

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: P583948

Luminaire Tested: **HC815D010-HM80520935-81WWW**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P583948
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2109-368-16)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 10/21/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HC815D010-HM80520935-81WWW
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, WHITE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1380.6 lumens
Efficiency: N/A
Efficacy: 98.6 lumens/watt
Spacing Criteria (0/90/45): 1.09 / 1.04 / 1.13
Luminous Opening: Circular (Dia: 0.67' x H: 0')
CIE Type: Direct

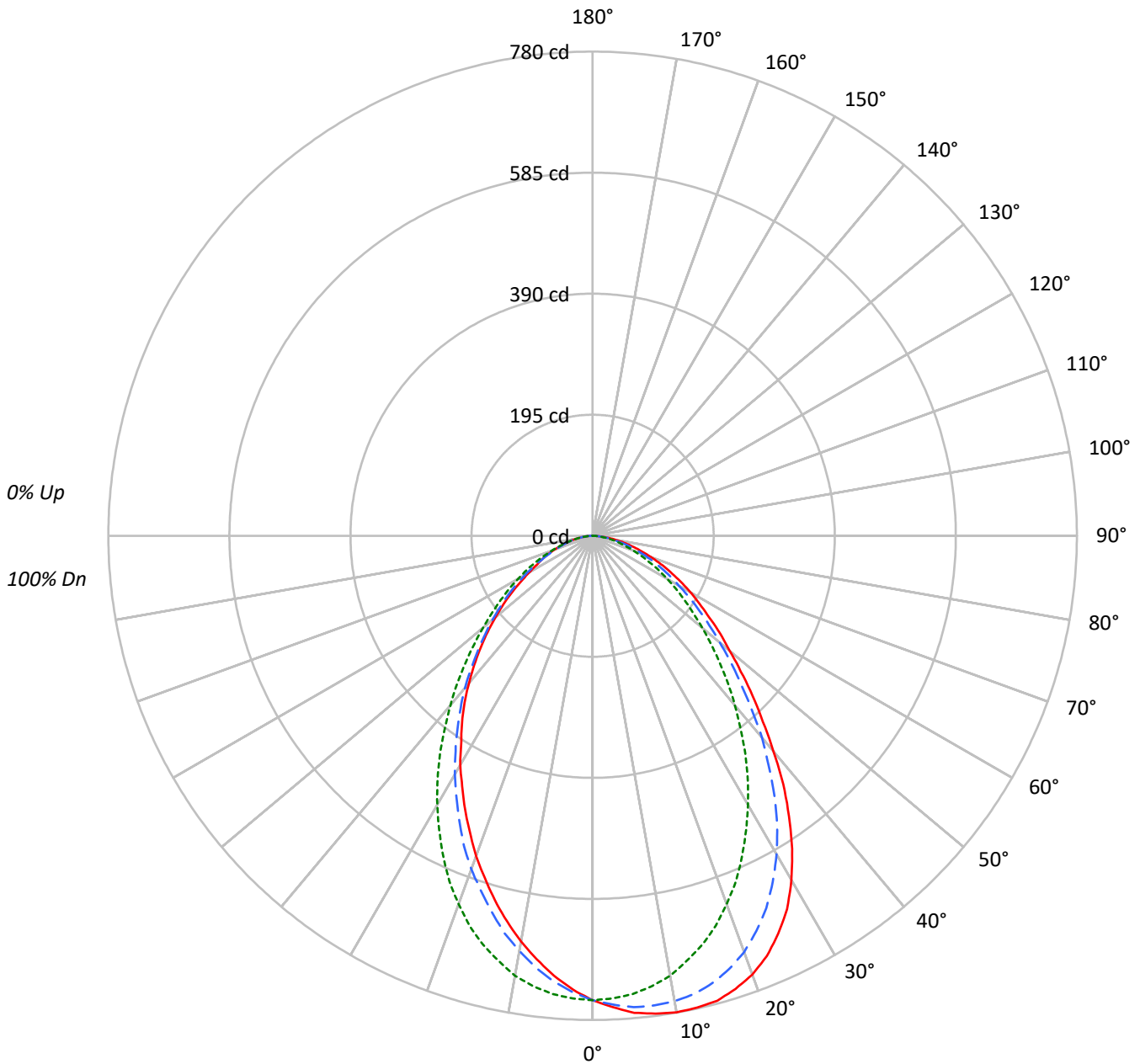
Input Watts (W): 14
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	93	91	89	87																			
2	102	95	89	84	99	93	88	83	90	85	81	86	83	79	83	80	78	76																			
3	94	85	78	72	92	83	77	71	81	75	70	78	73	69	75	71	68	66																			
4	87	76	69	63	85	75	68	62	73	67	62	71	65	61	68	64	60	58																			
5	81	69	61	55	79	68	61	55	66	60	54	64	59	54	63	57	53	51																			
6	75	63	55	49	73	62	55	49	61	54	49	59	53	48	57	52	48	46																			
7	70	58	50	44	69	57	50	44	56	49	44	54	48	44	53	48	43	41																			
8	66	53	46	40	64	53	45	40	51	45	40	50	44	40	49	44	39	38																			
9	62	49	42	37	60	49	42	37	48	41	36	47	41	36	46	40	36	34																			
10	58	46	39	34	57	45	38	34	44	38	33	44	38	33	43	37	33	32																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	23069	23069	23069
5°	23878	22937	22027
10°	24408	22532	20785
15°	24754	21772	19410
20°	24684	20716	18019
25°	24072	19373	16543
30°	22806	17818	15179
35°	20749	16127	13793
40°	18223	14342	12463
45°	15891	12616	11107
50°	13826	11053	9786
55°	12333	9709	8510
60°	11206	8517	7259
65°	10076	7406	6596
70°	8962	6311	5951
75°	7863	5326	5087
80°	6677	4315	4511
85°	5024	3255	3573



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	70.1	5.1
10°-20°	193.1	14.0
20°-30°	268.0	19.4
30°-40°	277.1	20.1
40°-50°	232.0	16.8
50°-60°	168.4	12.2
60°-70°	106.3	7.7
70°-80°	52.6	3.8
80°-90°	13.1	0.9
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°	531.1	38.5
0°-40°	808.2	58.5
0°-60°	1208.6	87.5
0°-90°	1380.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1380.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	748	748	748	748	748	
5°	771	762	741	721	712	74
15°	775	746	682	627	608	218
25°	708	662	569	508	486	324
