

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: P583879

Luminaire Tested: **HC815D010-HM80520835-81WWBB**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P583879
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-HM80520835-81WWBB
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, WHITE BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1378.2 lumens
Efficiency: N/A
Efficacy: 98.4 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

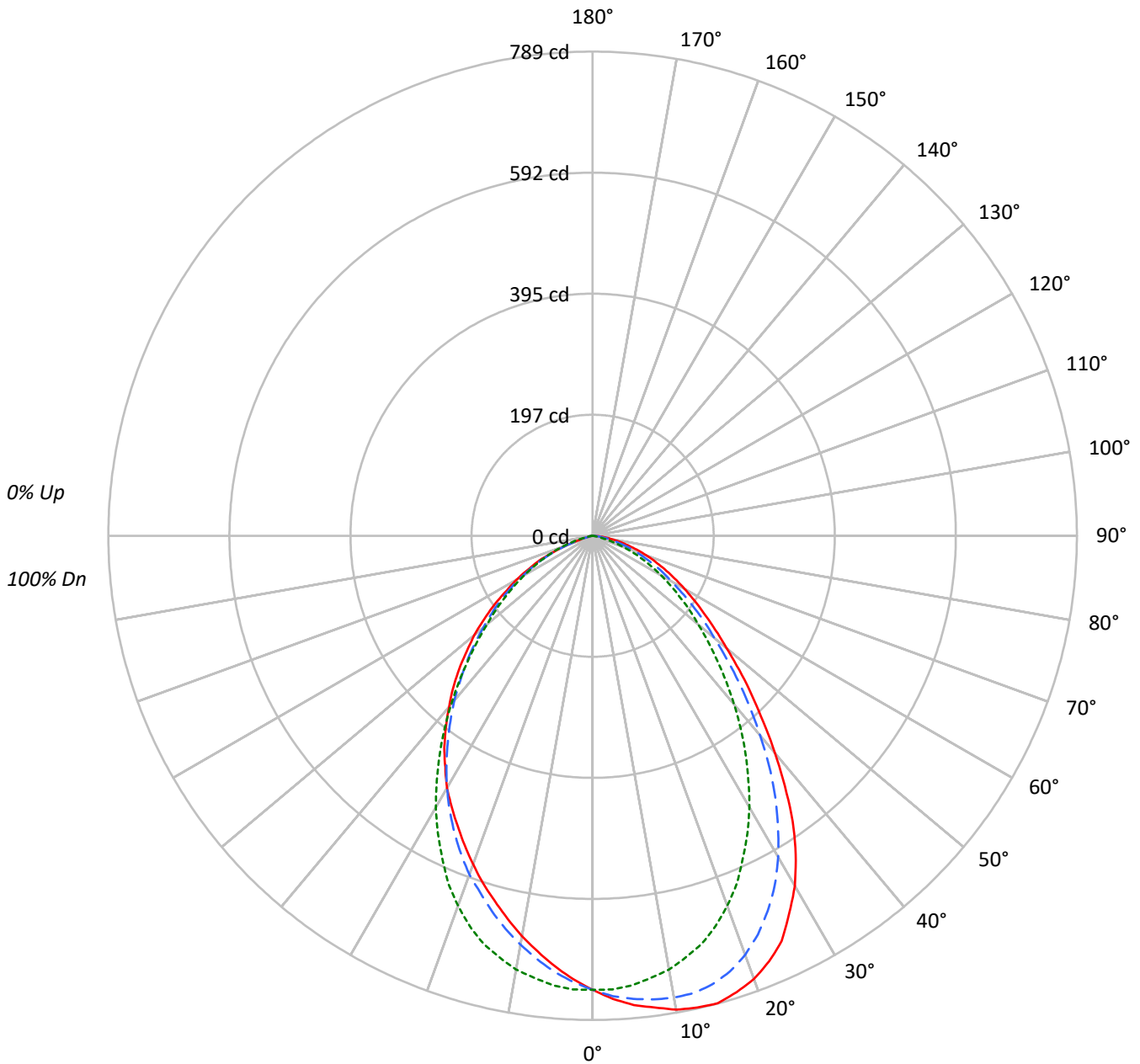
Input Watts (W): 14
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
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	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°	22816	22816	22816
5°	23760	22764	21804
10°	24552	22476	20744
15°	25175	21961	19665
20°	25225	21048	18692
25°	24797	19717	17723
30°	23468	18191	16892
35°	21401	16360	15863
40°	18605	14427	14648
45°	15965	12490	13410
50°	13639	10770	12041
55°	11951	9279	10462
60°	10645	7913	8801
65°	9442	6450	7019
70°	8376	4787	3985
75°	6982	2502	1191
80°	5505	799	195
85°	3927	389	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	69.7	5.1
10°-20°	195.4	14.2
20°-30°	276.6	20.1
30°-40°	289.4	21.0
40°-50°	241.3	17.5
50°-60°	171.1	12.4
60°-70°	98.6	7.2
70°-80°	31.7	2.3
80°-90°	4.4	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°	541.7	39.3
0°-40°	831.0	60.3
0°-60°	1243.5	90.2
0°-90°	1378.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1378.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	740	740	740	740	740	
5°	768	758	735	713	704	74
15°	789	756	688	634	616	222
25°	729	675	580	533	521	333
35°	568	519	435	411	421	352
45°	366	336	286	290	308	284
55°	222	199	173	181	195	201
65°	129	108	88	88	96	129
75°	59	43	21	10	10	64
85°	11	6	1	0	0	14
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°	739.9	739.9	739.9	739.9	739.9	739.9	739.9	739.9	739.9	739.9	739.9
2.5°	755.4	754.2	753.1	754.2	753.1	754.2	753.1	753.1	752.0	751.0	751.0
5°	767.6	766.4	766.4	766.4	765.3	764.2	764.2	763.1	761.0	759.8	757.6
7.5°	775.3	776.4	776.4	776.4	774.2	774.2	771.9	769.8	767.6	765.3	762.0
10°	784.1	784.1	783.0	781.9	779.8	778.6	777.5	775.3	771.9	767.6	764.2
12.5°	787.5	787.5	786.4	784.1	783.0	781.9	780.8	777.5	773.1	767.6	763.1
