

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: P583913

Luminaire Tested: **HC815D010-HM80520927-81WWBB**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P583913
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: HC815D010-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: 1081.5 lumens
Efficiency: N/A
Efficacy: 77.2 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

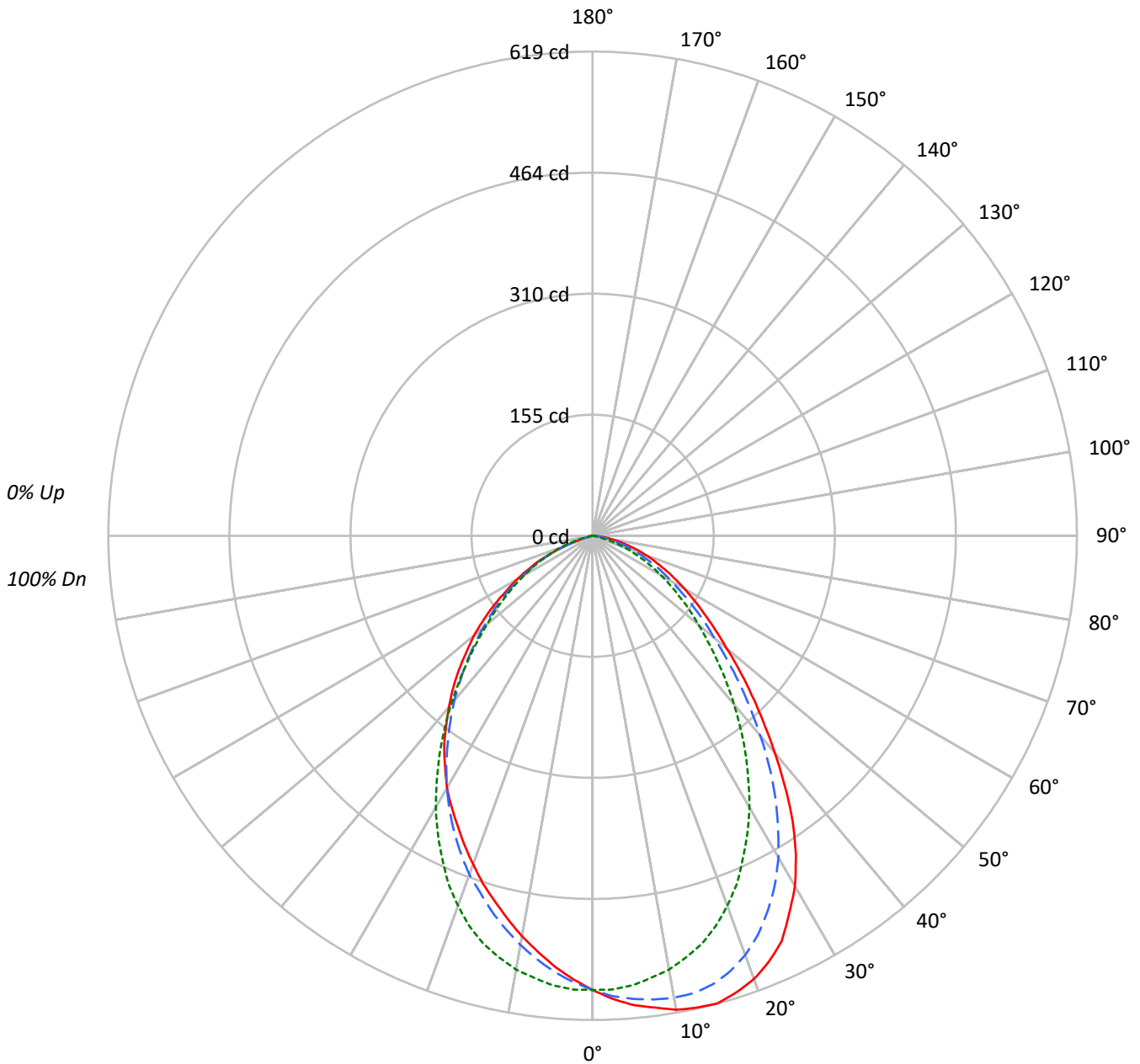
Input Watts (W): 14
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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			
1	111	107	104	101	108	105	102	99	101	98	96	97	95	93	93	92	90	88			
2	103	96	90	86	100	94	89	85	91	86	83	88	84	81	85	82	79	77			
3	95	86	79	74	93	85	78	73	82	76	72	79	74	71	77	73	69	67			
4	88	78	70	64	86	76	69	64	74	68	63	72	66	62	70	65	61	59			
5	82	70	63	57	80	69	62	56	67	61	56	65	60	55	64	59	55	53			
6	76	64	56	51	74	63	56	50	62	55	50	60	54	50	58	53	49	47			
7	71	59	51	45	69	58	51	45	57	50	45	55	49	45	54	49	44	43			
8	66	54	46	41	65	53	46	41	52	46	41	51	45	41	50	44	40	39			
9	62	50	43	37	61	50	42	37	48	42	37	47	41	37	46	41	37	35			
10	59	47	39	34	57	46	39	34	45	39	34	44	38	34	43	38	34	32			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	17904	17904	17904
5°	18644	17864	17115
10°	19266	17635	16276
15°	19755	17233	15432
20°	19791	16516	14665
25°	19458	15474	13906
30°	18416	14275	13256
35°	16793	12837	12449
40°	14600	11315	11497
45°	12529	9799	10519
50°	10698	8453	9451
55°	9381	7279	8215
60°	8350	6204	6901
65°	7413	5064	5516
70°	6573	3760	3129
75°	5481	1966	929
80°	4315	622	142
85°	3078	283	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	54.7	5.1
10°-20°	153.3	14.2
20°-30°	217.0	20.1
30°-40°	227.1	21.0
40°-50°	189.4	17.5
50°-60°	134.3	12.4
60°-70°	77.4	7.2
70°-80°	24.9	2.3
80°-90°	3.4	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°	425.1	39.3
0°-40°	652.1	60.3
0°-60°	975.8	90.2
0°-90°	1081.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1081.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	581	581	581	581	581	
5°	602	594	577	560	553	58
15°	619	594	540	497	483	174
25°	572	529	455	418	409	261
35°	446	407	341	323	331	277
45°	287	264	225	227	241	223
55°	174	156	135	142	153	158
65°	102	85	69	69	76	101
75°	46	34	16	8	8	50
85°	9	4	1	0	0	11
