

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: P583624

Luminaire Tested: **HC807D010-HM80520840-81WWBB**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P583624
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-HM80520840-81WWBB
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, WHITE BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 866.9 lumens
Efficiency: N/A
Efficacy: 108.4 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

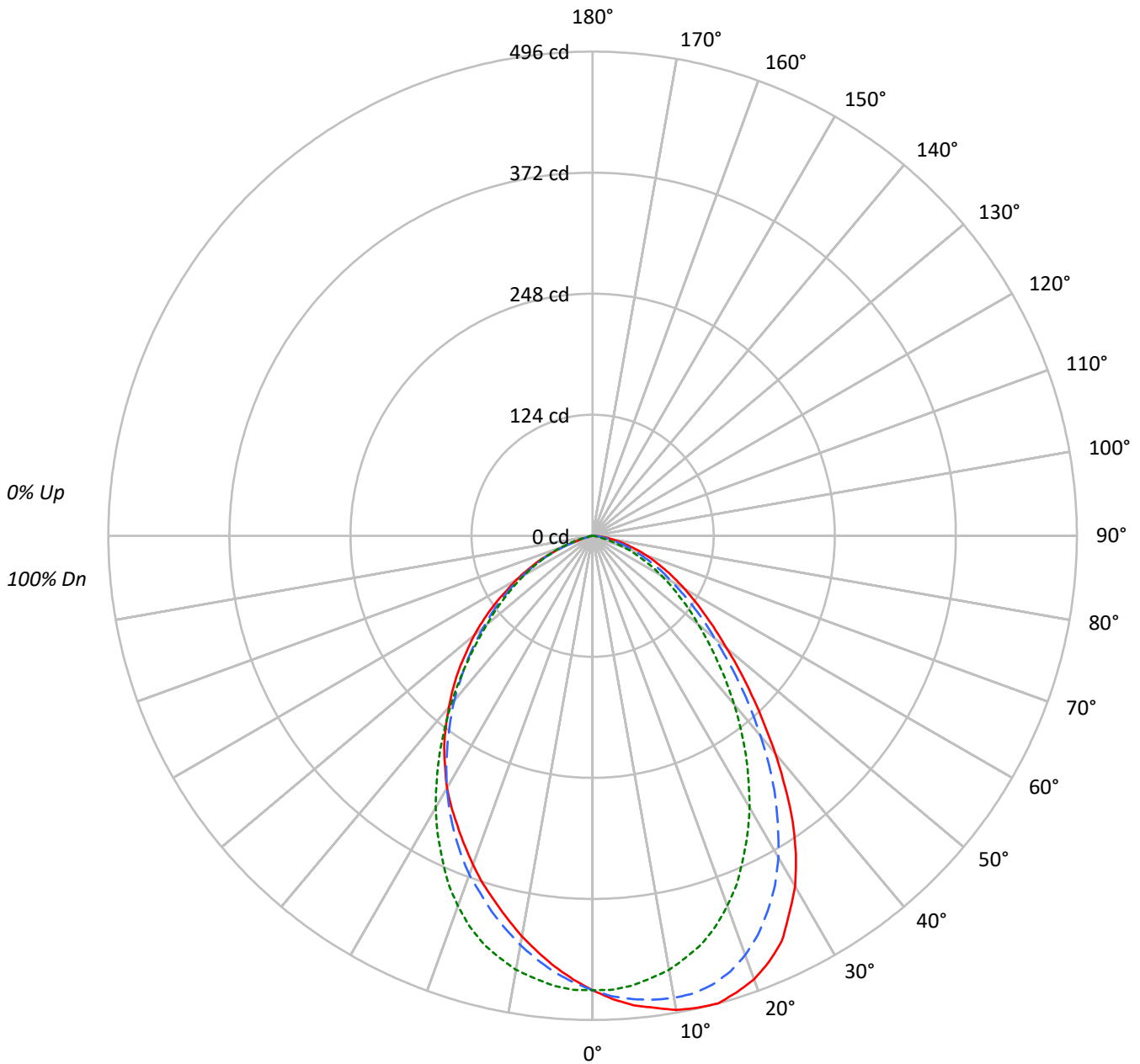
Input Watts (W): 8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20				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°	14354	14354	14354
5°	14945	14319	13716
10°	15443	14137	13048
15°	15834	13814	12371
20°	15866	13238	11758
25°	15597	12402	11150
30°	14766	11448	10625
35°	13458	10292	9979
40°	11702	9073	9210
45°	10043	7858	8434
50°	8578	6774	7575
55°	7516	5833	6586
60°	6691	4977	5532
65°	5939	4064	4414
70°	5265	3002	2506
75°	4396	1585	739
80°	3463	479	124
85°	2441	248	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	43.9	5.1
10°-20°	122.9	14.2
20°-30°	174.0	20.1
30°-40°	182.0	21.0
40°-50°	151.8	17.5
50°-60°	107.7	12.4
60°-70°	62.0	7.2
70°-80°	19.9	2.3
80°-90°	2.7	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°	340.7	39.3
0°-40°	522.7	60.3
0°-60°	782.2	90.2
0°-90°	866.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	866.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	466	466	466	466	466	
5°	483	477	463	449	443	46
15°	496	476	433	399	388	139
25°	458	424	364	335	328	209
35°	358	326	273	259	265	222
45°	230	212	180	182	193	178
55°	140	125	108	114	122	126
65°	81	68	56	56	60	81
75°	37	27	13	6	6	40
85°	7	4	1	0	0	9
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°	465.5	465.5	465.5	465.5	465.5	465.5	465.5	465.5	465.5	465.5	465.5
2.5°	475.1	474.4	473.7	474.4	473.7	474.4	473.7	473.7	473.1	472.4	472.4
5°	482.8	482.1	482.1	482.1	481.3	480.7	480.7	480.0	478.6	477.9	476.6
7.5°	487.7	488.4	488.4	488.4	487.0	487.0	485.5	484.2	482.8	481.3	479.3
10°	493.2	493.2	492.6	491.9	490.4	489.7	489.0	487.7	485.5	482.8	480.7
12.5°	495.3	495.3	494.6	493.2	492.6	491.9	491.1	489.0	486.2	482.8	480.0
15°	496.0	494.6	493.9	493.2	491.9	489.7	489.7	487.0	483.5	479.3	475.8
