

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: P583641

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

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P583641
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: HC807D010-HM80520927-81WWBB
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: 633.2 lumens
Efficiency: N/A
Efficacy: 79.1 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

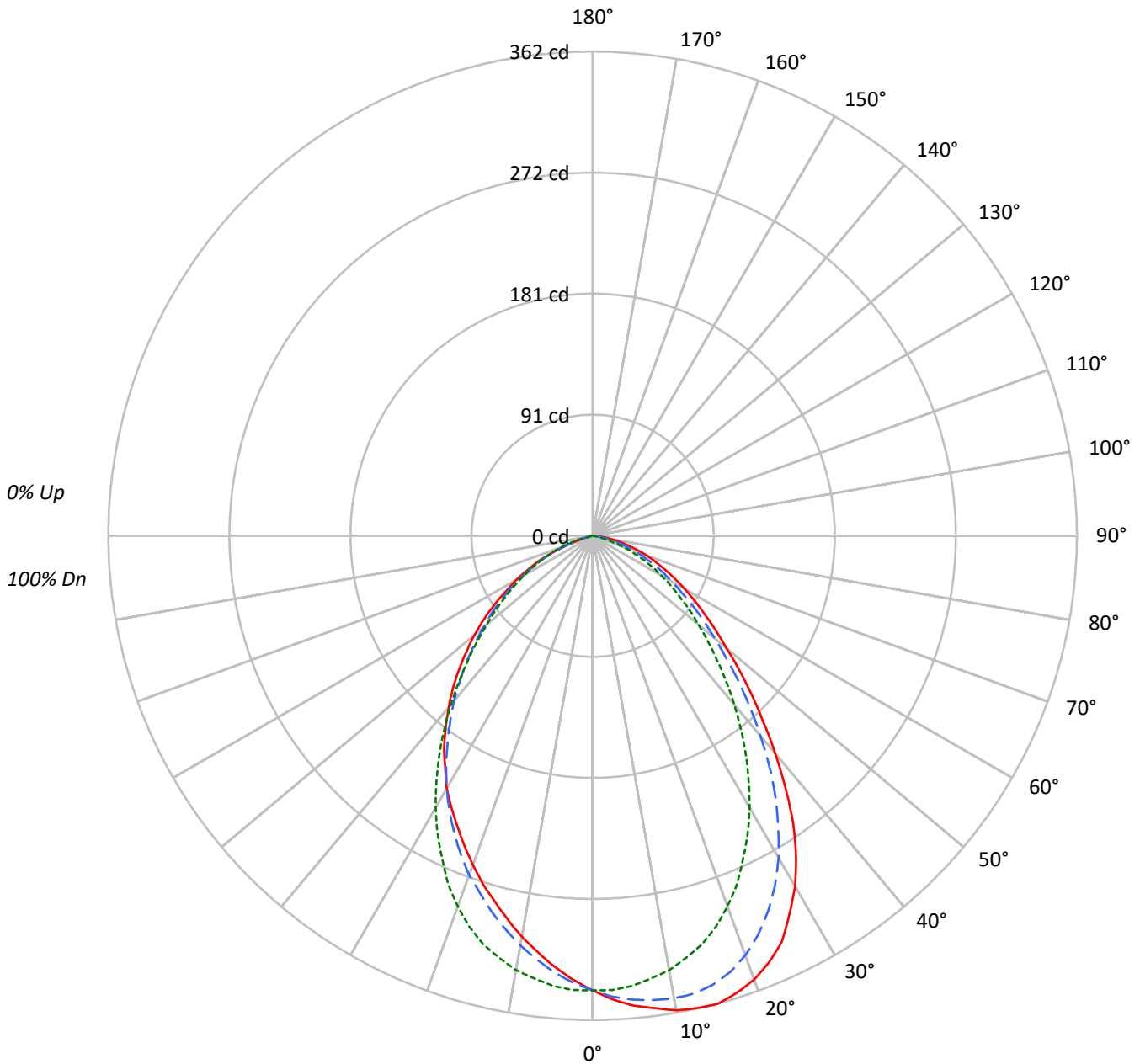
Input Watts (W): 8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	111	107	104	101	108	105	102	99	101	98	96	97	95	93	93	92	90	88			88
2	103	96	90	86	100	94	89	85	91	86	83	88	84	81	85	82	79	77			77
3	95	86	79	74	93	85	78	73	82	76	72	79	74	71	77	73	69	67			67
4	88	78	70	64	86	76	69	64	74	68	63	72	66	62	70	65	61	59			59
5	82	70	63	57	80	69	62	56	67	61	56	65	60	55	64	59	55	53			53
6	76	64	56	51	74	63	56	50	62	55	50	60	54	50	58	53	49	47			47
7	71	59	51	45	69	58	51	45	57	50	45	55	49	45	54	49	44	43			43
8	66	54	46	41	65	53	46	41	52	46	41	51	45	41	50	44	40	39			39
9	62	50	43	37	61	50	42	37	48	42	37	47	41	37	46	41	37	35			35
10	59	47	39	34	57	46	39	34	45	39	34	44	38	34	43	38	34	32			32

