

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: P583702

Luminaire Tested: **HC810D010-HM80520827-81RWWC**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P583702
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2109-368-14)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 10/21/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HC810D010-HM80520827-81RWWC
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, SPECULAR TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1108.9 lumens
Efficiency: N/A
Efficacy: 112.0 lumens/watt
Spacing Criteria (0/90/45): 1.15 / 1.08 / 1.17
Luminous Opening: Circular (Dia: 0.67' x H: 0')
CIE Type: Direct

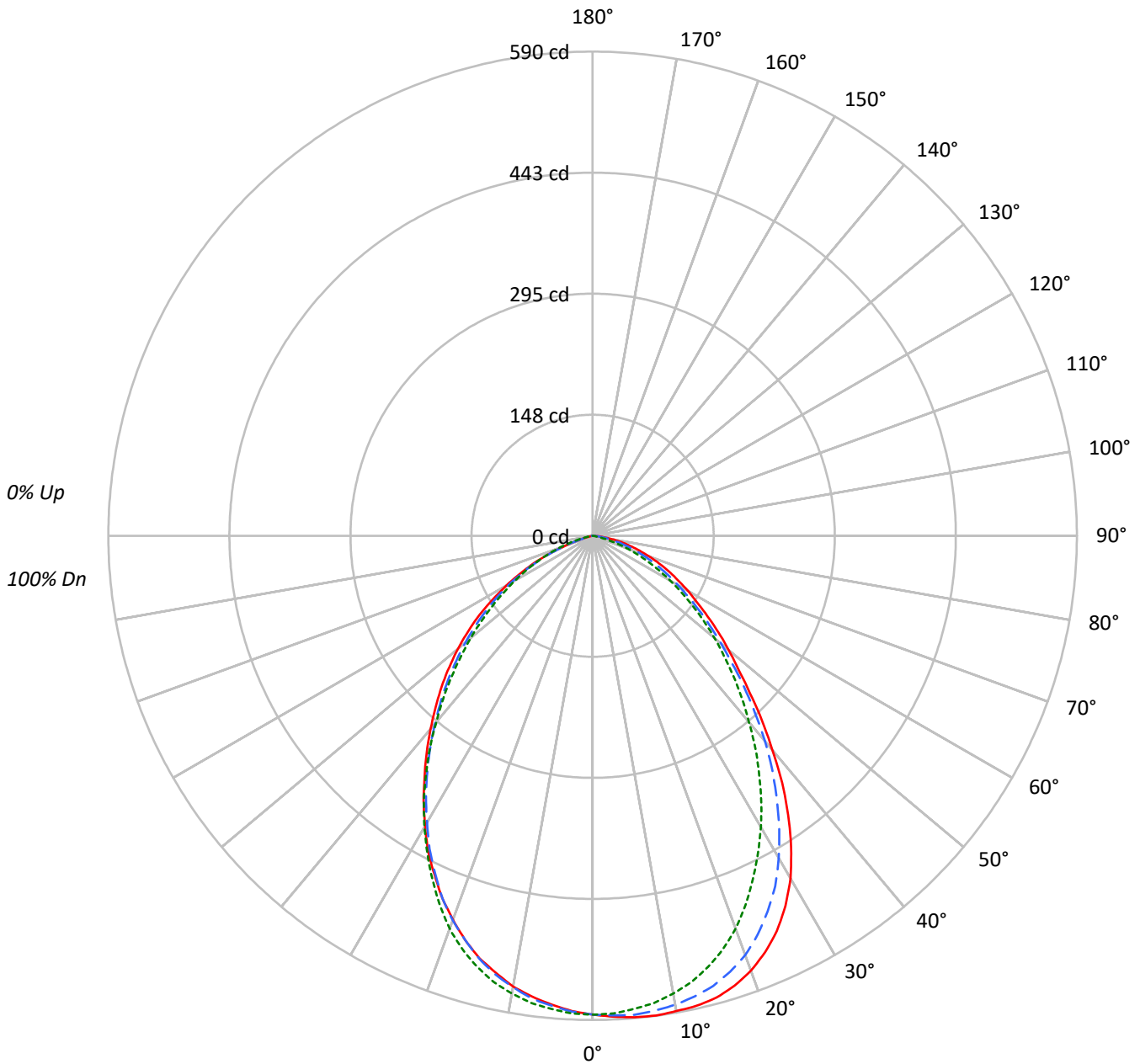
Input Watts (W): 9.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
RC	80									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	85	100	94	89	84	91	86	82	87	84	81	85	82	79	77																			
3	95	86	79	73	93	84	78	73	82	76	72	79	74	70	76	73	69	67																			
4	88	77	70	64	86	76	69	64	74	68	63	72	66	62	69	65	61	59																			
5	81	70	62	56	80	69	62	56	67	61	56	65	59	55	63	58	54	52																			
6	76	64	56	50	74	63	55	50	61	55	50	60	54	49	58	53	49	47																			
7	71	59	51	45	69	58	50	45	56	50	45	55	49	44	54	48	44	42																			
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38																			
9	62	50	42	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35																			
10	58	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	17993	17993	17993
5°	18232	17916	17749
10°	18415	17735	17463
15°	18602	17360	17009
20°	18508	16719	16332
25°	18077	15716	15505
30°	17170	14592	14535
35°	15630	13311	13431
40°	13702	11919	12358
45°	11822	10597	11347
50°	10353	9307	10276
55°	9172	8000	9048
60°	8264	6722	7493
65°	7442	5399	5742
70°	6537	3931	3165
75°	5576	2049	834
80°	4297	550	124
85°	2760	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	55.1	5.0
10°-20°	154.8	14.0
20°-30°	219.7	19.8
30°-40°	231.2	20.9
40°-50°	196.7	17.7
50°-60°	142.1	12.8
60°-70°	80.9	7.3
70°-80°	25.5	2.3
80°-90°	3.1	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°	429.5	38.7
0°-40°	660.7	59.6
0°-60°	999.5	90.1
0°-90°	1108.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1108.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	584	584	584	584	584	
5°	589	586	579	575	573	56
15°	583	568	544	534	533	164
