

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: P583864

Luminaire Tested: **HC815D010-HM80520830-81WWWB**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P583864
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-HM80520830-81WWWB
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, BLACK BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1505.5 lumens
Efficiency: N/A
Efficacy: 107.5 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

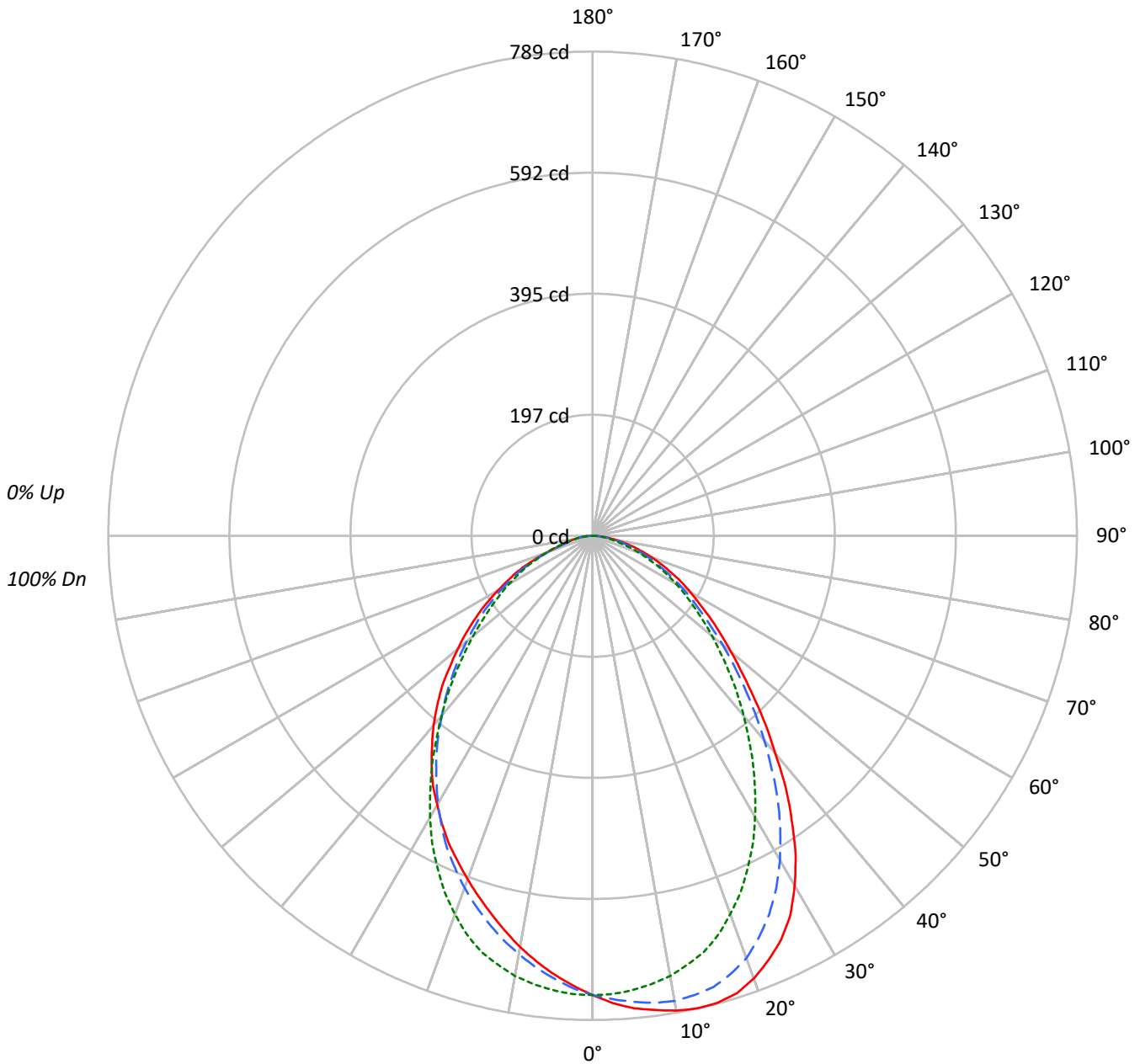
Input Watts (W): 14
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20					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°	23081	23081	23081
5°	23928	23005	22216
10°	24605	22805	21308
15°	25150	22404	20364
20°	25192	21527	19538
25°	24712	20333	18846
30°	23436	18854	18021
35°	21292	17170	17211
40°	18617	15409	16222
45°	16140	13724	15119
50°	14128	12190	13768
55°	12575	10806	12462
60°	11348	9707	10953
65°	10244	8537	9537
70°	9205	7195	7096
75°	8114	5695	5326
80°	6801	4724	5097
85°	5272	4140	4529



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	70.6	4.7
10°-20°	198.9	13.2
20°-30°	284.3	18.9
30°-40°	302.0	20.1
40°-50°	260.0	17.3
50°-60°	194.4	12.9
60°-70°	124.0	8.2
70°-80°	56.4	3.7
80°-90°	14.8	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°	553.8	36.8
0°-40°	855.8	56.8
0°-60°	1310.3	87.0
0°-90°	1505.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1505.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	748	748	748	748	748	
5°	773	762	743	724	718	74
15°	788	761	702	654	638	222
25°	726	680	598	561	554	332
35°	566	526	456	444	457	352
45°	370	350	315	323	347	288
55°	234	215	201	218	232	210
65°	140	124	117	122	131	140
75°	68	58	48	44	45	72
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°	748.5	748.5	748.5	748.5	748.5	748.5	748.5	748.5	748.5	748.5	748.5
2.5°	762.4	760.2	761.3	760.2	761.3	761.3	759.2	759.2	759.2	759.2	756.0
5°	773.0	771.9	771.9	770.8	769.8	770.8	769.8	768.8	766.6	765.5	762.4
7.5°	779.4	779.4	779.4	779.4	778.3	777.2	776.1	774.1	771.9	769.8	767.7
10°	785.8	786.9	785.8	784.7	783.6	781.6	780.5	778.3	775.2	771.9	769.8
12.5°	788.9	788.9	787.8	787.8	785.8	784.7	781.6	778.3	775.2	771.9	766.6