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°	580.6	580.6	580.6	580.6	580.6	580.6	580.6	580.6	580.6	580.6	580.6
2.5°	592.7	591.9	591.1	591.9	591.1	591.9	591.1	591.1	590.1	589.2	589.2
5°	602.3	601.4	601.4	601.4	600.6	599.7	599.7	598.8	597.1	596.2	594.4
7.5°	608.4	609.2	609.2	609.2	607.4	607.4	605.8	604.1	602.3	600.6	597.9
10°	615.3	615.3	614.4	613.6	611.9	610.9	610.1	608.4	605.8	602.3	599.7
12.5°	617.9	617.9	617.1	615.3	614.4	613.6	612.7	610.1	606.6	602.3	598.8
15°	618.8	617.1	616.2	615.3	613.6	610.9	610.9	607.4	603.1	597.9	593.6
17.5°	611.9	612.7	610.9	609.2	606.6	604.9	602.3	599.7	594.4	588.4	584.1
20°	603.1	602.3	601.4	598.8	595.4	594.4	591.9	587.6	583.2	576.2	570.2
22.5°	589.2	588.4	586.7	584.9	581.4	579.7	577.1	571.9	565.9	558.9	552.0
25°	571.9	570.2	567.6	564.1	561.5	559.7	556.3	551.0	544.2	536.3	529.4
27.5°	544.2	546.7	545.0	539.8	537.2	533.7	532.9	525.9	519.8	512.0	504.2
30°	517.2	517.2	514.7	512.0	507.7	505.1	501.6	496.5	490.3	480.8	474.8
32.5°	483.4	482.5	479.1	478.1	474.8	469.5	468.6	461.8	455.6	448.7	440.9
35°	446.1	444.3	440.9	438.3	436.6	433.9	431.3	425.2	419.2	412.2	407.0
37.5°	403.6	403.6	402.7	398.4	396.6	394.9	392.2	386.2	382.7	375.8	370.5
40°	362.7	361.9	359.3	358.4	356.7	354.0	352.3	348.8	343.7	338.5	333.3
42.5°	322.8	323.7	320.3	321.1	317.6	316.0	315.0	309.8	307.3	302.0	297.6
45°	287.3	286.4	284.6	283.8	282.1	280.3	278.6	275.9	271.6	266.4	263.8
47.5°	254.3	251.7	251.7	250.8	249.9	246.4	245.6	243.0	240.4	235.2	231.7
50°	223.0	223.0	223.0	222.2	219.6	218.7	217.0	214.4	211.7	208.3	203.0
52.5°	197.9	197.9	197.9	197.0	193.5	192.7	191.8	188.3	184.8	182.2	178.8
55°	174.5	175.3	174.5	172.7	170.1	170.1	167.5	165.8	162.3	159.7	156.2
57.5°	154.5	154.5	152.8	151.8	150.1	149.3	147.5	145.8	141.5	138.8	134.5
60°	135.4	134.5	134.5	132.8	131.1	129.3	128.5	125.8	124.1	119.8	116.3
62.5°	118.0	118.0	116.3	116.3	112.8	112.8	111.9	109.3	106.8	102.4	100.6
65°	101.6	101.6	100.6	99.8	97.2	96.3	95.4	92.9	90.3	87.6	85.1
67.5°	86.8	86.8	85.1	84.2	82.4	81.6	79.9	78.1	75.6	72.9	70.3
70°	72.9	72.1	71.2	70.3	68.6	67.7	65.9	64.2	61.6	59.9	57.2
72.5°	59.0	59.0	58.2	56.4	55.6	54.7	53.9	52.1	49.5	46.9	45.2
75°	46.0	46.0	46.0	44.2	42.5	41.7	41.7	39.9	38.2	35.5	33.9
77.5°	35.5	34.7	33.9	33.9	32.1	31.2	30.4	29.5	26.9	26.0	24.3
80°	24.3	25.2	24.3	23.4	22.5	21.7	21.7	20.0	19.0	17.4	15.7
82.5°	16.5	15.7	15.7	14.7	14.7	13.9	13.9	12.2	11.3	10.4	9.5
