

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: P583847

Luminaire Tested: **HC815D010-HM80520827-81WWWB**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P583847
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: HC815D010-HM80520827-81WWWB
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, BLACK BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1513.7 lumens
Efficiency: N/A
Efficacy: 108.1 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

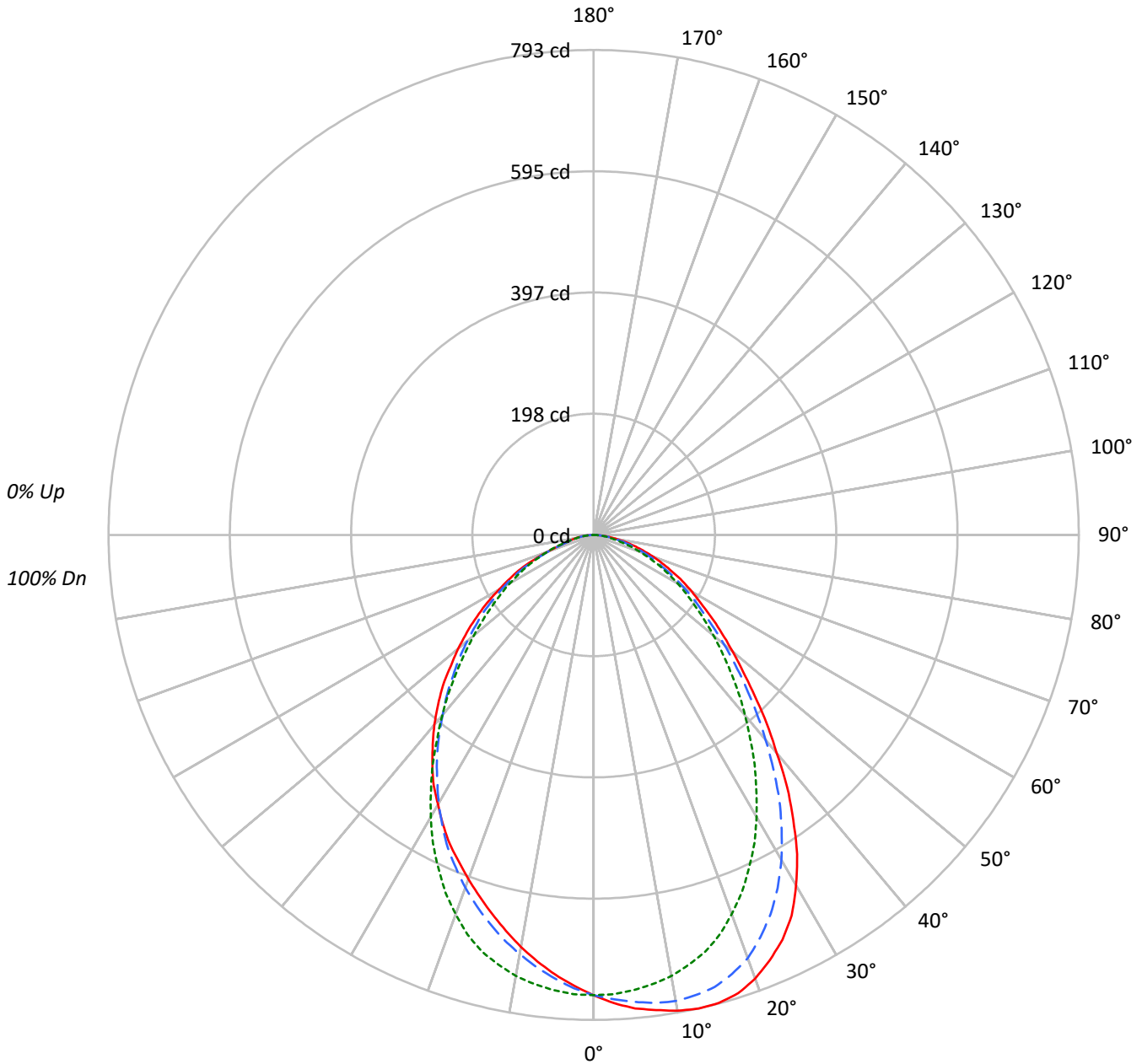
Input Watts (W): 14
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	23207	23207	23207
5°	24058	23129	22340
10°	24736	22930	21424
15°	25290	22522	20476
20°	25330	21645	19643
25°	24844	20442	18951
30°	23565	18957	18120
35°	21412	17264	17305
40°	18718	15494	16307
45°	16223	13798	15198
50°	14210	12257	13845
55°	12645	10865	12526
60°	11409	9757	11015
65°	10295	8581	9595
70°	9259	7222	7141
75°	8149	5731	5349
80°	6819	4759	5132
85°	5272	4175	4529



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	71.0	4.7
10°-20°	200.0	13.2
20°-30°	285.8	18.9
30°-40°	303.7	20.1
40°-50°	261.5	17.3
50°-60°	195.5	12.9
60°-70°	124.7	8.2
70°-80°	56.8	3.7
80°-90°	14.9	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°	556.8	36.8
0°-40°	860.5	56.8
0°-60°	1317.4	87.0
0°-90°	1513.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1513.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	753	753	753	753	753	
5°	777	766	747	728	722	74
15°	792	765	706	657	641	223
25°	730	684	601	564	557	334
35°	569	529	459	447	460	354
45°	372	352	316	325	348	289
55°	235	216	202	219	233	211
65°	141	125	118	123	132	141
75°	68	59	48	44	45	73
85°	15	13	12	13	13	18
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°	752.6	752.6	752.6	752.6	752.6	752.6	752.6	752.6	752.6	752.6	752.6
2.5°	766.5	764.3	765.4	764.3	765.4	765.4	763.4	763.4	763.4	763.4	760.1
5°	777.2	776.1	776.1	775.1	774.0	775.1	774.0	772.9	770.8	769.8	766.5
7.5°	783.6	783.6	783.6	783.6	782.5	781.4	780.5	778.3	776.1	774.0	771.9
10°	790.0	791.1	790.0	789.0	787.9	785.8	784.7	782.5	779.4	776.1	774.0
12.5°	793.3	793.3	792.2	792.2	790.0	789.0	785.8	782.5	779.4	776.1	770.8
15°	792.2	792.2	791.1	790.0	786.9	785.8	783.6	780.5	775.1	770.8	765.4
17.5°	785.8	784.7	782.5	782.5	778.3	777.2	775.1	770.8	765.4	759.0	752.6