15°	787.8	787.8	786.9	785.8	782.5	781.6	779.4	776.1	770.8	766.6	761.3
17.5°	781.6	780.5	778.3	778.3	774.1	773.0	770.8	766.6	761.3	754.9	748.5
20°	767.7	767.7	766.6	765.5	761.3	758.1	756.0	750.7	746.4	739.0	732.6
22.5°	748.5	750.7	748.5	746.4	741.1	740.0	736.9	730.5	724.1	715.5	708.2
25°	726.3	725.2	724.1	721.9	717.7	715.5	711.3	704.9	698.5	689.0	680.5
27.5°	697.5	693.2	693.2	689.0	685.8	682.6	680.5	674.1	665.6	658.2	647.6
30°	658.2	659.3	654.0	652.9	647.6	645.4	641.2	634.8	627.3	618.8	610.3
32.5°	615.6	612.5	612.5	608.2	603.9	600.7	599.7	592.3	585.9	577.3	568.9
35°	565.6	565.6	562.5	561.4	557.2	555.0	551.9	547.6	540.2	532.7	526.3
37.5°	516.7	514.7	513.6	511.4	508.3	505.0	505.0	497.7	496.6	488.0	479.6
40°	462.5	464.6	462.5	459.3	458.3	456.1	455.1	450.8	447.7	440.2	434.9
42.5°	416.8	414.6	414.6	413.6	409.3	409.3	407.3	405.1	399.8	397.7	391.3
45°	370.1	372.1	369.0	370.1	365.7	365.7	365.7	361.5	357.3	354.0	349.8
47.5°	329.6	330.7	330.7	327.5	326.4	326.4	324.3	322.2	319.0	314.7	311.5
50°	294.5	295.6	293.4	292.5	290.3	289.2	289.2	285.0	282.8	278.6	276.4
52.5°	262.6	262.6	261.6	261.6	258.4	258.4	256.3	253.0	250.9	248.8	243.5
55°	233.9	233.9	232.8	231.8	231.8	228.6	227.5	224.4	222.2	218.0	214.7
57.5°	206.3	207.4	206.3	205.2	204.1	203.0	201.0	197.7	195.7	192.4	190.3
60°	184.0	184.0	182.9	181.8	179.7	178.6	177.6	175.4	172.2	170.1	166.9
62.5°	162.7	161.6	160.5	159.5	157.4	157.4	155.2	153.2	149.9	147.9	145.7
65°	140.4	140.4	139.3	139.3	138.2	136.0	135.1	134.0	129.8	128.7	124.4
67.5°	120.1	121.2	119.1	119.1	117.0	117.0	115.9	112.7	111.7	109.5	107.4
70°	102.1	102.1	102.1	101.0	98.9	97.8	96.8	94.6	93.6	91.5	89.3
72.5°	84.0	84.0	82.9	82.9	81.8	80.9	79.8	77.6	77.6	75.4	73.4
75°	68.1	68.1	67.0	65.9	64.8	64.8	63.7	62.8	60.6	59.5	58.4
77.5°	52.1	52.1	52.1	51.1	50.0	50.0	50.0	47.8	45.7	45.7	44.7
80°	38.3	38.3	37.2	37.2	36.2	36.2	36.2	35.1	34.0	33.0	31.9
82.5°	25.5	25.5	25.5	25.5	24.5	24.5	24.5	23.4	22.3	22.3	22.3
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°	748.5	748.5	748.5	748.5	748.5	748.5	748.5	748.5	748.5	748.5	748.5
2.5°	757.1	756.0	754.9	753.8	753.8	752.8	750.7	749.6	748.5	747.5	747.5
5°	761.3	760.2	758.1	756.0	754.9	752.8	750.7	748.5	746.4	743.2	742.2