35°	551	511	428	380	366	343
45°	364	338	289	261	255	282
55°	229	209	181	165	158	207
65°	138	121	102	89	90	138
75°	66	55	45	43	43	71
85°	14	11	9	10	10	17
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°	748.1	748.1	748.1	748.1	748.1	748.1	748.1	748.1	748.1	748.1	748.1
2.5°	760.2	760.2	761.2	760.2	760.2	760.2	759.3	759.3	758.2	758.2	756.1
5°	771.4	769.4	771.4	769.4	769.4	769.4	768.3	766.4	765.3	763.2	762.3
7.5°	776.5	775.4	775.4	774.5	774.5	773.5	772.4	771.4	767.3	766.4	763.2
10°	779.5	778.6	778.6	777.5	775.4	775.4	773.5	772.4	767.3	765.3	761.2
12.5°	778.6	778.6	778.6	777.5	774.5	773.5	771.4	768.3	764.3	760.2	756.1
15°	775.4	775.4	773.5	772.4	769.4	767.3	766.4	761.2	757.2	752.2	746.0
17.5°	765.3	765.3	764.3	762.3	759.3	757.2	755.2	750.1	746.0	737.9	731.8
20°	752.2	751.1	750.1	747.1	744.0	743.0	740.0	732.9	727.7	721.7	713.6
22.5°	732.9	731.8	730.8	728.8	723.7	721.7	719.6	714.6	705.4	699.4	689.1
25°	707.5	707.5	705.4	702.4	697.3	695.3	692.3	687.2	679.0	669.9	661.8
27.5°	678.1	677.0	674.0	671.9	667.9	664.8	659.7	653.7	645.5	638.4	628.3
30°	640.5	640.5	638.4	635.4	630.3	628.3	624.2	617.1	609.0	599.8	592.7
32.5°	597.8	597.8	594.8	592.7	589.7	584.7	583.6	575.5	568.4	561.3	553.2
35°	551.2	552.1	550.1	546.1	541.0	541.0	539.0	531.9	523.7	516.6	510.6
37.5°	504.4	501.4	500.4	498.4	495.4	491.3	489.2	486.2	479.1	474.0	464.9
40°	452.7	453.7	451.6	449.7	448.6	445.6	444.5	439.5	434.4	428.4	424.3
42.5°	406.0	406.0	406.0	403.9	402.0	398.9	397.9	394.9	388.7	384.6	378.6
45°	364.4	361.4	361.4	360.3	359.3	357.3	354.3	352.2	348.1	345.1	338.0
47.5°	323.8	324.7	323.8	322.8	319.7	318.7	317.6	313.7	309.6	306.6	301.5
50°	288.2	290.3	288.2	288.2	286.2	285.2	283.2	280.2	277.2	272.0	266.9
52.5°	258.8	258.8	257.9	256.8	253.8	251.7	250.8	249.7	244.6	240.5	236.5
55°	229.4	230.4	230.4	227.4	226.3	224.4	223.3	220.3	218.2	212.1	209.1
57.5°	204.0	203.0	204.0	202.0	199.9	198.0	196.9	194.8	191.8	187.7	183.8
60°	181.7	179.7	179.7	178.6	176.7	175.6	173.5	170.5	167.5	163.4	160.4
62.5°	159.3	158.3	157.4	156.3	154.2	153.3	152.2	149.2	146.2	143.2	140.0
65°	138.1	138.1	137.0	135.0	134.0	132.9	131.9	129.9	125.8	123.9	120.7
67.5°	118.8	117.7	117.7	115.7	113.6	112.7	112.7	110.6	107.6	104.6	102.5
70°	99.4	100.5	99.4	98.4	96.4	96.4	94.4	93.4	89.3	88.3	85.3
72.5°	82.2	82.2	81.2	81.2	79.2	78.2	78.2	76.2	74.1	72.1	70.0
75°	66.0	66.0	66.0	64.9	64.0	61.9	61.9	60.9	58.9	56.9	54.8
77.5°	51.8	50.7	50.7	49.8	48.7	47.7	47.7	46.6	44.7	43.6	41.6