20°	771.9	771.9	770.8	769.8	765.4	762.3	760.1	754.8	750.5	743.0	736.6
22.5°	752.6	754.8	752.6	750.5	745.2	744.1	740.8	734.4	728.1	719.5	712.0
25°	730.2	729.1	728.1	725.9	721.7	719.5	715.2	708.8	702.4	692.8	684.2
27.5°	701.3	697.1	697.1	692.8	689.5	686.4	684.2	677.8	669.3	661.8	651.1
30°	661.8	662.9	657.4	656.4	651.1	648.9	644.7	638.3	630.7	622.1	613.7
32.5°	619.0	615.8	615.8	611.5	607.2	604.1	603.0	595.5	589.0	580.4	571.9
35°	568.8	568.8	565.5	564.4	560.2	558.0	554.9	550.6	543.1	535.6	529.2
37.5°	519.6	517.4	516.3	514.2	511.0	507.8	507.8	500.3	499.2	490.7	482.1
40°	465.0	467.2	465.0	461.9	460.8	458.6	457.5	453.3	450.1	442.6	437.3
42.5°	419.1	416.9	416.9	415.8	411.6	411.6	409.5	407.3	402.0	399.8	393.4
45°	372.0	374.2	371.0	372.0	367.8	367.8	367.8	363.4	359.2	356.0	351.7
47.5°	331.4	332.5	332.5	329.3	328.2	328.2	326.1	323.9	320.8	316.4	313.2
50°	296.2	297.2	295.1	294.0	291.9	290.8	290.8	286.5	284.4	280.0	278.0
52.5°	264.0	264.0	263.1	263.1	259.8	259.8	257.6	254.5	252.3	250.2	244.9
55°	235.2	235.2	234.1	233.0	233.0	229.8	228.8	225.6	223.4	219.2	215.9
57.5°	207.4	208.5	207.4	206.3	205.2	204.2	202.1	198.8	196.7	193.5	191.4
60°	185.0	185.0	183.9	182.8	180.6	179.5	178.6	176.4	173.2	171.1	167.9
62.5°	163.5	162.6	161.5	160.4	158.2	158.2	156.0	154.0	150.7	148.6	146.4
65°	141.1	141.1	140.0	140.0	138.9	136.9	135.8	134.7	130.4	129.4	125.1
67.5°	120.9	121.8	119.8	119.8	117.6	117.6	116.5	113.3	112.3	110.1	108.0
70°	102.7	102.7	102.7	101.6	99.4	98.3	97.2	95.2	94.1	91.9	89.8
72.5°	84.5	84.5	83.4	83.4	82.3	81.2	80.1	78.1	78.1	75.9	73.7
75°	68.4	68.4	67.4	66.3	65.2	65.2	64.1	63.0	61.0	59.9	58.8
77.5°	52.4	52.4	52.4	51.3	50.2	50.2	50.2	48.1	45.9	45.9	44.9
80°	38.4	38.4	37.5	37.5	36.4	36.4	36.4	35.3	34.2	33.1	32.1
82.5°	25.7	25.7	25.7	25.7	24.6	24.6	24.6	23.5	22.4	22.4	22.4
85°	14.9	14.9	14.9	14.9	13.9	13.9	13.9	13.9	13.9	12.8	12.8
87.5°	6.4	5.3	6.4	5.3	6.4	5.3	6.4	5.3	5.3	5.3	5.3
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°	752.6	752.6	752.6	752.6	752.6	752.6	752.6	752.6	752.6	752.6	752.6
2.5°	761.2	760.1	759.0	757.9	757.9	756.9	754.8	753.7	752.6	751.6	751.6
5°	765.4	764.3	762.3	760.1	759.0	756.9	754.8	752.6	750.5	747.2	746.3
7.5°	768.7	765.4	763.4	759.0	757.9	755.8	752.6	749.4	745.2	740.8	737.7