7.5°	764.5	761.3	759.2	754.9	753.8	751.7	748.5	745.4	741.1	736.9	733.6
10°	764.5	760.2	757.1	751.7	749.6	747.5	743.2	737.9	732.6	728.3	723.0
12.5°	762.4	757.1	751.7	746.4	743.2	740.0	733.6	728.3	721.9	715.5	711.3
15°	754.9	748.5	742.2	735.8	732.6	728.3	721.9	714.6	708.2	701.8	694.3
17.5°	741.1	734.7	727.3	719.9	715.5	712.4	702.9	697.5	687.9	681.5	675.2
20°	723.0	715.5	706.0	698.5	693.2	690.1	682.6	673.1	665.6	656.0	649.6
22.5°	699.6	690.1	680.5	673.1	667.7	663.5	654.0	644.3	637.9	629.5	622.0
25°	672.0	662.4	652.9	642.3	636.8	632.6	624.2	615.6	607.1	597.6	591.2
27.5°	639.0	628.4	619.9	610.3	605.0	598.6	589.0	580.6	572.0	565.6	557.2
30°	602.9	591.2	582.6	573.1	567.8	562.5	552.9	544.4	536.9	529.5	525.3
32.5°	559.2	550.8	542.2	532.7	528.4	525.3	515.7	507.2	498.6	492.2	489.1
35°	517.8	508.3	500.8	492.2	486.9	483.8	475.3	467.9	463.6	456.1	451.9
37.5°	474.2	466.8	458.3	449.7	446.6	443.4	437.1	429.6	423.2	417.9	415.7
40°	428.5	422.1	414.6	409.3	406.2	403.0	397.7	392.3	388.1	382.8	380.7
42.5°	384.9	380.7	374.3	367.9	364.8	363.7	357.3	353.1	350.9	348.7	346.7
45°	345.6	339.2	335.0	330.7	327.5	325.4	322.2	319.0	316.9	314.7	312.6
47.5°	307.3	302.0	297.8	294.5	291.4	290.3	288.1	285.0	282.8	282.8	282.8
50°	272.2	268.0	263.7	261.6	260.5	258.4	256.3	255.2	254.1	254.1	254.1
52.5°	241.4	237.1	233.9	231.8	231.8	229.7	227.5	226.4	226.4	226.4	226.4
55°	212.7	209.4	207.4	205.2	203.0	202.1	202.1	202.1	201.0	201.0	202.1
57.5°	187.1	185.0	181.8	179.7	178.6	178.6	177.6	176.5	177.6	178.6	179.7
60°	163.8	161.6	160.5	157.4	157.4	157.4	156.3	156.3	156.3	157.4	158.5
62.5°	142.4	141.5	139.3	138.2	137.1	137.1	136.0	136.0	136.0	136.0	137.1
65°	123.4	121.2	119.1	119.1	119.1	118.0	118.0	115.9	117.0	117.0	115.9
67.5°	105.3	103.1	102.1	101.0	99.9	99.9	98.9	97.8	96.8	96.8	96.8
70°	88.2	86.2	86.2	84.0	84.0	82.9	81.8	81.8	80.9	79.8	78.7
72.5°	71.2	70.1	69.2	68.1	68.1	68.1	67.0	65.9	64.8	63.7	61.7
75°	56.4	56.4	54.2	53.1	53.1	52.1	51.1	50.0	48.9	47.8	46.8
77.5°	43.6	42.5	40.4	39.3	39.3	39.3	38.3	37.2	36.2	35.1	34.0
80°	31.9	30.8	29.8	28.7	28.7	28.7	27.6	27.6	26.6	26.6	26.6
82.5°	21.2	21.2	20.2	20.2	20.2	20.2	19.2	19.2	19.2	19.2	19.2
85°	12.8	12.8	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7