17.5°	490.4	491.1	489.7	488.4	486.2	484.9	482.8	480.7	476.6	471.7	468.2
20°	483.5	482.8	482.1	480.0	477.3	476.6	474.4	470.9	467.5	461.9	457.1
22.5°	472.4	471.7	470.2	468.9	466.0	464.7	462.6	458.4	453.6	448.0	442.4
25°	458.4	457.1	454.9	452.2	450.0	448.7	446.0	441.8	436.2	430.0	424.3
27.5°	436.2	438.3	436.9	432.7	430.6	427.8	427.1	421.6	416.7	410.5	404.1
30°	414.7	414.7	412.5	410.5	407.0	404.9	402.1	397.9	393.0	385.4	380.5
32.5°	387.5	386.8	384.0	383.4	380.5	376.3	375.7	370.1	365.2	359.7	353.4
35°	357.5	356.2	353.4	351.3	349.9	347.9	345.7	340.9	336.0	330.4	326.2
37.5°	323.5	323.5	322.8	319.3	317.9	316.6	314.4	309.6	306.8	301.3	297.1
40°	290.7	290.1	288.0	287.3	286.0	283.8	282.5	279.6	275.4	271.3	267.1
42.5°	258.8	259.4	256.7	257.4	254.7	253.2	252.5	248.3	246.3	242.1	238.6
45°	230.3	229.6	228.1	227.5	226.1	224.7	223.3	221.2	217.7	213.5	211.5
47.5°	203.9	201.7	201.7	201.0	200.4	197.5	196.8	194.8	192.8	188.6	185.7
50°	178.8	178.8	178.8	178.1	176.0	175.3	173.9	171.8	169.7	166.9	162.8
52.5°	158.6	158.6	158.6	157.9	155.1	154.4	153.8	150.9	148.2	146.1	143.3
55°	139.8	140.5	139.8	138.4	136.3	136.3	134.3	132.9	130.1	128.0	125.2
57.5°	123.8	123.8	122.5	121.8	120.3	119.6	118.3	116.9	113.4	111.3	107.8
60°	108.5	107.8	107.8	106.5	105.0	103.6	103.0	100.9	99.4	96.0	93.2
62.5°	94.6	94.6	93.2	93.2	90.5	90.5	89.7	87.7	85.6	82.1	80.7
65°	81.4	81.4	80.7	79.9	77.9	77.2	76.5	74.4	72.3	70.3	68.2
67.5°	69.5	69.5	68.2	67.5	66.1	65.4	64.1	62.6	60.5	58.4	56.4
70°	58.4	57.7	57.0	56.4	55.0	54.3	52.8	51.5	49.4	48.0	45.9
72.5°	47.3	47.3	46.6	45.2	44.6	43.9	43.1	41.7	39.7	37.5	36.2
75°	36.9	36.9	36.9	35.5	34.1	33.3	33.3	32.0	30.6	28.6	27.1
77.5°	28.6	27.8	27.1	27.1	25.7	25.1	24.4	23.7	21.5	20.9	19.5
80°	19.5	20.2	19.5	18.8	18.0	17.4	17.4	16.0	15.3	13.9	12.5
82.5°	13.3	12.5	12.5	11.8	11.8	11.1	11.1	9.8	9.1	8.4	7.6
85°	6.9	6.9	6.2	6.2	6.2	5.6	5.6	4.9	4.9	4.2	3.5
87.5°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.4	1.4	1.4
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°	465.5	465.5	465.5	465.5	465.5	465.5	465.5	465.5	465.5	465.5	465.5
2.5°	471.7	470.2	469.5	469.5	468.9	468.2	467.5	466.8	465.5	465.5	464.0