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	10481	10481	10481
5°	10914	10456	10017
10°	11282	10324	9531
15°	11566	10091	9035
20°	11587	9671	8588
25°	11391	9057	8145
30°	10782	8357	7762
35°	9829	7518	7288
40°	8550	6630	6730
45°	7331	5739	6158
50°	6265	4946	5531
55°	5494	4258	4806
60°	4884	3633	4040
65°	4334	2962	3225
70°	3850	2200	1830
75°	3205	1156	536
80°	2522	355	89
85°	1804	177	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	32.0	5.1
10°-20°	89.8	14.2
20°-30°	127.1	20.1
30°-40°	132.9	21.0
40°-50°	110.9	17.5
50°-60°	78.6	12.4
60°-70°	45.3	7.2
70°-80°	14.6	2.3
80°-90°	2.0	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°	248.9	39.3
0°-40°	381.8	60.3
0°-60°	571.3	90.2
0°-90°	633.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	633.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	340	340	340	340	340	
5°	353	348	338	328	324	34
15°	362	348	316	291	283	102
25°	335	310	266	245	239	153
35°	261	238	200	189	194	162
45°	168	154	132	133	141	130
55°	102	91	79	83	89	92
65°	59	50	41	41	44	59
75°	27	20	10	4	4	29
85°	5	2	0	0	0	6
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°	339.9	339.9	339.9	339.9	339.9	339.9	339.9	339.9	339.9	339.9	339.9
2.5°	347.0	346.6	346.1	346.6	346.1	346.6	346.1	346.1	345.5	345.0	345.0
5°	352.6	352.2	352.2	352.2	351.6	351.1	351.1	350.6	349.5	349.1	348.1
7.5°	356.2	356.7	356.7	356.7	355.6	355.6	354.7	353.6	352.6	351.6	350.1
10°	360.3	360.3	359.7	359.2	358.3	357.7	357.2	356.2	354.7	352.6	351.1
12.5°	361.7	361.7	361.2	360.3	359.7	359.2	358.7	357.2	355.2	352.6	350.6
15°	362.3	361.2	360.8	360.3	359.2	357.7	357.7	355.6	353.1	350.1	347.5
17.5°	358.3	358.7	357.7	356.7	355.2	354.2	352.6	351.1	348.1	344.5	342.0
20°	353.1	352.6	352.2	350.6	348.6	348.1	346.6	344.0	341.4	337.3	333.8
22.5°	345.0	344.5	343.4	342.5	340.5	339.4	337.8	334.8	331.3	327.2	323.1
25°	334.8	333.8	332.3	330.3	328.7	327.7	325.6	322.7	318.6	314.0	310.0
27.5°	318.6	320.1	319.1	316.1	314.5	312.5	312.0	308.0	304.4	299.8	295.2
30°	302.8	302.8	301.3	299.8	297.2	295.8	293.7	290.6	287.0	281.5	278.0
32.5°	283.0	282.5	280.5	280.0	278.0	274.8	274.4	270.3	266.7	262.7	258.1
35°	261.1	260.2	258.1	256.6	255.6	254.1	252.5	248.9	245.5	241.4	238.3
37.5°	236.3	236.3	235.8	233.3	232.2	231.2	229.7	226.1	224.1	220.0	217.0
40°	212.4	211.9	210.3	209.8	208.9	207.3	206.3	204.2	201.2	198.1	195.1
42.5°	189.0	189.5	187.5	188.0	185.9	185.0	184.4	181.4	179.8	176.9	174.2
45°	168.1	167.7	166.7	166.1	165.1	164.1	163.1	161.6	159.1	155.9	154.5
47.5°	148.9	147.3	147.3	146.9	146.4	144.4	143.8	142.3	140.8	137.7	135.6
50°	130.6	130.6	130.6	130.0	128.6	128.0	127.0	125.5	123.9	121.9	118.9
52.5°	115.8	115.8	115.8	115.3	113.3	112.8	112.3	110.3	108.3	106.7	104.7
55°	102.2	102.7	102.2	101.1	99.5	99.5	98.1	97.0	95.0	93.4	91.4
57.5°	90.5	90.5	89.4	88.9	88.0	87.4	86.4	85.3	82.8	81.3	78.8
60°	79.2	78.8	78.8	77.8	76.7	75.8	75.2	73.7	72.7	70.1	68.1
62.5°	69.1	69.1	68.1	68.1	66.1	66.1	65.5	64.1	62.5	60.0	58.9
65°	59.4	59.4	58.9	58.4	56.9	56.4	55.9	54.4	52.8	51.3	49.8