85°	8.7	8.7	7.8	7.8	7.8	7.0	7.0	6.0	6.0	5.2	4.3
87.5°	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	1.7	1.7	1.7
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°	580.6	580.6	580.6	580.6	580.6	580.6	580.6	580.6	580.6	580.6	580.6
2.5°	588.4	586.7	585.8	585.8	584.9	584.1	583.2	582.4	580.6	580.6	578.9
5°	592.7	591.1	590.1	587.6	585.8	585.8	582.4	581.4	578.9	577.1	575.4
7.5°	596.2	592.7	590.1	587.6	585.8	584.1	580.6	577.1	573.7	570.2	568.4
10°	596.2	592.7	588.4	584.1	582.4	580.6	576.2	571.0	566.7	563.2	558.9
12.5°	594.4	589.2	584.1	580.6	577.1	574.5	569.4	564.1	558.9	552.0	548.5
15°	589.2	582.4	577.1	571.0	568.4	564.1	559.7	552.0	545.9	539.8	535.5
17.5°	578.9	570.2	564.1	558.0	553.7	551.0	544.2	537.2	530.3	523.3	518.2
20°	563.2	555.4	548.5	540.7	537.2	533.7	525.0	518.2	511.2	503.3	498.1
22.5°	544.2	536.3	526.8	520.7	515.5	511.2	503.3	495.5	488.6	481.6	474.8
25°	520.7	512.8	504.2	494.7	491.2	486.8	478.1	470.4	462.6	454.8	448.7
27.5°	495.5	485.1	478.1	467.8	464.3	459.9	450.4	441.8	434.8	428.7	421.8
30°	465.1	457.4	447.8	438.3	434.8	430.4	422.6	414.9	407.9	400.9	394.0
32.5°	432.2	424.4	414.9	407.9	402.7	399.2	391.4	384.5	377.5	370.5	364.5
35°	397.5	388.9	381.9	374.9	370.5	366.2	358.4	352.3	347.2	341.0	335.0
37.5°	361.9	355.8	348.8	341.0	336.7	333.3	327.2	320.3	316.0	310.6	306.3
40°	327.2	320.3	314.1	307.3	303.8	301.1	295.1	289.9	285.6	281.1	278.6
42.5°	291.6	285.6	279.4	275.1	272.5	269.9	265.6	259.4	256.9	252.6	249.9
45°	258.6	253.4	249.1	243.0	241.2	239.6	234.4	230.0	227.4	224.7	223.0
47.5°	227.4	223.9	218.7	215.2	212.7	210.9	207.4	204.0	201.4	199.5	197.9
50°	200.5	196.2	192.7	189.2	187.5	184.8	181.4	179.7	177.9	176.2	176.2
52.5°	175.3	171.0	167.5	164.8	163.2	161.5	158.8	158.0	156.2	156.2	155.3
55°	151.8	149.3	145.8	142.3	141.5	140.6	138.8	137.1	136.3	135.4	136.3
57.5°	131.9	129.3	125.8	123.3	122.4	121.5	120.6	118.9	118.0	118.0	118.0
60°	113.6	111.1	108.4	105.9	105.9	104.1	103.3	102.4	101.6	100.6	100.6
62.5°	97.2	94.6	91.9	90.3	89.4	88.6	86.8	85.9	85.1	85.1	84.2
65°	82.4	78.9	78.1	75.6	74.6	73.7	72.9	71.2	70.3	69.4	68.6
67.5°	67.7	65.9	63.4	61.6	60.7	59.9	59.0	57.2	56.4	55.6	53.9
70°	54.7	52.9	51.2	49.5	48.6	47.7	46.0	44.2	43.4	41.7	39.0
72.5°	42.5	40.8	39.0	37.4	36.4	35.5	33.9	32.1	30.4	28.7	26.9
75°	32.1	30.4	27.7	26.0	25.2	25.2	22.5	20.8	19.0	16.5	14.7