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°	748.5	748.5	748.5	748.5	748.5	748.5	748.5	748.5	748.5	748.5	748.5
2.5°	745.4	745.4	743.2	742.2	741.1	742.2	740.0	739.0	737.9	737.9	736.9
5°	739.0	737.9	733.6	732.6	731.6	730.5	728.3	726.3	724.1	723.0	721.9
7.5°	730.5	727.3	723.0	721.9	721.0	717.7	714.6	712.4	709.3	708.2	706.0
10°	718.8	714.6	711.3	708.2	706.0	702.9	699.6	696.5	692.2	691.2	687.9
12.5°	704.9	699.6	693.2	692.2	689.0	684.8	680.5	677.3	674.1	672.0	668.8
15°	687.9	682.6	676.2	673.1	669.9	666.7	661.3	657.1	654.0	650.7	647.6
17.5°	667.7	661.3	656.0	652.9	650.7	645.4	641.2	635.9	632.6	629.5	626.2
20°	643.2	637.9	630.6	627.3	626.2	622.0	616.7	614.6	610.3	607.1	605.0
22.5°	615.6	610.3	603.9	601.8	597.6	595.4	590.1	588.0	585.9	582.6	581.7
25°	584.8	579.5	574.2	573.1	570.0	567.8	564.5	561.4	561.4	558.3	558.3
27.5°	552.9	547.6	543.3	541.2	540.2	538.0	534.8	533.8	532.7	531.6	531.6
30°	518.9	512.5	510.3	509.4	508.3	506.1	505.0	503.0	504.1	505.0	504.1
32.5°	482.7	480.6	476.3	474.2	475.3	474.2	472.1	474.2	473.2	475.3	476.3
35°	447.7	445.5	443.4	443.4	441.3	441.3	441.3	442.4	444.4	445.5	447.7
37.5°	413.6	410.4	409.3	408.3	409.3	409.3	409.3	411.5	413.6	415.7	419.0
40°	377.4	375.4	375.4	375.4	375.4	378.5	377.4	379.6	381.7	384.9	388.1
42.5°	343.4	343.4	344.5	344.5	344.5	344.5	346.7	349.8	353.1	356.2	359.3
45°	311.5	311.5	311.5	313.7	313.7	314.7	319.0	321.1	323.2	326.4	329.6
47.5°	281.7	281.7	282.8	283.9	285.0	287.0	289.2	292.5	295.6	297.8	300.9
50°	254.1	255.2	257.3	259.4	259.4	260.5	263.7	265.8	268.0	271.1	272.2
52.5°	227.5	229.7	231.8	232.8	233.9	236.1	237.1	240.3	241.4	244.5	245.6
55°	203.0	204.1	207.4	208.3	208.3	210.5	212.7	214.7	218.0	218.0	220.2
57.5°	180.8	181.8	184.0	185.0	184.0	187.1	188.2	190.3	191.4	193.5	194.6
60°	158.5	160.5	161.6	161.6	162.7	163.8	165.9	165.9	168.0	170.1	170.1
62.5°	137.1	138.2	139.3	140.4	141.5	140.4	143.5	143.5	145.7	146.8	148.8
65°	117.0	118.0	118.0	119.1	119.1	120.1	120.1	121.2	122.3	124.4	125.4
67.5°	96.8	96.8	96.8	97.8	96.8	97.8	97.8	98.9	98.9	101.0	102.1
70°	78.7	77.6	76.5	76.5	76.5	76.5	75.4	76.5	76.5	77.6	77.6
72.5°	60.6	59.5	58.4	57.4	57.4	56.4	55.3	56.4	56.4	57.4	57.4
75°	45.7	43.6	43.6	43.6	42.5	42.5	42.5	43.6	43.6	43.6	44.7