67.5°	50.8	50.8	49.8	49.2	48.3	47.8	46.7	45.8	44.2	42.7	41.1
70°	42.7	42.2	41.7	41.1	40.2	39.7	38.6	37.6	36.1	35.0	33.6
72.5°	34.5	34.5	34.1	33.0	32.5	32.0	31.5	30.5	28.9	27.5	26.4
75°	26.9	26.9	26.9	25.9	24.9	24.4	24.4	23.4	22.3	20.8	19.8
77.5°	20.8	20.3	19.8	19.8	18.8	18.3	17.8	17.3	15.8	15.3	14.2
80°	14.2	14.7	14.2	13.7	13.3	12.7	12.7	11.7	11.2	10.2	9.2
82.5°	9.7	9.2	9.2	8.6	8.6	8.1	8.1	7.2	6.6	6.1	5.6
85°	5.1	5.1	4.5	4.5	4.5	4.1	4.1	3.6	3.6	3.1	2.5
87.5°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.1	1.1	1.1
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°	339.9	339.9	339.9	339.9	339.9	339.9	339.9	339.9	339.9	339.9	339.9
2.5°	344.5	343.4	343.0	343.0	342.5	342.0	341.4	340.9	339.9	339.9	338.9
5°	347.0	346.1	345.5	344.0	343.0	343.0	340.9	340.5	338.9	337.8	336.9
7.5°	349.1	347.0	345.5	344.0	343.0	342.0	339.9	337.8	335.8	333.8	332.8
10°	349.1	347.0	344.5	342.0	340.9	339.9	337.3	334.4	331.7	329.7	327.2
12.5°	348.1	345.0	342.0	339.9	337.8	336.4	333.3	330.3	327.2	323.1	321.1
15°	345.0	340.9	337.8	334.4	332.8	330.3	327.7	323.1	319.5	316.1	313.4
17.5°	338.9	333.8	330.3	326.7	324.2	322.7	318.6	314.5	310.5	306.4	303.3
20°	329.7	325.2	321.1	316.6	314.5	312.5	307.4	303.3	299.2	294.7	291.7
22.5°	318.6	314.0	308.4	304.8	301.9	299.2	294.7	290.1	286.1	282.0	278.0
25°	304.8	300.3	295.2	289.7	287.6	285.0	280.0	275.4	270.8	266.2	262.7
27.5°	290.1	284.1	280.0	273.9	271.9	269.2	263.7	258.6	254.5	251.0	246.9
30°	272.3	267.8	262.2	256.6	254.5	252.0	247.5	242.8	238.8	234.7	230.6
32.5°	253.0	248.4	242.8	238.8	235.8	233.7	229.2	225.1	221.1	217.0	213.4
35°	232.7	227.6	223.6	219.5	217.0	214.4	209.8	206.3	203.3	199.7	196.1
37.5°	211.9	208.3	204.2	199.7	197.2	195.1	191.6	187.5	185.0	181.9	179.4
40°	191.6	187.5	183.9	179.8	177.8	176.3	172.8	169.7	167.2	164.7	163.1
42.5°	170.8	167.2	163.6	161.1	159.5	158.0	155.5	151.9	150.5	147.8	146.4
45°	151.4	148.4	145.8	142.3	141.2	140.3	137.2	134.7	133.1	131.6	130.6
47.5°	133.1	131.1	128.0	126.0	124.5	123.4	121.4	119.4	117.8	116.9	115.8
50°	117.3	114.8	112.8	110.8	109.7	108.3	106.2	105.2	104.2	103.1	103.1
52.5°	102.7	100.1	98.1	96.6	95.5	94.5	93.0	92.5	91.4	91.4	90.9
55°	88.9	87.4	85.3	83.3	82.8	82.3	81.3	80.3	79.8	79.2	79.8
57.5°	77.2	75.8	73.7	72.2	71.7	71.1	70.6	69.7	69.1	69.1	69.1
60°	66.6	65.0	63.5	62.0	62.0	60.9	60.5	60.0	59.4	58.9	58.9
62.5°	56.9	55.3	53.9	52.8	52.3	51.9	50.8	50.3	49.8	49.8	49.2
65°	48.3	46.2	45.8	44.2	43.7	43.1	42.7	41.7	41.1	40.6	40.2
67.5°	39.7	38.6	37.0	36.1	35.6	35.0	34.5	33.6	33.0	32.5	31.5
70°	32.0	31.0	30.0	28.9	28.4	28.0	26.9	25.9	25.5	24.4	22.8
72.5°	24.9	23.9	22.8	21.9	21.4	20.8	19.8	18.8	17.8	16.7	15.8
75°	18.8	17.8	16.3	15.3	14.7	14.7	13.3	12.2	11.2	9.7	8.6
77.5°	13.3	11.7	11.2	10.2	9.7	8.6	7.6	6.6	5.6	5.1	4.1
80°	8.6	7.6	6.6	6.1	5.6	5.1	4.5	3.6	2.5	2.0	1.6
82.5°	5.1	4.5	4.1	3.6	3.1	2.5	2.0	2.0	1.6	1.1	0.5
85°	2.5	2.0	1.6	1.6	1.1	1.1	1.1	0.5	0.5	0.5	0.5
87.5°	1.1	0.5	0.5	0.5	0.5	0.5	0.5	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



