

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: P583762

Luminaire Tested: **HC810D010-HM80520840-81WWWB**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P583762
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: HC810D010-HM80520840-81WWWB
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, BLACK BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1225.8 lumens
Efficiency: N/A
Efficacy: 123.8 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

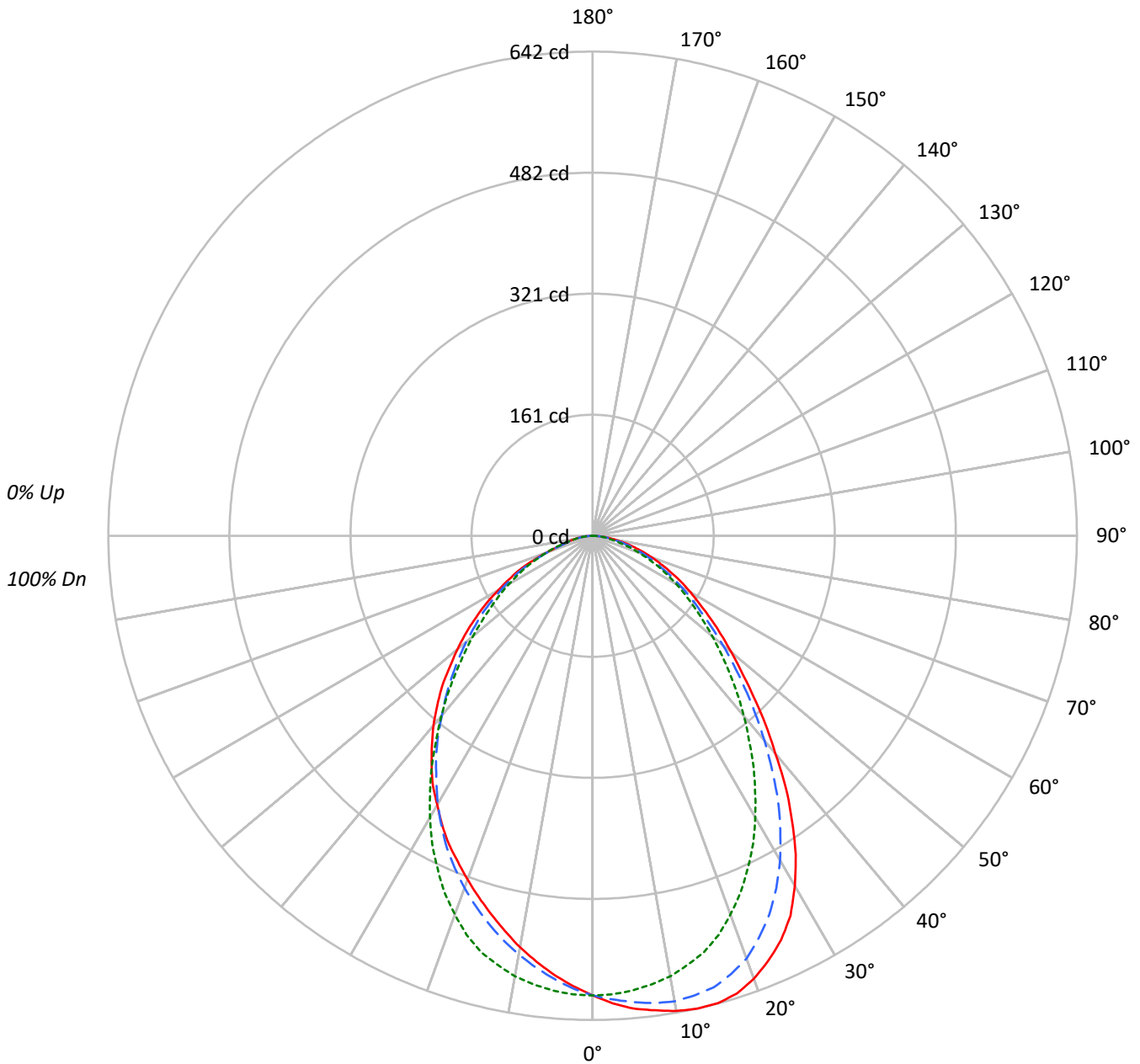
Input Watts (W): 9.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	18795	18795	18795
5°	19483	18733	18090
10°	20033	18571	17350
15°	20479	18241	16585
20°	20510	17530	15909
25°	20118	16556	15348
30°	19082	15354	14670
35°	17339	13981	14015
40°	15160	12547	13207
45°	13139	11177	12306
50°	11504	9926	11216
55°	10242	8795	10145
60°	9239	7900	8918
65°	8340	6946	7771
70°	7492	5851	5779
75°	6600	4635	4337
80°	5523	3836	4138
85°	4281	3361	3644



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	57.5	4.7
10°-20°	161.9	13.2
20°-30°	231.4	18.9
30°-40°	245.9	20.1
40°-50°	211.7	17.3
50°-60°	158.3	12.9
60°-70°	101.0	8.2
70°-80°	45.9	3.7
80°-90°	12.0	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°	450.9	36.8
0°-40°	696.8	56.8
0°-60°	1066.9	87.0
0°-90°	1225.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1225.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	610	610	610	610	610	
5°	629	621	605	590	584	60
15°	642	620	571	532	520	181
25°	591	554	487	457	451	271
35°	461	428	371	362	372	287
45°	301	285	256	263	282	234
55°	190	175	164	178	189	171
65°	114	101	95	100	106	114
75°	55	48	39	36	36	59
85°	12	10	10	10	10	15
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°	609.5	609.5	609.5	609.5	609.5	609.5	609.5	609.5	609.5	609.5	609.5
2.5°	620.7	619.0	619.9	619.0	619.9	619.9	618.2	618.2	618.2	618.2	615.5
5°	629.4	628.5	628.5	627.7	626.8	627.7	626.8	626.0	624.2	623.4	620.7
7.5°	634.7	634.7	634.7	634.7	633.7	632.9	632.0	630.3	628.5	626.8	625.0
10°	639.8	640.7	639.8	639.0	638.0	636.3	635.5	633.7	631.2	628.5	626.8
12.5°	642.3	642.3	641.5	641.5	639.8	639.0	636.3	633.7	631.2	628.5	624.2
15°	641.5	641.5	640.7	639.8	637.2	636.3	634.7	632.0	627.7	624.2	619.9
17.5°	636.3	635.5	633.7	633.7	630.3	629.4	627.7	624.2	619.9	614.7	609.5