25°	531	505	462	454	456	243
35°	415	391	354	351	357	258
45°	271	261	243	249	260	211
55°	171	158	149	157	168	154
65°	102	88	74	73	79	101
75°	47	36	17	8	7	50
85°	8	5	0	0	0	10
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°	583.5	583.5	583.5	583.5	583.5	583.5	583.5	583.5	583.5	583.5	583.5
2.5°	586.6	587.4	585.9	585.9	587.4	585.9	586.6	586.6	585.9	585.9	585.0
5°	589.0	588.1	588.1	588.1	589.0	587.4	586.6	587.4	585.9	585.9	585.9
7.5°	589.7	589.7	589.0	588.1	588.1	588.1	587.4	586.6	585.9	584.3	583.5
10°	588.1	588.1	589.0	587.4	587.4	585.9	585.9	584.3	584.3	582.7	580.3
12.5°	586.6	585.9	585.9	584.3	584.3	582.7	582.7	580.3	579.6	577.2	574.9
15°	582.7	581.9	580.3	579.6	578.8	578.0	576.5	575.6	573.4	570.2	567.9
17.5°	574.9	574.2	573.4	571.8	570.2	569.5	568.7	566.4	563.3	560.9	557.0
20°	564.0	563.3	563.3	560.9	560.1	557.7	557.0	553.9	551.6	546.9	543.8
22.5°	549.2	550.0	548.5	546.9	545.3	542.9	541.4	538.3	534.4	529.7	525.9
25°	531.3	532.1	530.6	529.0	526.6	525.0	523.5	518.8	514.9	509.5	504.8
27.5°	508.7	508.7	508.7	507.1	503.3	502.4	500.9	496.2	490.8	486.1	481.4
30°	482.2	481.4	481.4	479.1	477.6	474.4	472.1	468.2	464.3	458.8	453.4
32.5°	450.3	451.1	448.7	447.1	444.9	444.9	441.7	438.6	433.9	428.5	423.0
35°	415.2	416.0	414.4	413.6	409.8	409.0	408.2	404.4	401.2	397.3	391.0
37.5°	379.4	378.6	377.8	377.8	375.5	373.9	372.4	370.0	365.4	362.3	359.2
40°	340.4	340.4	340.4	339.7	338.8	337.3	336.6	335.0	331.9	328.7	326.5
42.5°	305.4	305.4	304.6	303.9	302.3	303.0	301.5	299.9	296.8	294.5	292.9
45°	271.1	271.1	271.1	271.9	270.3	267.9	267.9	266.5	264.9	263.4	261.0
47.5°	240.8	243.0	241.5	240.8	241.5	238.4	238.4	236.8	235.2	233.7	230.5
50°	215.8	215.8	215.8	214.2	213.5	213.5	211.1	209.5	208.8	207.2	204.1
52.5°	193.2	191.6	191.6	190.9	190.0	188.5	188.5	186.9	183.9	182.3	179.9
55°	170.6	170.6	169.8	169.0	168.3	167.4	166.7	164.3	162.9	160.5	158.2
57.5°	150.4	151.9	151.1	149.5	148.0	148.0	146.4	144.8	142.6	140.3	137.9
60°	134.0	133.2	133.2	132.5	130.9	130.1	129.3	126.9	124.6	122.4	120.0
62.5°	116.8	116.8	116.8	115.3	113.7	113.0	112.1	110.6	107.5	105.2	103.6
65°	102.0	101.3	100.5	99.8	98.9	97.4	96.6	95.1	92.7	90.4	88.0
67.5°	87.3	86.4	86.4	85.7	83.3	82.6	82.6	80.3	77.9	75.6	73.2
70°	72.5	72.5	72.5	70.9	70.1	69.4	68.5	67.0	64.7	62.3	60.0
72.5°	60.0	59.3	59.3	58.4	56.1	55.3	54.6	53.0	50.6	49.0	47.5
75°	46.8	46.8	45.9	45.2	44.4	43.6	42.8	41.2	38.9	36.7	35.8