77.5°	34.0	34.0	33.0	33.0	33.0	34.0	34.0	35.1	35.1	35.1	35.1
80°	25.5	26.6	26.6	26.6	26.6	27.6	27.6	27.6	27.6	28.7	28.7
82.5°	19.2	19.2	19.2	19.2	20.2	20.2	20.2	20.2	20.2	20.2	20.2
85°	11.7	12.8	12.8	11.7	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: P583864

CATALOG NUMBER: HC815D010-HM80520830-81WWWB

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	748.5	748.5	748.5	748.5	748.5	748.5	748.5	748.5
2.5°	735.8	735.8	735.8	735.8	734.7	734.7	734.7	733.6
5°	719.9	719.9	719.9	717.7	718.8	718.8	716.6	717.7
7.5°	703.8	702.9	701.8	701.8	700.7	699.6	698.5	699.6
10°	685.8	682.6	682.6	681.5	681.5	679.4	679.4	680.5
12.5°	665.6	663.5	663.5	662.4	661.3	660.3	659.3	659.3
15°	645.4	643.2	642.3	641.2	640.1	637.9	639.0	637.9
17.5°	625.2	622.0	622.0	620.9	619.9	617.8	617.8	616.7
20°	601.8	600.7	598.6	599.7	598.6	596.5	595.4	595.4
22.5°	578.4	578.4	577.3	577.3	576.4	575.3	574.2	574.2
25°	556.1	555.0	556.1	556.1	552.9	552.9	552.9	553.9
27.5°	530.6	531.6	530.6	530.6	530.6	530.6	531.6	530.6
30°	505.0	505.0	505.0	506.1	508.3	507.2	507.2	506.1
32.5°	477.4	478.5	478.5	479.6	480.6	482.7	482.7	483.8
35°	449.7	451.9	453.0	451.9	455.1	455.1	457.2	457.2
37.5°	421.0	422.1	424.3	425.4	427.4	428.5	429.6	429.6
40°	390.2	394.5	395.5	396.6	399.8	399.8	400.9	403.0
42.5°	361.5	365.7	366.8	367.9	370.1	373.2	372.1	374.3
45°	333.9	337.0	338.1	339.2	342.3	343.4	343.4	346.7
47.5°	304.1	306.2	307.3	309.4	311.5	313.7	315.8	314.7
50°	274.4	277.5	279.7	280.8	283.9	285.0	286.1	287.0
52.5°	247.7	249.9	250.9	252.0	255.2	256.3	257.3	259.4
55°	222.2	223.3	225.5	224.4	227.5	228.6	229.7	231.8
57.5°	196.7	197.7	198.8	198.8	201.0	203.0	204.1	205.2
60°	172.2	174.4	175.4	175.4	175.4	177.6	177.6	177.6
62.5°	149.9	149.9	151.0	151.0	153.2	153.2	153.2	153.2
65°	126.5	127.6	128.7	128.7	130.7	129.8	131.8	130.7
67.5°	102.1	102.1	104.2	104.2	103.1	104.2	104.2	104.2
70°	77.6	77.6	78.7	78.7	78.7	78.7	78.7	78.7
72.5°	57.4	57.4	57.4	58.4	57.4	57.4	58.4	57.4
75°	44.7	44.7	44.7	44.7	44.7	44.7	44.7	44.7
77.5°	35.1	35.1	36.2	36.2	36.2	36.2	36.2	36.2
80°	28.7	28.7	28.7	28.7	29.8	28.7	28.7	28.7
82.5°	21.2	20.2	21.2	20.2	21.2	21.2	21.2	21.2
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)