77.5°	22.5	20.0	19.0	17.4	16.5	14.7	13.0	11.3	9.5	8.7	7.0
80°	14.7	13.0	11.3	10.4	9.5	8.7	7.8	6.0	4.3	3.5	2.7
82.5°	8.7	7.8	7.0	6.0	5.2	4.3	3.5	3.5	2.7	1.7	0.8
85°	4.3	3.5	2.7	2.7	1.7	1.7	1.7	0.8	0.8	0.8	0.8
87.5°	1.7	0.8	0.8	0.8	0.8	0.8	0.8	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°	580.6	580.6	580.6	580.6	580.6	580.6	580.6	580.6	580.6	580.6	580.6
2.5°	578.0	577.1	576.2	575.4	575.4	573.7	573.7	572.7	571.0	570.2	570.2
5°	572.7	570.2	568.4	567.6	566.7	564.1	563.2	561.5	559.7	558.0	557.2
7.5°	565.0	560.7	558.9	558.0	555.4	552.9	551.0	548.5	545.9	543.3	542.4
10°	555.4	551.0	546.7	545.0	542.4	540.7	537.2	533.7	531.2	528.5	525.9
12.5°	543.3	538.0	533.7	532.0	529.4	525.9	520.7	519.0	514.7	512.8	509.5
15°	529.4	523.3	519.0	516.3	513.8	508.5	505.1	501.6	497.3	495.5	492.1
17.5°	512.0	505.1	500.8	498.1	496.5	492.1	486.8	482.5	478.1	476.5	473.8
20°	491.2	486.8	480.8	478.1	476.5	471.3	466.1	464.3	460.8	457.4	454.8
22.5°	467.8	463.4	457.4	454.8	453.9	449.6	445.2	442.6	439.9	437.4	434.8
25°	443.4	438.3	433.1	431.3	429.6	426.1	422.6	420.9	418.3	416.6	414.9
27.5°	417.4	412.2	407.9	405.2	403.6	400.9	399.2	397.5	395.7	394.0	393.2
30°	389.7	384.5	381.0	379.2	377.5	376.7	374.0	373.2	372.3	370.5	371.5
32.5°	361.9	357.5	354.0	351.5	351.5	349.7	348.8	348.8	348.0	348.0	348.0
35°	331.5	329.0	326.3	325.5	324.6	323.7	322.8	323.7	322.8	323.7	324.6
37.5°	303.8	301.1	299.4	298.6	297.6	298.6	297.6	297.6	298.6	300.3	301.1
40°	275.1	273.4	271.6	272.5	271.6	271.6	271.6	274.3	275.1	275.9	276.8
42.5°	248.2	246.4	245.6	245.6	246.4	245.6	247.4	248.2	249.9	252.6	254.3
45°	222.2	221.4	221.4	222.2	221.4	223.0	223.0	224.7	227.4	229.1	230.9
47.5°	197.9	197.9	197.9	198.7	198.7	199.5	201.4	202.2	204.0	205.7	207.4
50°	175.3	176.2	177.0	177.0	177.0	178.8	180.5	181.4	182.2	183.2	185.7
52.5°	155.3	156.2	156.2	157.1	158.0	158.8	159.7	161.5	162.3	164.0	164.8
55°	136.3	136.3	138.0	138.8	138.8	138.8	140.6	140.6	142.3	143.2	145.0
57.5°	118.0	118.9	118.9	119.8	119.8	120.6	121.5	122.4	123.3	124.1	125.0
60°	100.6	100.6	100.6	101.6	102.4	103.3	102.4	104.1	104.1	105.9	106.8
62.5°	84.2	85.1	85.1	85.1	85.1	85.1	85.1	85.9	86.8	87.6	88.6
65°	68.6	68.6	68.6	67.7	68.6	67.7	68.6	69.4	69.4	70.3	71.2
67.5°	52.9	52.9	51.2	51.2	52.1	52.1	52.1	52.1	51.2	52.9	52.9
70°	38.2	37.4	36.4	35.5	35.5	34.7	34.7	33.9	33.9	33.9	33.9