10°	768.7	764.3	761.2	755.8	753.7	751.6	747.2	741.9	736.6	732.3	727.0
12.5°	766.5	761.2	755.8	750.5	747.2	744.1	737.7	732.3	725.9	719.5	715.2
15°	759.0	752.6	746.3	739.7	736.6	732.3	725.9	718.4	712.0	705.5	698.1
17.5°	745.2	738.8	731.2	723.7	719.5	716.3	706.6	701.3	691.7	685.3	678.9
20°	727.0	719.5	709.9	702.4	697.1	693.8	686.4	676.7	669.3	659.6	653.2
22.5°	703.5	693.8	684.2	676.7	671.4	667.1	657.4	647.8	641.4	632.9	625.4
25°	675.6	666.0	656.4	645.8	640.3	636.1	627.6	619.0	610.5	600.8	594.4
27.5°	642.5	631.8	623.2	613.7	608.3	601.9	592.3	583.7	575.1	568.8	560.2
30°	606.1	594.4	585.9	576.2	570.9	565.5	555.9	547.3	539.8	532.4	528.2
32.5°	562.4	553.8	545.3	535.6	531.3	528.2	518.5	510.0	501.4	495.0	491.8
35°	520.7	511.0	503.6	495.0	489.6	486.5	477.9	470.4	466.1	458.6	454.4
37.5°	476.8	469.3	460.8	452.2	449.0	445.8	439.3	431.9	425.5	420.2	418.0
40°	430.8	424.4	416.9	411.6	408.4	405.1	399.8	394.5	390.2	384.9	382.7
42.5°	387.0	382.7	376.3	369.9	366.7	365.6	359.2	354.9	352.8	350.7	348.5
45°	347.4	341.0	336.8	332.5	329.3	327.2	323.9	320.8	318.6	316.4	314.3
47.5°	309.0	303.7	299.3	296.2	292.9	291.9	289.7	286.5	284.4	284.4	284.4
50°	273.7	269.4	265.1	263.1	262.0	259.8	257.6	256.5	255.5	255.5	255.5
52.5°	242.7	238.3	235.2	233.0	233.0	230.9	228.8	227.7	227.7	227.7	227.7
55°	213.8	210.6	208.5	206.3	204.2	203.2	203.2	203.2	202.1	202.1	203.2
57.5°	188.1	186.1	182.8	180.6	179.5	179.5	178.6	177.5	178.6	179.5	180.6
60°	164.6	162.6	161.5	158.2	158.2	158.2	157.1	157.1	157.1	158.2	159.3
62.5°	143.3	142.2	140.0	138.9	137.9	137.9	136.9	136.9	136.9	136.9	137.9
65°	124.0	121.8	119.8	119.8	119.8	118.7	118.7	116.5	117.6	117.6	116.5
67.5°	105.8	103.8	102.7	101.6	100.5	100.5	99.4	98.3	97.2	97.2	97.2
70°	88.7	86.6	86.6	84.5	84.5	83.4	82.3	82.3	81.2	80.1	79.2
72.5°	71.6	70.6	69.5	68.4	68.4	68.4	67.4	66.3	65.2	64.1	62.1
75°	56.6	56.6	54.5	53.5	53.5	52.4	51.3	50.2	49.2	48.1	47.0
77.5°	43.9	42.8	40.6	39.5	39.5	39.5	38.4	37.5	36.4	35.3	34.2
80°	32.1	31.0	29.9	28.9	28.9	28.9	27.8	27.8	26.8	26.8	26.8
82.5°	21.3	21.3	20.4	20.4	20.4	20.4	19.3	19.3	19.3	19.3	19.3
85°	12.8	12.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8
87.5°	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3
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°	752.6	752.6	752.6	752.6	752.6	752.6	752.6	752.6	752.6	752.6	752.6