15°	788.6	786.4	785.2	784.1	781.9	778.6	778.6	774.2	768.7	762.0	756.5
17.5°	779.8	780.8	778.6	776.4	773.1	770.8	767.6	764.2	757.6	749.9	744.3
20°	768.7	767.6	766.4	763.1	758.7	757.6	754.2	748.8	743.2	734.3	726.6
22.5°	751.0	749.9	747.6	745.4	741.0	738.8	735.4	728.8	721.1	712.3	703.4
25°	728.8	726.6	723.4	718.9	715.5	713.4	708.9	702.3	693.5	683.5	674.7
27.5°	693.5	696.7	694.6	687.9	684.6	680.2	679.0	670.2	662.5	652.5	642.6
30°	659.1	659.1	655.9	652.5	647.0	643.7	639.3	632.6	624.9	612.7	604.9
32.5°	616.0	614.9	610.5	609.4	604.9	598.3	597.2	588.4	580.7	571.8	561.8
35°	568.5	566.2	561.8	558.5	556.3	553.0	549.7	541.9	534.2	525.4	518.8
37.5°	514.3	514.3	513.2	507.7	505.4	503.2	500.0	492.1	487.8	478.9	472.2
40°	462.2	461.2	457.9	456.8	454.5	451.3	449.0	444.6	438.0	431.3	424.6
42.5°	411.4	412.5	408.1	409.2	404.8	402.6	401.5	394.9	391.5	384.9	379.3
45°	366.1	365.0	362.7	361.6	359.5	357.3	355.0	351.7	346.2	339.6	336.2
47.5°	324.0	320.8	320.8	319.6	318.5	314.1	312.9	309.7	306.3	299.7	295.3
50°	284.3	284.3	284.3	283.2	279.8	278.7	276.5	273.2	269.8	265.5	258.8
52.5°	252.2	252.2	252.2	251.0	246.7	245.6	244.4	240.0	235.6	232.2	227.9
55°	222.3	223.4	222.3	220.0	216.8	216.8	213.4	211.2	206.8	203.5	199.1
57.5°	196.9	196.9	194.6	193.5	191.4	190.3	188.0	185.8	180.3	177.0	171.5
60°	172.6	171.5	171.5	169.2	167.0	164.8	163.6	160.4	158.1	152.7	148.2
62.5°	150.4	150.4	148.2	148.2	143.8	143.8	142.7	139.3	136.0	130.5	128.3
65°	129.4	129.4	128.3	127.1	123.9	122.8	121.7	118.3	115.1	111.7	108.3
67.5°	110.6	110.6	108.3	107.2	105.1	104.0	101.7	99.5	96.2	92.9	89.5
70°	92.9	91.8	90.7	89.5	87.4	86.3	84.1	81.8	78.6	76.3	73.0
72.5°	75.2	75.2	74.1	71.9	70.7	69.6	68.6	66.4	63.0	59.8	57.5
75°	58.6	58.6	58.6	56.4	54.2	53.1	53.1	50.9	48.7	45.3	43.1
77.5°	45.3	44.2	43.1	43.1	41.0	39.8	38.7	37.6	34.3	33.1	31.0
80°	31.0	32.1	31.0	29.9	28.8	27.6	27.6	25.4	24.3	22.2	19.9
82.5°	21.0	19.9	19.9	18.8	18.8	17.7	17.7	15.4	14.3	13.3	12.2
85°	11.1	11.1	10.0	10.0	10.0	8.8	8.8	7.7	7.7	6.6	5.5
87.5°	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	2.2	2.2	2.2
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°	739.9	739.9	739.9	739.9	739.9	739.9	739.9	739.9	739.9	739.9	739.9
2.5°	749.9	747.6	746.5	746.5	745.4	744.3	743.2	742.2	739.9	739.9	737.7