72.5°	25.2	23.4	21.7	20.8	20.0	20.0	18.2	17.4	18.2	18.2	18.2
75°	13.0	11.3	10.4	9.5	8.7	8.7	7.8	7.8	7.8	7.8	7.8
77.5°	5.2	4.3	3.5	3.5	2.7	2.7	2.7	2.7	2.7	2.7	2.7
80°	1.7	1.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
82.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
85°	0.8	0.0	0.0	0.8	0.0	0.8	0.8	0.8	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: P583913

CATALOG NUMBER: HC815D010-HM80520927-81WWBB

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	580.6	580.6	580.6	580.6	580.6	580.6	580.6	580.6
2.5°	569.4	569.4	568.4	569.4	567.6	568.4	567.6	567.6
5°	556.3	554.5	554.5	554.5	553.7	553.7	552.9	552.9
7.5°	540.7	539.8	539.0	538.0	537.2	536.3	536.3	536.3
10°	525.0	523.3	523.3	522.5	520.7	519.8	519.8	519.8
12.5°	506.8	506.0	505.1	505.1	501.6	502.5	501.6	501.6
15°	489.5	488.6	488.6	486.0	484.3	484.3	484.3	483.4
17.5°	471.3	470.4	469.5	467.8	466.1	466.1	465.1	466.1
20°	452.1	451.3	449.6	449.6	448.7	447.8	446.1	446.9
22.5°	433.1	431.3	430.4	430.4	429.6	429.6	427.9	427.9
25°	413.1	412.2	411.4	412.2	410.5	410.5	408.7	408.7
27.5°	392.2	391.4	391.4	391.4	390.5	391.4	390.5	390.5
30°	371.5	371.5	370.5	370.5	371.5	370.5	371.5	372.3
32.5°	348.8	348.8	349.7	349.7	350.7	350.7	350.7	350.7
35°	325.5	327.2	327.2	328.0	329.0	329.8	329.8	330.7
37.5°	303.8	304.6	305.5	306.3	308.1	308.1	308.1	308.1
40°	280.3	281.1	282.9	282.1	285.6	286.4	285.6	285.6
42.5°	256.1	257.7	258.6	260.4	261.2	262.9	263.8	263.8
45°	233.4	234.4	236.1	237.7	238.7	241.2	241.2	241.2
47.5°	210.0	211.7	212.7	214.4	215.2	217.9	218.7	217.9
50°	187.5	189.2	190.9	190.9	193.5	194.4	196.2	197.0
52.5°	165.8	166.7	168.3	169.2	171.0	172.7	173.5	174.5
55°	145.0	145.8	147.5	147.5	150.1	151.0	152.8	152.8
57.5°	125.8	126.8	128.5	127.6	129.3	131.1	131.1	130.1
60°	107.6	107.6	107.6	109.3	110.3	111.1	111.9	111.9
62.5°	88.6	90.3	91.1	91.1	91.9	92.9	92.9	91.9
65°	71.2	72.9	73.7	73.7	74.6	74.6	74.6	75.6
67.5°	53.9	53.9	53.9	54.7	53.9	53.9	53.9	53.9
70°	33.9	33.9	33.9	33.9	33.0	33.9	33.9	34.7
72.5°	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2
75°	7.8	7.8	7.8	8.7	7.8	7.8	7.8	7.8
77.5°	3.5	2.7	3.5	3.5	2.7	2.7	2.7	2.7
80°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
82.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
85°	0.0	0.8	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)