77.5°	35.8	35.1	35.1	34.3	32.7	32.0	32.0	30.4	28.0	26.4	24.9
80°	24.2	24.9	24.2	23.3	22.6	21.8	21.0	20.3	18.8	17.2	15.6
82.5°	14.8	15.6	14.8	14.8	14.1	13.2	13.2	11.7	10.9	10.1	9.4
85°	7.8	7.8	7.8	7.8	7.0	7.0	7.0	6.3	5.4	4.7	4.7
87.5°	2.3	3.1	2.3	2.3	2.3	2.3	2.3	2.3	1.6	1.6	1.6
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°	583.5	583.5	583.5	583.5	583.5	583.5	583.5	583.5	583.5	583.5	583.5
2.5°	585.9	585.0	584.3	584.3	584.3	584.3	584.3	583.5	582.7	582.7	582.7
5°	584.3	584.3	584.3	583.5	582.7	582.7	581.2	580.3	579.6	578.8	578.0
7.5°	582.7	581.2	580.3	579.6	578.8	578.8	577.2	575.6	575.6	574.2	572.6
10°	578.0	577.2	575.6	574.2	573.4	572.6	571.1	568.7	567.9	566.4	564.8
12.5°	572.6	571.1	569.5	566.4	565.5	564.8	561.7	559.3	557.7	557.0	553.2
15°	565.5	562.4	560.1	556.2	555.4	553.9	551.6	549.2	546.1	543.8	542.2
17.5°	553.2	550.0	546.1	542.2	540.7	540.7	536.7	533.7	529.7	528.2	525.0
20°	538.3	534.4	531.3	526.6	524.3	521.9	519.6	514.9	511.8	509.5	505.6
22.5°	521.2	515.7	511.8	507.1	503.3	500.9	497.0	493.1	489.2	486.9	483.8
25°	499.3	494.6	488.5	483.8	481.4	478.3	473.6	469.7	465.9	461.9	460.4
27.5°	475.2	469.0	463.5	458.1	455.7	453.4	448.0	443.3	440.2	436.2	434.6
30°	448.7	442.5	436.2	431.5	429.2	425.4	422.3	416.7	412.9	409.8	405.9
32.5°	418.3	413.6	408.2	401.2	399.7	396.5	391.9	389.6	384.9	382.5	379.4
35°	385.6	382.5	377.1	371.5	369.3	367.7	363.8	359.2	356.0	353.6	352.1
37.5°	354.5	350.5	345.1	341.2	339.7	337.3	332.6	330.3	327.2	325.6	322.5
40°	320.9	317.1	313.1	310.8	308.4	307.0	303.9	301.5	298.3	296.1	295.2
42.5°	288.2	286.0	282.8	279.7	278.9	276.6	275.0	272.6	270.3	269.5	267.2
45°	258.7	256.3	253.1	250.0	249.3	247.7	246.9	244.6	243.0	243.0	243.0
47.5°	229.0	226.7	223.6	222.0	222.9	219.7	219.7	218.9	217.3	217.3	218.2
50°	202.5	199.4	198.7	197.1	195.6	194.0	194.7	192.4	192.4	194.0	193.2
52.5°	177.7	174.5	173.7	172.1	171.4	171.4	170.6	170.6	169.8	170.6	170.6
55°	155.1	152.7	151.1	149.5	148.8	148.8	148.8	148.0	147.2	148.8	149.5
57.5°	134.7	134.0	132.5	130.1	129.3	128.5	127.8	127.8	127.8	127.8	128.5
60°	116.8	115.3	113.7	111.4	111.4	110.6	109.9	109.0	109.0	109.0	109.0
62.5°	101.3	98.9	96.6	95.1	94.2	93.5	92.7	91.1	91.1	91.1	91.1
65°	85.7	83.3	81.9	80.3	78.7	78.7	77.2	76.3	74.8	74.0	72.5
67.5°	70.9	69.4	67.8	65.4	64.7	63.8	62.3	61.5	59.3	58.4	57.7
70°	57.7	55.3	53.7	52.2	51.4	49.9	48.3	46.8	45.2	43.6	42.1