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CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	339.9	339.9	339.9	339.9	339.9	339.9	339.9	339.9	339.9	339.9	339.9
2.5°	338.4	337.8	337.3	336.9	336.9	335.8	335.8	335.3	334.4	333.8	333.8
5°	335.3	333.8	332.8	332.3	331.7	330.3	329.7	328.7	327.7	326.7	326.2
7.5°	330.8	328.3	327.2	326.7	325.2	323.6	322.7	321.1	319.5	318.1	317.5
10°	325.2	322.7	320.1	319.1	317.5	316.6	314.5	312.5	310.9	309.4	308.0
12.5°	318.1	315.0	312.5	311.4	310.0	308.0	304.8	303.9	301.3	300.3	298.3
15°	310.0	306.4	303.9	302.3	300.8	297.8	295.8	293.7	291.1	290.1	288.1
17.5°	299.8	295.8	293.1	291.7	290.6	288.1	285.0	282.5	280.0	278.9	277.5
20°	287.6	285.0	281.5	280.0	278.9	275.9	272.8	271.9	269.8	267.8	266.2
22.5°	273.9	271.3	267.8	266.2	265.8	263.1	260.6	259.1	257.6	256.1	254.5
25°	259.7	256.6	253.6	252.5	251.5	249.5	247.5	246.4	244.9	243.9	242.8
27.5°	244.4	241.4	238.8	237.3	236.3	234.7	233.7	232.7	231.7	230.6	230.2
30°	228.1	225.1	223.1	222.0	221.1	220.5	219.0	218.4	218.0	217.0	217.5
32.5°	211.9	209.4	207.3	205.8	205.8	204.7	204.2	204.2	203.7	203.7	203.7
35°	194.1	192.5	191.1	190.5	190.0	189.5	189.0	189.5	189.0	189.5	190.0
37.5°	177.8	176.3	175.3	174.8	174.2	174.8	174.2	174.2	174.8	175.8	176.3
40°	161.1	160.0	159.1	159.5	159.1	159.1	159.1	160.6	161.1	161.6	162.0
42.5°	145.3	144.4	143.8	143.8	144.4	143.8	144.8	145.3	146.4	147.8	148.9
45°	130.0	129.5	129.5	130.0	129.5	130.6	130.6	131.6	133.1	134.1	135.2
47.5°	115.8	115.8	115.8	116.4	116.4	116.9	117.8	118.4	119.4	120.5	121.4
50°	102.7	103.1	103.6	103.6	103.6	104.7	105.6	106.2	106.7	107.2	108.7
52.5°	90.9	91.4	91.4	92.0	92.5	93.0	93.4	94.5	95.0	96.1	96.6
55°	79.8	79.8	80.8	81.3	81.3	81.3	82.3	82.3	83.3	83.9	84.8
57.5°	69.1	69.7	69.7	70.1	70.1	70.6	71.1	71.7	72.2	72.7	73.1
60°	58.9	58.9	58.9	59.4	60.0	60.5	60.0	60.9	60.9	62.0	62.5
62.5°	49.2	49.8	49.8	49.8	49.8	49.8	49.8	50.3	50.8	51.3	51.9
65°	40.2	40.2	40.2	39.7	40.2	39.7	40.2	40.6	40.6	41.1	41.7
67.5°	31.0	31.0	30.0	30.0	30.5	30.5	30.5	30.5	30.0	31.0	31.0
70°	22.3	21.9	21.4	20.8	20.8	20.3	20.3	19.8	19.8	19.8	19.8
72.5°	14.7	13.7	12.7	12.2	11.7	11.7	10.6	10.2	10.6	10.6	10.6
75°	7.6	6.6	6.1	5.6	5.1	5.1	4.5	4.5	4.5	4.5	4.5
77.5°	3.1	2.5	2.0	2.0	1.6	1.6	1.6	1.6	1.6	1.6	1.6
80°	1.1	1.1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
82.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
85°	0.5	0.0	0.0	0.5	0.0	0.5	0.5	0.5	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