5°	475.1	473.7	473.1	470.9	469.5	469.5	466.8	466.0	464.0	462.6	461.3
7.5°	477.9	475.1	473.1	470.9	469.5	468.2	465.5	462.6	459.8	457.1	455.7
10°	477.9	475.1	471.7	468.2	466.8	465.5	461.9	457.8	454.2	451.5	448.0
12.5°	476.6	472.4	468.2	465.5	462.6	460.6	456.4	452.2	448.0	442.4	439.6
15°	472.4	466.8	462.6	457.8	455.7	452.2	448.7	442.4	437.6	432.7	429.2
17.5°	464.0	457.1	452.2	447.3	443.8	441.8	436.2	430.6	425.1	419.4	415.3
20°	451.5	445.3	439.6	433.4	430.6	427.8	420.9	415.3	409.8	403.4	399.4
22.5°	436.2	430.0	422.3	417.4	413.2	409.8	403.4	397.2	391.6	386.1	380.5
25°	417.4	411.1	404.1	396.5	393.8	390.3	383.4	377.0	370.8	364.5	359.7
27.5°	397.2	388.9	383.4	375.0	372.1	368.7	361.0	354.1	348.6	343.7	338.1
30°	372.8	366.6	359.0	351.3	348.6	345.0	338.8	332.6	327.0	321.5	315.8
32.5°	346.4	340.2	332.6	327.0	322.8	320.0	313.7	308.2	302.6	297.1	292.2
35°	318.6	311.7	306.0	300.5	297.1	293.6	287.3	282.5	278.3	273.4	268.5
37.5°	290.1	285.2	279.6	273.4	270.0	267.1	262.3	256.7	253.2	249.0	245.6
40°	262.3	256.7	251.8	246.3	243.5	241.4	236.5	232.3	228.8	225.4	223.3
42.5°	233.7	228.8	224.1	220.5	218.4	216.3	212.8	208.0	205.9	202.4	200.4
45°	207.3	203.2	199.7	194.8	193.4	192.0	187.9	184.4	182.2	180.2	178.8
47.5°	182.2	179.5	175.3	172.6	170.4	169.1	166.2	163.5	161.4	160.0	158.6
50°	160.7	157.3	154.4	151.6	150.2	148.2	145.4	144.0	142.6	141.2	141.2
52.5°	140.5	137.1	134.3	132.2	130.7	129.4	127.3	126.7	125.2	125.2	124.5
55°	121.8	119.6	116.9	114.1	113.4	112.7	111.3	109.9	109.2	108.5	109.2
57.5°	105.8	103.6	100.9	98.8	98.1	97.4	96.7	95.4	94.6	94.6	94.6
60°	91.2	89.0	87.0	84.8	84.8	83.5	82.8	82.1	81.4	80.7	80.7
62.5°	77.9	75.9	73.7	72.3	71.7	71.0	69.5	68.8	68.2	68.2	67.5
65°	66.1	63.3	62.6	60.5	59.9	59.2	58.4	57.0	56.4	55.7	55.0
67.5°	54.3	52.8	50.8	49.4	48.8	48.0	47.3	45.9	45.2	44.6	43.1
70°	43.9	42.4	41.0	39.7	39.0	38.2	36.9	35.5	34.8	33.3	31.3
72.5°	34.1	32.7	31.3	29.9	29.3	28.6	27.1	25.7	24.4	22.9	21.5
75°	25.7	24.4	22.2	20.9	20.2	20.2	18.0	16.7	15.3	13.3	11.8
77.5°	18.0	16.0	15.3	13.9	13.3	11.8	10.4	9.1	7.6	6.9	5.6
80°	11.8	10.4	9.1	8.4	7.6	6.9	6.2	4.9	3.5	2.7	2.0
82.5°	6.9	6.2	5.6	4.9	4.2	3.5	2.7	2.7	2.0	1.4	0.7
85°	3.5	2.7	2.0	2.0	1.4	1.4	1.4	0.7	0.7	0.7	0.7