72.5°	45.2	42.8	41.2	39.8	38.2	38.2	35.8	34.3	32.0	30.4	28.0
75°	33.5	31.1	29.6	27.3	26.4	25.7	23.3	21.8	19.5	17.2	15.6
77.5°	22.6	21.0	19.5	17.2	15.6	15.6	13.2	11.7	10.1	7.8	7.0
80°	14.1	12.5	10.9	9.4	9.4	7.8	7.0	5.4	3.8	3.1	2.3
82.5°	7.8	7.0	6.3	4.7	4.7	3.8	3.1	2.3	1.6	0.7	0.7
85°	3.8	3.1	2.3	2.3	1.6	1.6	1.6	0.7	0.7	0.0	0.0
87.5°	1.6	0.7	0.7	0.7	0.7	0.7	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):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	583.5	583.5	583.5	583.5	583.5	583.5	583.5	583.5	583.5	583.5	583.5
2.5°	581.9	581.9	581.2	581.2	581.2	580.3	581.2	580.3	580.3	580.3	581.2
5°	578.8	577.2	577.2	576.5	576.5	575.6	576.5	575.6	574.9	574.2	574.9
7.5°	572.6	571.1	570.2	569.5	569.5	569.5	568.7	567.9	568.7	566.4	567.9
10°	564.0	563.3	561.7	560.9	560.1	560.9	560.1	558.6	558.6	558.6	557.7
12.5°	553.2	551.6	550.8	550.0	548.5	548.5	549.2	547.6	547.6	546.1	546.1
15°	539.8	538.3	536.7	536.7	535.1	535.1	534.4	534.4	533.7	532.8	532.8
17.5°	523.5	521.2	519.6	520.3	519.6	518.8	518.8	517.2	516.5	517.2	517.2
20°	504.0	502.4	500.9	501.7	500.2	499.3	500.2	497.7	498.6	498.6	498.6
22.5°	482.2	481.4	479.1	479.1	477.6	476.7	477.6	477.6	478.3	477.6	477.6
25°	458.1	456.5	455.0	455.0	454.1	453.4	454.1	455.0	454.1	455.0	455.0
27.5°	432.4	430.1	430.1	428.5	428.5	429.2	428.5	429.2	430.1	430.1	431.5
30°	404.4	403.5	402.8	401.9	401.9	402.8	402.8	402.8	403.5	405.1	405.1
32.5°	377.8	376.2	374.7	374.7	376.2	375.5	376.2	376.2	377.8	377.8	379.4
35°	349.1	349.1	347.5	348.2	348.2	348.2	348.2	349.8	351.3	352.1	353.6
37.5°	322.5	320.2	320.9	320.9	321.8	320.9	323.3	323.3	324.9	324.9	326.5
40°	293.6	293.6	294.5	293.6	294.5	294.5	296.1	297.6	298.3	299.9	300.7
42.5°	266.5	267.9	266.5	267.2	267.9	268.8	269.5	270.3	273.5	275.0	277.3
45°	241.5	242.3	243.0	243.9	243.0	244.6	245.4	246.9	249.3	250.0	250.9
47.5°	217.3	218.2	218.9	219.7	219.7	221.3	222.0	223.6	225.1	226.0	226.7
50°	194.0	195.6	196.3	196.3	197.1	198.7	200.3	200.3	201.8	204.1	204.9
52.5°	173.0	173.0	174.5	175.3	176.1	176.1	178.4	179.2	179.9	181.5	183.1
55°	149.5	151.9	152.7	152.7	154.2	155.8	156.6	157.3	157.3	160.5	160.5
57.5°	129.3	130.1	131.6	131.6	131.6	134.0	134.0	135.6	136.3	137.1	138.7
60°	109.0	110.6	110.6	111.4	110.6	112.1	113.0	114.6	115.3	116.1	116.8
62.5°	90.4	90.4	91.1	91.1	91.1	91.1	92.7	92.7	94.2	95.1	95.8
65°	72.5	72.5	72.5	72.5	72.5	72.5	72.5	72.5	73.2	73.2	74.8