20°	625.0	625.0	624.2	623.4	619.9	617.3	615.5	611.2	607.7	601.7	596.6
22.5°	609.5	611.2	609.5	607.7	603.4	602.6	599.9	594.7	589.6	582.6	576.6
25°	591.3	590.4	589.6	587.9	584.4	582.6	579.2	574.0	568.8	561.0	554.1
27.5°	567.9	564.5	564.5	561.0	558.4	555.8	554.1	548.8	542.0	535.9	527.2
30°	535.9	536.8	532.5	531.5	527.2	525.5	522.0	516.9	510.8	503.9	496.9
32.5°	501.2	498.7	498.7	495.2	491.7	489.2	488.3	482.2	477.1	470.1	463.1
35°	460.6	460.6	458.0	457.1	453.6	452.0	449.3	445.8	439.8	433.8	428.5
37.5°	420.7	419.0	418.2	416.4	413.8	411.2	411.2	405.2	404.4	397.4	390.4
40°	376.6	378.4	376.6	374.1	373.1	371.4	370.6	367.1	364.4	358.4	354.1
42.5°	339.3	337.6	337.6	336.8	333.3	333.3	331.6	329.8	325.5	323.8	318.7
45°	301.3	303.0	300.4	301.3	297.9	297.9	297.9	294.4	290.9	288.2	284.9
47.5°	268.4	269.2	269.2	266.6	265.8	265.8	264.1	262.3	259.8	256.3	253.6
50°	239.8	240.6	239.0	238.1	236.3	235.5	235.5	232.0	230.3	226.8	225.1
52.5°	213.8	213.8	213.0	213.0	210.4	210.4	208.7	206.0	204.3	202.5	198.2
55°	190.5	190.5	189.6	188.7	188.7	186.2	185.2	182.7	180.9	177.5	174.9
57.5°	167.9	168.9	167.9	167.1	166.2	165.4	163.6	161.1	159.3	156.7	154.9
60°	149.8	149.8	148.9	148.1	146.3	145.4	144.6	142.8	140.3	138.5	135.9
62.5°	132.5	131.6	130.8	129.8	128.1	128.1	126.5	124.6	122.1	120.3	118.6
65°	114.3	114.3	113.5	113.5	112.5	110.8	110.0	109.1	105.7	104.8	101.3
67.5°	97.8	98.7	97.0	97.0	95.2	95.2	94.4	91.7	90.9	89.2	87.4
70°	83.1	83.1	83.1	82.2	80.5	79.7	78.7	77.0	76.2	74.4	72.7
72.5°	68.4	68.4	67.6	67.6	66.7	65.7	64.9	63.2	63.2	61.4	59.7
75°	55.4	55.4	54.6	53.7	52.8	52.8	51.9	51.1	49.4	48.4	47.6
77.5°	42.4	42.4	42.4	41.6	40.7	40.7	40.7	38.9	37.3	37.3	36.4
80°	31.1	31.1	30.3	30.3	29.4	29.4	29.4	28.6	27.6	26.8	26.0
82.5°	20.8	20.8	20.8	20.8	20.0	20.0	20.0	19.0	18.2	18.2	18.2
85°	12.1	12.1	12.1	12.1	11.3	11.3	11.3	11.3	11.3	10.3	10.3
87.5°	5.2	4.3	5.2	4.3	5.2	4.3	5.2	4.3	4.3	4.3	4.3
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°	609.5	609.5	609.5	609.5	609.5	609.5	609.5	609.5	609.5	609.5	609.5
2.5°	616.4	615.5	614.7	613.9	613.9	612.9	611.2	610.4	609.5	608.6	608.6
5°	619.9	619.0	617.3	615.5	614.7	612.9	611.2	609.5	607.7	605.2	604.2
7.5°	622.5	619.9	618.2	614.7	613.9	612.1	609.5	606.9	603.4	599.9	597.4