2.5°	749.4	749.4	747.2	746.3	745.2	746.3	744.1	743.0	741.9	741.9	740.8
5°	743.0	741.9	737.7	736.6	735.5	734.4	732.3	730.2	728.1	727.0	725.9
7.5°	734.4	731.2	727.0	725.9	724.8	721.7	718.4	716.3	713.1	712.0	709.9
10°	722.6	718.4	715.2	712.0	709.9	706.6	703.5	700.2	696.0	694.9	691.7
12.5°	708.8	703.5	697.1	696.0	692.8	688.5	684.2	680.9	677.8	675.6	672.4
15°	691.7	686.4	680.0	676.7	673.5	670.3	664.9	660.7	657.4	654.3	651.1
17.5°	671.4	664.9	659.6	656.4	654.3	648.9	644.7	639.3	636.1	632.9	629.7
20°	646.8	641.4	634.0	630.7	629.7	625.4	620.1	617.9	613.7	610.5	608.3
22.5°	619.0	613.7	607.2	605.2	600.8	598.6	593.3	591.2	589.0	585.9	584.8
25°	588.0	582.6	577.3	576.2	573.0	570.9	567.7	564.4	564.4	561.3	561.3
27.5°	555.9	550.6	546.3	544.2	543.1	540.9	537.8	536.7	535.6	534.5	534.5
30°	521.8	515.3	513.2	512.1	511.0	508.9	507.8	505.6	506.7	507.8	506.7
32.5°	485.4	483.2	479.0	476.8	477.9	476.8	474.6	476.8	475.7	477.9	479.0
35°	450.1	447.9	445.8	445.8	443.7	443.7	443.7	444.8	446.8	447.9	450.1
37.5°	415.8	412.7	411.6	410.5	411.6	411.6	411.6	413.7	415.8	418.0	421.3
40°	379.6	377.4	377.4	377.4	377.4	380.5	379.6	381.6	383.8	387.0	390.2
42.5°	345.4	345.4	346.4	346.4	346.4	346.4	348.5	351.7	354.9	358.1	361.4
45°	313.2	313.2	313.2	315.3	315.3	316.4	320.8	322.8	325.0	328.2	331.4
47.5°	283.3	283.3	284.4	285.5	286.5	288.6	290.8	294.0	297.2	299.3	302.6
50°	255.5	256.5	258.7	260.9	260.9	262.0	265.1	267.3	269.4	272.6	273.7
52.5°	228.8	230.9	233.0	234.1	235.2	237.4	238.3	241.6	242.7	245.9	246.9
55°	204.2	205.2	208.5	209.5	209.5	211.7	213.8	215.9	219.2	219.2	221.2
57.5°	181.7	182.8	185.0	186.1	185.0	188.1	189.2	191.4	192.4	194.6	195.7
60°	159.3	161.5	162.6	162.6	163.5	164.6	166.8	166.8	168.9	171.1	171.1
62.5°	137.9	138.9	140.0	141.1	142.2	141.1	144.4	144.4	146.4	147.5	149.7
65°	117.6	118.7	118.7	119.8	119.8	120.9	120.9	121.8	122.9	125.1	126.2
67.5°	97.2	97.2	97.2	98.3	97.2	98.3	98.3	99.4	99.4	101.6	102.7
70°	79.2	78.1	77.0	77.0	77.0	77.0	75.9	77.0	77.0	78.1	78.1
72.5°	61.0	59.9	58.8	57.7	57.7	56.6	55.6	56.6	56.6	57.7	57.7
75°	45.9	43.9	43.9	43.9	42.8	42.8	42.8	43.9	43.9	43.9	44.9
77.5°	34.2	34.2	33.1	33.1	33.1	34.2	34.2	35.3	35.3	35.3	35.3
80°	25.7	26.8	26.8	26.8	26.8	27.8	27.8	27.8	27.8	28.9	28.9