67.5°	56.1	55.3	53.7	54.6	53.7	53.7	53.0	53.0	53.7	53.7	55.3
70°	40.5	39.8	38.2	38.2	37.4	36.7	35.8	35.1	34.3	34.3	34.3
72.5°	26.4	24.9	22.6	21.8	21.8	20.3	18.8	17.9	17.9	17.9	17.9
75°	13.2	11.7	10.1	9.4	9.4	7.8	8.5	7.8	7.8	7.8	7.8
77.5°	5.4	3.8	3.1	3.1	3.1	2.3	2.3	2.3	2.3	2.3	2.3
80°	1.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
82.5°	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	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	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: P583702

CATALOG NUMBER: HC810D010-HM80520827-81RWWC

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	583.5	583.5	583.5	583.5	583.5	583.5	583.5	583.5
2.5°	580.3	580.3	578.8	579.6	579.6	579.6	579.6	579.6
5°	573.4	574.2	573.4	574.2	574.2	573.4	573.4	573.4
7.5°	566.4	567.1	566.4	567.1	567.1	567.1	566.4	566.4
10°	557.7	557.7	557.7	557.7	557.7	557.0	557.7	557.7
12.5°	546.1	546.1	546.1	546.9	546.9	546.1	546.1	545.3
15°	533.7	532.1	532.8	533.7	532.8	532.8	532.8	532.8
17.5°	516.5	517.2	516.5	516.5	516.5	516.5	517.2	516.5
20°	498.6	498.6	499.3	498.6	498.6	498.6	498.6	497.7
22.5°	478.3	477.6	477.6	478.3	478.3	477.6	478.3	478.3
25°	455.7	456.5	455.7	455.7	456.5	456.5	456.5	455.7
27.5°	431.5	432.4	433.1	432.4	432.4	432.4	433.1	433.9
30°	406.6	408.2	406.6	406.6	408.2	407.5	408.2	408.2
32.5°	380.2	382.5	380.9	382.5	382.5	383.3	382.5	383.3
35°	353.6	356.0	356.0	356.0	356.8	357.6	357.6	356.8
37.5°	328.7	329.5	329.5	331.0	331.9	332.6	332.6	331.9
40°	303.0	304.6	305.4	305.4	305.4	307.0	308.4	307.0
42.5°	278.1	278.9	279.7	279.7	281.3	282.0	282.8	282.8
45°	254.0	255.5	256.3	257.1	257.8	259.4	258.7	260.2
47.5°	229.0	231.4	232.1	232.9	234.5	235.2	236.1	236.8
50°	206.4	207.9	207.9	209.5	211.9	211.9	213.5	214.2
52.5°	183.9	184.6	185.3	186.2	187.8	189.3	189.3	190.9
55°	162.0	162.9	162.9	163.6	164.3	167.4	168.3	168.3
57.5°	139.4	139.4	141.0	141.8	142.6	144.1	144.1	144.1
60°	117.7	118.4	118.4	119.2	120.0	121.5	122.4	121.5
62.5°	95.8	96.6	96.6	97.4	98.9	99.8	98.9	98.9
65°	75.6	76.3	76.3	77.2	78.7	78.7	77.9	78.7
67.5°	55.3	55.3	55.3	55.3	55.3	55.3	55.3	55.3
70°	35.1	34.3	33.5	34.3	34.3	34.3	33.5	35.1
72.5°	17.2	17.9	17.9	17.9	17.9	17.9	17.9	17.2
75°	7.8	7.8	7.0	7.0	7.0	7.8	7.8	7.0
77.5°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
80°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	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)