10°	622.5	619.0	616.4	612.1	610.4	608.6	605.2	600.9	596.6	593.1	588.7
12.5°	620.7	616.4	612.1	607.7	605.2	602.6	597.4	593.1	587.9	582.6	579.2
15°	614.7	609.5	604.2	599.1	596.6	593.1	587.9	581.8	576.6	571.4	565.3
17.5°	603.4	598.2	592.2	586.1	582.6	580.1	572.3	567.9	560.1	555.0	549.8
20°	588.7	582.6	574.9	568.8	564.5	561.9	555.8	548.0	542.0	534.2	529.0
22.5°	569.6	561.9	554.1	548.0	543.7	540.2	532.5	524.7	519.5	512.5	506.5
25°	547.2	539.3	531.5	522.9	518.5	515.2	508.2	501.2	494.4	486.6	481.4
27.5°	520.3	511.7	504.7	496.9	492.6	487.4	479.6	472.7	465.8	460.6	453.6
30°	490.9	481.4	474.4	466.6	462.3	458.0	450.1	443.3	437.2	431.2	427.7
32.5°	455.4	448.5	441.5	433.8	430.3	427.7	419.9	413.0	406.0	400.9	398.2
35°	421.7	413.8	407.7	400.9	396.5	393.9	387.0	380.9	377.4	371.4	367.9
37.5°	386.1	380.1	373.1	366.2	363.6	361.1	355.8	349.8	344.6	340.3	338.5
40°	348.9	343.7	337.6	333.3	330.7	328.1	323.8	319.5	316.0	311.7	310.0
42.5°	313.4	310.0	304.7	299.5	297.0	296.1	290.9	287.4	285.7	283.9	282.2
45°	281.4	276.2	272.7	269.2	266.6	264.9	262.3	259.8	257.9	256.3	254.6
47.5°	250.3	245.9	242.4	239.8	237.3	236.3	234.6	232.0	230.3	230.3	230.3
50°	221.6	218.2	214.7	213.0	212.2	210.4	208.7	207.8	206.9	206.9	206.9
52.5°	196.5	193.0	190.5	188.7	188.7	187.0	185.2	184.4	184.4	184.4	184.4
55°	173.2	170.6	168.9	167.1	165.4	164.6	164.6	164.6	163.6	163.6	164.6
57.5°	152.4	150.6	148.1	146.3	145.4	145.4	144.6	143.8	144.6	145.4	146.3
60°	133.3	131.6	130.8	128.1	128.1	128.1	127.3	127.3	127.3	128.1	129.0
62.5°	116.0	115.2	113.5	112.5	111.7	111.7	110.8	110.8	110.8	110.8	111.7
65°	100.5	98.7	97.0	97.0	97.0	96.0	96.0	94.4	95.2	95.2	94.4
67.5°	85.7	84.0	83.1	82.2	81.4	81.4	80.5	79.7	78.7	78.7	78.7
70°	71.9	70.1	70.1	68.4	68.4	67.6	66.7	66.7	65.7	64.9	64.1
72.5°	58.1	57.1	56.3	55.4	55.4	55.4	54.6	53.7	52.8	51.9	50.2
75°	45.9	45.9	44.1	43.3	43.3	42.4	41.6	40.7	39.8	38.9	38.1
77.5°	35.5	34.6	32.9	32.0	32.0	32.0	31.1	30.3	29.4	28.6	27.6
80°	26.0	25.1	24.3	23.3	23.3	23.3	22.5	22.5	21.6	21.6	21.6
82.5°	17.3	17.3	16.5	16.5	16.5	16.5	15.6	15.6	15.6	15.6	15.6
85°	10.3	10.3	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5
87.5°	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
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°	609.5	609.5	609.5	609.5	609.5	609.5	609.5	609.5	609.5	609.5	609.5