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CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	339.9	339.9	339.9	339.9	339.9	339.9	339.9	339.9
2.5°	333.3	333.3	332.8	333.3	332.3	332.8	332.3	332.3
5°	325.6	324.7	324.7	324.7	324.2	324.2	323.6	323.6
7.5°	316.6	316.1	315.5	315.0	314.5	314.0	314.0	314.0
10°	307.4	306.4	306.4	305.9	304.8	304.4	304.4	304.4
12.5°	296.7	296.2	295.8	295.8	293.7	294.2	293.7	293.7
15°	286.6	286.1	286.1	284.5	283.6	283.6	283.6	283.0
17.5°	275.9	275.4	274.8	273.9	272.8	272.8	272.3	272.8
20°	264.7	264.2	263.1	263.1	262.7	262.2	261.1	261.7
22.5°	253.6	252.5	252.0	252.0	251.5	251.5	250.5	250.5
25°	241.9	241.4	240.8	241.4	240.3	240.3	239.4	239.4
27.5°	229.7	229.2	229.2	229.2	228.6	229.2	228.6	228.6
30°	217.5	217.5	217.0	217.0	217.5	217.0	217.5	218.0
32.5°	204.2	204.2	204.7	204.7	205.3	205.3	205.3	205.3
35°	190.5	191.6	191.6	192.0	192.5	193.1	193.1	193.6
37.5°	177.8	178.3	178.9	179.4	180.3	180.3	180.3	180.3
40°	164.1	164.7	165.6	165.1	167.2	167.7	167.2	167.2
42.5°	149.9	150.9	151.4	152.5	153.0	153.9	154.5	154.5
45°	136.7	137.2	138.3	139.2	139.7	141.2	141.2	141.2
47.5°	123.0	123.9	124.5	125.5	126.0	127.5	128.0	127.5
50°	109.7	110.8	111.7	111.7	113.3	113.8	114.8	115.3
52.5°	97.0	97.5	98.6	99.1	100.1	101.1	101.6	102.2
55°	84.8	85.3	86.4	86.4	88.0	88.4	89.4	89.4
57.5°	73.7	74.2	75.2	74.7	75.8	76.7	76.7	76.2
60°	63.0	63.0	63.0	64.1	64.5	65.0	65.5	65.5
62.5°	51.9	52.8	53.3	53.3	53.9	54.4	54.4	53.9
65°	41.7	42.7	43.1	43.1	43.7	43.7	43.7	44.2
67.5°	31.5	31.5	31.5	32.0	31.5	31.5	31.5	31.5
70°	19.8	19.8	19.8	19.8	19.4	19.8	19.8	20.3
72.5°	10.6	10.6	10.6	10.6	10.6	10.6	10.6	10.6
75°	4.5	4.5	4.5	5.1	4.5	4.5	4.5	4.5
77.5°	2.0	1.6	2.0	2.0	1.6	1.6	1.6	1.6
80°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
82.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
85°	0.0	0.5	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



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













(END OF REPORT)