5°	755.4	753.1	752.0	748.8	746.5	746.5	742.2	741.0	737.7	735.4	733.2
7.5°	759.8	755.4	752.0	748.8	746.5	744.3	739.9	735.4	731.1	726.6	724.4
10°	759.8	755.4	749.9	744.3	742.2	739.9	734.3	727.7	722.2	717.8	712.3
12.5°	757.6	751.0	744.3	739.9	735.4	732.2	725.5	718.9	712.3	703.4	699.0
15°	751.0	742.2	735.4	727.7	724.4	718.9	713.4	703.4	695.6	687.9	682.4
17.5°	737.7	726.6	718.9	711.2	705.6	702.3	693.5	684.6	675.8	666.8	660.2
20°	717.8	707.8	699.0	689.0	684.6	680.2	669.1	660.2	651.4	641.4	634.8
22.5°	693.5	683.5	671.3	663.6	657.0	651.4	641.4	631.5	622.6	613.8	604.9
25°	663.6	653.6	642.6	630.5	626.0	620.5	609.4	599.5	589.5	579.5	571.8
27.5°	631.5	618.3	609.4	596.1	591.7	586.1	573.9	563.0	554.1	546.3	537.6
30°	592.7	582.9	570.7	558.5	554.1	548.5	538.6	528.6	519.8	510.9	502.1
32.5°	550.8	540.8	528.6	519.8	513.2	508.8	498.7	490.0	481.0	472.2	464.5
35°	506.6	495.5	486.6	477.8	472.2	466.7	456.8	449.0	442.4	434.6	426.9
37.5°	461.2	453.4	444.6	434.6	429.1	424.6	416.9	408.1	402.6	396.0	390.4
40°	416.9	408.1	400.3	391.5	387.0	383.8	376.1	369.5	363.9	358.4	355.0
42.5°	371.6	363.9	356.1	350.5	347.3	343.9	338.5	330.7	327.4	321.9	318.5
45°	329.6	322.9	317.4	309.7	307.5	305.2	298.6	293.1	289.8	286.4	284.3
47.5°	289.8	285.3	278.7	274.3	271.0	268.7	264.4	259.9	256.5	254.4	252.2
50°	255.5	249.9	245.6	241.1	238.8	235.6	231.1	229.0	226.8	224.5	224.5
52.5°	223.4	217.9	213.4	210.2	207.9	205.7	202.4	201.2	199.1	199.1	198.0
55°	193.5	190.3	185.8	181.4	180.3	179.2	177.0	174.7	173.6	172.6	173.6
57.5°	168.1	164.8	160.4	157.0	155.9	154.8	153.8	151.5	150.4	150.4	150.4
60°	144.8	141.6	138.2	135.0	135.0	132.7	131.6	130.5	129.4	128.3	128.3
62.5°	123.9	120.5	117.2	115.1	113.9	112.8	110.6	109.5	108.3	108.3	107.2
65°	105.1	100.6	99.5	96.2	95.1	94.0	92.9	90.7	89.5	88.4	87.4
67.5°	86.3	84.1	80.7	78.6	77.4	76.3	75.2	73.0	71.9	70.7	68.6
70°	69.6	67.5	65.3	63.0	61.9	60.9	58.6	56.4	55.3	53.1	49.8
72.5°	54.2	51.9	49.8	47.6	46.4	45.3	43.1	41.0	38.7	36.5	34.3
75°	41.0	38.7	35.4	33.1	32.1	32.1	28.8	26.5	24.3	21.0	18.8
77.5°	28.8	25.4	24.3	22.2	21.0	18.8	16.6	14.3	12.2	11.1	8.8
80°	18.8	16.6	14.3	13.3	12.2	11.1	10.0	7.7	5.5	4.5	3.4
82.5°	11.1	10.0	8.8	7.7	6.6	5.5	4.5	4.5	3.4	2.2	1.1
85°	5.5	4.5	3.4	3.4	2.2	2.2	2.2	1.1	1.1	1.1	1.1