2.5°	606.9	606.9	605.2	604.2	603.4	604.2	602.6	601.7	600.9	600.9	599.9
5°	601.7	600.9	597.4	596.6	595.6	594.7	593.1	591.3	589.6	588.7	587.9
7.5°	594.7	592.2	588.7	587.9	586.9	584.4	581.8	580.1	577.4	576.6	574.9
10°	585.3	581.8	579.2	576.6	574.9	572.3	569.6	567.1	563.6	562.8	560.1
12.5°	574.0	569.6	564.5	563.6	561.0	557.6	554.1	551.5	548.8	547.2	544.5
15°	560.1	555.8	550.6	548.0	545.5	542.8	538.5	535.0	532.5	529.8	527.2
17.5°	543.7	538.5	534.2	531.5	529.8	525.5	522.0	517.7	515.2	512.5	509.9
20°	523.8	519.5	513.4	510.8	509.9	506.5	502.2	500.4	496.9	494.4	492.6
22.5°	501.2	496.9	491.7	490.1	486.6	484.8	480.4	478.8	477.1	474.4	473.6
25°	476.1	471.8	467.5	466.6	464.1	462.3	459.8	457.1	457.1	454.5	454.5
27.5°	450.1	445.8	442.5	440.7	439.8	438.1	435.5	434.6	433.8	432.8	432.8
30°	422.5	417.3	415.5	414.7	413.8	412.0	411.2	409.5	410.4	411.2	410.4
32.5°	393.1	391.4	387.9	386.1	387.0	386.1	384.4	386.1	385.2	387.0	387.9
35°	364.4	362.8	361.1	361.1	359.3	359.3	359.3	360.1	361.9	362.8	364.4
37.5°	336.8	334.2	333.3	332.5	333.3	333.3	333.3	335.0	336.8	338.5	341.1
40°	307.4	305.7	305.7	305.7	305.7	308.2	307.4	309.0	310.8	313.4	316.0
42.5°	279.6	279.6	280.5	280.5	280.5	280.5	282.2	284.9	287.4	290.0	292.7
45°	253.6	253.6	253.6	255.4	255.4	256.3	259.8	261.4	263.2	265.8	268.4
47.5°	229.5	229.5	230.3	231.1	232.0	233.8	235.5	238.1	240.6	242.4	245.0
50°	206.9	207.8	209.5	211.2	211.2	212.2	214.7	216.5	218.2	220.8	221.6
52.5°	185.2	187.0	188.7	189.6	190.5	192.2	193.0	195.7	196.5	199.2	200.0
55°	165.4	166.2	168.9	169.7	169.7	171.4	173.2	174.9	177.5	177.5	179.2
57.5°	147.1	148.1	149.8	150.6	149.8	152.4	153.3	154.9	155.8	157.6	158.4
60°	129.0	130.8	131.6	131.6	132.5	133.3	135.1	135.1	136.8	138.5	138.5
62.5°	111.7	112.5	113.5	114.3	115.2	114.3	116.8	116.8	118.6	119.5	121.2
65°	95.2	96.0	96.0	97.0	97.0	97.8	97.8	98.7	99.5	101.3	102.2
67.5°	78.7	78.7	78.7	79.7	78.7	79.7	79.7	80.5	80.5	82.2	83.1
70°	64.1	63.2	62.4	62.4	62.4	62.4	61.4	62.4	62.4	63.2	63.2
72.5°	49.4	48.4	47.6	46.8	46.8	45.9	45.1	45.9	45.9	46.8	46.8
75°	37.3	35.5	35.5	35.5	34.6	34.6	34.6	35.5	35.5	35.5	36.4
77.5°	27.6	27.6	26.8	26.8	26.8	27.6	27.6	28.6	28.6	28.6	28.6
80°	20.8	21.6	21.6	21.6	21.6	22.5	22.5	22.5	22.5	23.3	23.3