82.5°	19.3	19.3	19.3	19.3	20.4	20.4	20.4	20.4	20.4	20.4	20.4
85°	11.8	12.8	12.8	11.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8
87.5°	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3
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: P583847

CATALOG NUMBER: HC815D010-HM80520827-81WWWB

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	752.6	752.6	752.6	752.6	752.6	752.6	752.6	752.6
2.5°	739.7	739.7	739.7	739.7	738.8	738.8	738.8	737.7
5°	723.7	723.7	723.7	721.7	722.6	722.6	720.6	721.7
7.5°	707.7	706.6	705.5	705.5	704.6	703.5	702.4	703.5
10°	689.5	686.4	686.4	685.3	685.3	683.1	683.1	684.2
12.5°	669.3	667.1	667.1	666.0	664.9	663.8	662.9	662.9
15°	648.9	646.8	645.8	644.7	643.6	641.4	642.5	641.4
17.5°	628.6	625.4	625.4	624.3	623.2	621.2	621.2	620.1
20°	605.2	604.1	601.9	603.0	601.9	599.7	598.6	598.6
22.5°	581.5	581.5	580.4	580.4	579.5	578.4	577.3	577.3
25°	559.1	558.0	559.1	559.1	555.9	555.9	555.9	557.0
27.5°	533.5	534.5	533.5	533.5	533.5	533.5	534.5	533.5
30°	507.8	507.8	507.8	508.9	511.0	510.0	510.0	508.9
32.5°	480.1	481.0	481.0	482.1	483.2	485.4	485.4	486.5
35°	452.2	454.4	455.4	454.4	457.5	457.5	459.7	459.7
37.5°	423.3	424.4	426.6	427.7	429.8	430.8	431.9	431.9
40°	392.3	396.6	397.7	398.7	402.0	402.0	403.1	405.1
42.5°	363.4	367.8	368.9	369.9	372.0	375.2	374.2	376.3
45°	335.7	338.8	339.9	341.0	344.3	345.4	345.4	348.5
47.5°	305.7	307.9	309.0	311.1	313.2	315.3	317.5	316.4
50°	275.8	279.1	281.1	282.2	285.5	286.5	287.6	288.6
52.5°	249.1	251.2	252.3	253.4	256.5	257.6	258.7	260.9
55°	223.4	224.5	226.7	225.6	228.8	229.8	230.9	233.0
57.5°	197.7	198.8	199.9	199.9	202.1	204.2	205.2	206.3
60°	173.2	175.3	176.4	176.4	176.4	178.6	178.6	178.6
62.5°	150.7	150.7	151.8	151.8	154.0	154.0	154.0	154.0
65°	127.2	128.3	129.4	129.4	131.5	130.4	132.6	131.5
67.5°	102.7	102.7	104.7	104.7	103.8	104.7	104.7	104.7
70°	78.1	78.1	79.2	79.2	79.2	79.2	79.2	79.2
72.5°	57.7	57.7	57.7	58.8	57.7	57.7	58.8	57.7
75°	44.9	44.9	44.9	44.9	44.9	44.9	44.9	44.9
77.5°	35.3	35.3	36.4	36.4	36.4	36.4	36.4	36.4
80°	28.9	28.9	28.9	28.9	29.9	28.9	28.9	28.9
82.5°	21.3	20.4	21.3	20.4	21.3	21.3	21.3	21.3
85°	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8
87.5°	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3
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)