87.5°	2.2	1.1	1.1	1.1	1.1	1.1	1.1	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°	739.9	739.9	739.9	739.9	739.9	739.9	739.9	739.9	739.9	739.9	739.9
2.5°	736.6	735.4	734.3	733.2	733.2	731.1	731.1	730.0	727.7	726.6	726.6
5°	730.0	726.6	724.4	723.4	722.2	718.9	717.8	715.5	713.4	711.2	710.0
7.5°	720.0	714.4	712.3	711.2	707.8	704.4	702.3	699.0	695.6	692.4	691.2
10°	707.8	702.3	696.7	694.6	691.2	689.0	684.6	680.2	676.8	673.5	670.2
12.5°	692.4	685.6	680.2	677.9	674.7	670.2	663.6	661.4	655.9	653.6	649.3
15°	674.7	666.8	661.4	658.1	654.7	648.0	643.7	639.3	633.7	631.5	627.1
17.5°	652.5	643.7	638.2	634.8	632.6	627.1	620.5	614.9	609.4	607.2	603.8
20°	626.0	620.5	612.7	609.4	607.2	600.6	593.9	591.7	587.3	582.9	579.5
22.5°	596.1	590.6	582.9	579.5	578.4	572.9	567.3	564.1	560.7	557.4	554.1
25°	565.1	558.5	551.9	549.7	547.4	543.0	538.6	536.3	533.1	530.9	528.6
27.5°	532.0	525.4	519.8	516.5	514.3	510.9	508.8	506.6	504.3	502.1	501.0
30°	496.6	490.0	485.5	483.3	481.0	480.0	476.7	475.6	474.4	472.2	473.3
32.5°	461.2	455.6	451.3	447.9	447.9	445.7	444.6	444.6	443.4	443.4	443.4
35°	422.5	419.2	415.8	414.8	413.7	412.5	411.4	412.5	411.4	412.5	413.7
37.5°	387.0	383.8	381.5	380.4	379.3	380.4	379.3	379.3	380.4	382.7	383.8
40°	350.5	348.4	346.2	347.3	346.2	346.2	346.2	349.5	350.5	351.7	352.8
42.5°	316.3	314.1	312.9	312.9	314.1	312.9	315.2	316.3	318.5	321.9	324.0
45°	283.2	282.0	282.0	283.2	282.0	284.3	284.3	286.4	289.8	292.0	294.1
47.5°	252.2	252.2	252.2	253.3	253.3	254.4	256.5	257.7	259.9	262.1	264.4
50°	223.4	224.5	225.6	225.6	225.6	227.9	230.0	231.1	232.2	233.4	236.7
52.5°	198.0	199.1	199.1	200.2	201.2	202.4	203.5	205.7	206.8	209.1	210.2
55°	173.6	173.6	175.8	177.0	177.0	177.0	179.2	179.2	181.4	182.4	184.7
57.5°	150.4	151.5	151.5	152.7	152.7	153.8	154.8	155.9	157.0	158.1	159.3
60°	128.3	128.3	128.3	129.4	130.5	131.6	130.5	132.7	132.7	135.0	136.0
62.5°	107.2	108.3	108.3	108.3	108.3	108.3	108.3	109.5	110.6	111.7	112.8
65°	87.4	87.4	87.4	86.3	87.4	86.3	87.4	88.4	88.4	89.5	90.7
67.5°	67.5	67.5	65.3	65.3	66.4	66.4	66.4	66.4	65.3	67.5	67.5
70°	48.7	47.6	46.4	45.3	45.3	44.2	44.2	43.1	43.1	43.1	43.1
72.5°	32.1	29.9	27.6	26.5	25.4	25.4	23.3	22.2	23.3	23.3	23.3
75°	16.6	14.3	13.3	12.2	11.1	11.1	10.0	10.0	10.0	10.0	10.0
