16.7
80°	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7
82.5°	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6
85°	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
87.5°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
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)