87.5°	1.4	0.7	0.7	0.7	0.7	0.7	0.7	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°	465.5	465.5	465.5	465.5	465.5	465.5	465.5	465.5	465.5	465.5	465.5
2.5°	463.3	462.6	461.9	461.3	461.3	459.8	459.8	459.1	457.8	457.1	457.1
5°	459.1	457.1	455.7	454.9	454.2	452.2	451.5	450.0	448.7	447.3	446.6
7.5°	452.9	449.4	448.0	447.3	445.3	443.1	441.8	439.6	437.6	435.5	434.7
10°	445.3	441.8	438.3	436.9	434.7	433.4	430.6	427.8	425.8	423.6	421.6
12.5°	435.5	431.3	427.8	426.5	424.3	421.6	417.4	416.0	412.5	411.1	408.3
15°	424.3	419.4	416.0	413.9	411.8	407.6	404.9	402.1	398.7	397.2	394.5
17.5°	410.5	404.9	401.4	399.4	397.9	394.5	390.3	386.8	383.4	381.9	379.9
20°	393.8	390.3	385.4	383.4	381.9	377.7	373.6	372.1	369.4	366.6	364.5
22.5°	375.0	371.5	366.6	364.5	363.9	360.4	356.8	354.8	352.6	350.6	348.6
25°	355.5	351.3	347.1	345.7	344.4	341.5	338.8	337.3	335.3	333.9	332.6
27.5°	334.6	330.4	327.0	324.9	323.5	321.5	320.0	318.6	317.3	315.8	315.1
30°	312.4	308.2	305.4	304.0	302.6	302.0	299.8	299.1	298.4	297.1	297.8
32.5°	290.1	286.6	283.8	281.8	281.8	280.3	279.6	279.6	278.9	278.9	278.9
35°	265.8	263.6	261.6	260.9	260.2	259.4	258.8	259.4	258.8	259.4	260.2
37.5°	243.5	241.4	240.0	239.4	238.6	239.4	238.6	238.6	239.4	240.7	241.4
40°	220.5	219.2	217.7	218.4	217.7	217.7	217.7	219.9	220.5	221.2	221.9
42.5°	199.0	197.5	196.8	196.8	197.5	196.8	198.3	199.0	200.4	202.4	203.9
45°	178.1	177.3	177.3	178.1	177.3	178.8	178.8	180.2	182.2	183.7	185.1
47.5°	158.6	158.6	158.6	159.3	159.3	160.0	161.4	162.0	163.5	164.9	166.2
50°	140.5	141.2	142.0	142.0	142.0	143.3	144.7	145.4	146.1	146.7	148.9
52.5°	124.5	125.2	125.2	126.0	126.7	127.3	128.0	129.4	130.1	131.5	132.2
55°	109.2	109.2	110.7	111.3	111.3	111.3	112.7	112.7	114.1	114.8	116.2
57.5°	94.6	95.4	95.4	96.0	96.0	96.7	97.4	98.1	98.8	99.4	100.1
60°	80.7	80.7	80.7	81.4	82.1	82.8	82.1	83.5	83.5	84.8	85.6
62.5°	67.5	68.2	68.2	68.2	68.2	68.2	68.2	68.8	69.5	70.3	71.0
65°	55.0	55.0	55.0	54.3	55.0	54.3	55.0	55.7	55.7	56.4	57.0
67.5°	42.4	42.4	41.0	41.0	41.7	41.7	41.7	41.7	41.0	42.4	42.4
70°	30.6	29.9	29.3	28.6	28.6	27.8	27.8	27.1	27.1	27.1	27.1
72.5°	20.2	18.8	17.4	16.7	16.0	16.0	14.6	13.9	14.6	14.6	14.6
75°	10.4	9.1	8.4	7.6	6.9	6.9	6.2	6.2	6.2	6.2	6.2