77.5°	6.6	5.5	4.5	4.5	3.4	3.4	3.4	3.4	3.4	3.4	3.4
80°	2.2	2.2	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
82.5°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
85°	1.1	0.0	0.0	1.1	0.0	1.1	1.1	1.1	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: P583879

CATALOG NUMBER: HC815D010-HM80520835-81WWBB

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	739.9	739.9	739.9	739.9	739.9	739.9	739.9	739.9
2.5°	725.5	725.5	724.4	725.5	723.4	724.4	723.4	723.4
5°	708.9	706.7	706.7	706.7	705.6	705.6	704.4	704.4
7.5°	689.0	687.9	686.8	685.6	684.6	683.5	683.5	683.5
10°	669.1	666.8	666.8	665.8	663.6	662.5	662.5	662.5
12.5°	645.9	644.8	643.7	643.7	639.3	640.3	639.3	639.3
15°	623.7	622.6	622.6	619.4	617.1	617.1	617.1	616.0
17.5°	600.6	599.5	598.3	596.1	593.9	593.9	592.7	593.9
20°	576.2	575.1	572.9	572.9	571.8	570.7	568.5	569.6
22.5°	551.9	549.7	548.5	548.5	547.4	547.4	545.3	545.3
25°	526.5	525.4	524.2	525.4	523.1	523.1	520.9	520.9
27.5°	500.0	498.7	498.7	498.7	497.7	498.7	497.7	497.7
30°	473.3	473.3	472.2	472.2	473.3	472.2	473.3	474.4
32.5°	444.6	444.6	445.7	445.7	446.8	446.8	446.8	446.8
35°	414.8	416.9	416.9	418.0	419.2	420.3	420.3	421.4
37.5°	387.0	388.3	389.3	390.4	392.6	392.6	392.6	392.6
40°	357.3	358.4	360.5	359.5	363.9	365.0	363.9	363.9
42.5°	326.3	328.5	329.6	331.7	332.9	335.1	336.2	336.2
45°	297.5	298.6	300.8	303.1	304.1	307.5	307.5	307.5
47.5°	267.6	269.8	271.0	273.2	274.3	277.6	278.7	277.6
50°	238.8	241.1	243.3	243.3	246.7	247.7	249.9	251.0
52.5°	211.2	212.3	214.6	215.7	217.9	220.0	221.2	222.3
55°	184.7	185.8	188.0	188.0	191.4	192.4	194.6	194.6
57.5°	160.4	161.5	163.6	162.6	164.8	167.0	167.0	165.9
60°	137.1	137.1	137.1	139.3	140.5	141.6	142.7	142.7
62.5°	112.8	115.1	116.2	116.2	117.2	118.3	118.3	117.2
65°	90.7	92.9	94.0	94.0	95.1	95.1	95.1	96.2
67.5°	68.6	68.6	68.6	69.6	68.6	68.6	68.6	68.6
70°	43.1	43.1	43.1	43.1	42.1	43.1	43.1	44.2
72.5°	23.3	23.3	23.3	23.3	23.3	23.3	23.3	23.3
75°	10.0	10.0	10.0	11.1	10.0	10.0	10.0	10.0
77.5°	4.5	3.4	4.5	4.5	3.4	3.4	3.4	3.4
80°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
82.5°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
85°	0.0	1.1	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)