82.5°	15.6	15.6	15.6	15.6	16.5	16.5	16.5	16.5	16.5	16.5	16.5
85°	9.5	10.3	10.3	9.5	10.3	10.3	10.3	10.3	10.3	10.3	10.3
87.5°	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
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: P583762

CATALOG NUMBER: HC810D010-HM80520840-81WWWB

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	609.5	609.5	609.5	609.5	609.5	609.5	609.5	609.5
2.5°	599.1	599.1	599.1	599.1	598.2	598.2	598.2	597.4
5°	586.1	586.1	586.1	584.4	585.3	585.3	583.6	584.4
7.5°	573.1	572.3	571.4	571.4	570.6	569.6	568.8	569.6
10°	558.4	555.8	555.8	555.0	555.0	553.3	553.3	554.1
12.5°	542.0	540.2	540.2	539.3	538.5	537.7	536.8	536.8
15°	525.5	523.8	522.9	522.0	521.2	519.5	520.3	519.5
17.5°	509.0	506.5	506.5	505.6	504.7	503.0	503.0	502.2
20°	490.1	489.2	487.4	488.3	487.4	485.7	484.8	484.8
22.5°	470.9	470.9	470.1	470.1	469.3	468.4	467.5	467.5
25°	452.8	452.0	452.8	452.8	450.1	450.1	450.1	451.1
27.5°	432.0	432.8	432.0	432.0	432.0	432.0	432.8	432.0
30°	411.2	411.2	411.2	412.0	413.8	413.0	413.0	412.0
32.5°	388.7	389.6	389.6	390.4	391.4	393.1	393.1	393.9
35°	366.2	367.9	368.8	367.9	370.6	370.6	372.3	372.3
37.5°	342.8	343.7	345.5	346.3	348.0	348.9	349.8	349.8
40°	317.7	321.2	322.0	323.0	325.5	325.5	326.3	328.1
42.5°	294.4	297.9	298.7	299.5	301.3	303.9	303.0	304.7
45°	271.9	274.4	275.3	276.2	278.7	279.6	279.6	282.2
47.5°	247.6	249.3	250.3	251.9	253.6	255.4	257.1	256.3
50°	223.3	226.0	227.7	228.6	231.1	232.0	232.9	233.8
52.5°	201.7	203.5	204.3	205.2	207.8	208.7	209.5	211.2
55°	180.9	181.9	183.5	182.7	185.2	186.2	187.0	188.7
57.5°	160.1	161.1	161.9	161.9	163.6	165.4	166.2	167.1
60°	140.3	142.0	142.8	142.8	142.8	144.6	144.6	144.6
62.5°	122.1	122.1	123.0	123.0	124.6	124.6	124.6	124.6
65°	103.0	103.9	104.8	104.8	106.5	105.7	107.3	106.5
67.5°	83.1	83.1	84.9	84.9	84.0	84.9	84.9	84.9
70°	63.2	63.2	64.1	64.1	64.1	64.1	64.1	64.1
72.5°	46.8	46.8	46.8	47.6	46.8	46.8	47.6	46.8
75°	36.4	36.4	36.4	36.4	36.4	36.4	36.4	36.4
77.5°	28.6	28.6	29.4	29.4	29.4	29.4	29.4	29.4
80°	23.3	23.3	23.3	23.3	24.3	23.3	23.3	23.3
82.5°	17.3	16.5	17.3	16.5	17.3	17.3	17.3	17.3
85°	10.3	10.3	10.3	10.3	10.3	10.3	10.3	10.3
87.5°	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
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)