77.5°	4.2	3.5	2.7	2.7	2.0	2.0	2.0	2.0	2.0	2.0	2.0
80°	1.4	1.4	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
82.5°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
85°	0.7	0.0	0.0	0.7	0.0	0.7	0.7	0.7	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: P583624

CATALOG NUMBER: HC807D010-HM80520840-81WWBB

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	465.5	465.5	465.5	465.5	465.5	465.5	465.5	465.5
2.5°	456.4	456.4	455.7	456.4	454.9	455.7	454.9	454.9
5°	446.0	444.5	444.5	444.5	443.8	443.8	443.1	443.1
7.5°	433.4	432.7	432.0	431.3	430.6	430.0	430.0	430.0
10°	420.9	419.4	419.4	418.8	417.4	416.7	416.7	416.7
12.5°	406.3	405.6	404.9	404.9	402.1	402.8	402.1	402.1
15°	392.3	391.6	391.6	389.6	388.1	388.1	388.1	387.5
17.5°	377.7	377.0	376.3	375.0	373.6	373.6	372.8	373.6
20°	362.4	361.7	360.4	360.4	359.7	359.0	357.5	358.3
22.5°	347.1	345.7	345.0	345.0	344.4	344.4	343.0	343.0
25°	331.1	330.4	329.7	330.4	329.1	329.1	327.7	327.7
27.5°	314.4	313.7	313.7	313.7	313.1	313.7	313.1	313.1
30°	297.8	297.8	297.1	297.1	297.8	297.1	297.8	298.4
32.5°	279.6	279.6	280.3	280.3	281.1	281.1	281.1	281.1
35°	260.9	262.3	262.3	263.0	263.6	264.3	264.3	265.1
37.5°	243.5	244.1	244.9	245.6	247.0	247.0	247.0	247.0
40°	224.7	225.4	226.8	226.1	228.8	229.6	228.8	228.8
42.5°	205.2	206.6	207.3	208.6	209.4	210.8	211.5	211.5
45°	187.1	187.9	189.2	190.6	191.3	193.4	193.4	193.4
47.5°	168.4	169.7	170.4	171.8	172.6	174.6	175.3	174.6
50°	150.2	151.6	153.1	153.1	155.1	155.8	157.3	157.9
52.5°	132.9	133.6	134.9	135.6	137.1	138.4	139.1	139.8
55°	116.2	116.9	118.3	118.3	120.3	121.1	122.5	122.5
57.5°	100.9	101.6	103.0	102.3	103.6	105.0	105.0	104.3
60°	86.3	86.3	86.3	87.7	88.3	89.0	89.7	89.7
62.5°	71.0	72.3	73.0	73.0	73.7	74.4	74.4	73.7
65°	57.0	58.4	59.2	59.2	59.9	59.9	59.9	60.5
67.5°	43.1	43.1	43.1	43.9	43.1	43.1	43.1	43.1
70°	27.1	27.1	27.1	27.1	26.4	27.1	27.1	27.8
72.5°	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6
75°	6.2	6.2	6.2	6.9	6.2	6.2	6.2	6.2
77.5°	2.7	2.0	2.7	2.7	2.0	2.0	2.0	2.0
80°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
82.5°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
85°	0.0	0.7	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)