80°	37.6	36.5	36.5	36.5	34.5	35.5	34.5	33.5	32.5	31.5	30.5
82.5°	24.3	25.4	25.4	24.3	23.4	23.4	23.4	22.3	22.3	21.3	20.2
85°	14.2	14.2	14.2	14.2	13.3	13.3	13.3	12.2	12.2	12.2	11.2
87.5°	6.1	6.1	6.1	6.1	6.1	6.1	5.1	5.1	5.1	5.1	5.1
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°	748.1	748.1	748.1	748.1	748.1	748.1	748.1	748.1	748.1	748.1	748.1
2.5°	756.1	754.1	753.1	752.2	752.2	751.1	750.1	748.1	748.1	746.0	745.1
5°	760.2	757.2	755.2	753.1	752.2	750.1	748.1	745.1	744.0	741.0	737.9
7.5°	761.2	756.1	754.1	750.1	748.1	746.0	741.9	738.9	734.8	731.8	727.7
10°	757.2	753.1	748.1	743.0	741.9	738.9	732.9	728.8	723.7	719.6	713.6
12.5°	751.1	745.1	740.0	733.8	730.8	727.7	721.7	715.5	708.4	701.3	695.3
15°	741.0	733.8	726.7	719.6	715.5	712.5	705.4	698.3	691.2	682.0	676.0
17.5°	725.8	717.6	710.5	701.3	697.3	694.3	685.2	677.0	667.9	658.8	652.6
20°	706.5	696.2	688.2	678.1	674.9	669.9	660.8	651.7	641.4	631.3	624.2
22.5°	681.1	670.9	661.8	651.7	646.6	641.4	632.4	621.2	611.1	602.9	595.8
25°	651.7	642.5	631.3	622.1	616.1	610.0	599.8	590.7	581.7	569.4	562.3
27.5°	619.1	608.0	599.8	587.7	581.7	577.6	566.4	554.2	546.1	534.9	526.8
30°	582.6	572.5	563.3	551.2	545.0	541.0	530.8	519.7	511.5	500.4	492.2
32.5°	544.1	532.9	521.8	513.6	506.5	502.5	491.3	484.2	474.0	464.9	455.7
35°	502.5	491.3	483.1	472.0	467.9	463.8	454.8	445.6	436.5	428.4	421.3
37.5°	457.8	449.7	440.5	432.4	429.3	425.2	414.2	406.0	398.9	390.8	384.6
40°	414.2	407.0	400.9	392.8	387.8	384.6	376.6	369.5	361.4	356.3	350.2
42.5°	374.5	366.4	360.3	354.3	349.2	346.1	339.0	333.9	327.9	322.8	315.7
45°	332.9	328.8	321.7	316.7	313.7	309.6	304.5	298.4	293.3	289.3	284.3
47.5°	296.4	292.3	287.3	281.1	279.1	276.1	271.0	266.9	262.9	258.8	253.8
50°	262.9	257.9	253.8	249.7	247.6	244.6	239.6	237.5	234.5	230.4	227.4
52.5°	232.4	228.3	224.4	219.2	218.2	216.2	213.2	209.1	206.1	204.0	202.0
55°	205.0	201.0	198.0	193.9	192.8	190.9	186.8	184.7	182.7	180.6	178.6
57.5°	180.6	176.7	172.6	170.5	168.5	166.4	165.4	162.4	160.4	159.3	157.4
60°	158.3	154.2	151.2	148.2	147.1	146.2	144.1	142.1	140.0	138.1	137.0
62.5°	137.0	132.9	131.0	128.9	126.9	126.9	124.8	122.8	120.7	119.8	117.7
65°	117.7	115.7	112.7	109.7	108.6	108.6	105.6	104.6	103.5	101.5	99.4
67.5°	99.4	97.5	94.4	93.4	92.4	91.3	90.4	88.3	86.3	85.3	83.3
70°	83.3	81.2	79.2	78.2	77.1	76.2	74.1	73.0	71.1	70.0	69.0
72.5°	67.0	66.0	64.0	62.9	61.9	60.9	59.9	58.9	56.9	55.8	54.8
75°	53.7	52.8	50.7	49.8	48.7	48.7	47.7	45.7	44.7	44.7	43.6
77.5°	40.6	39.6	38.6	37.6	36.5	36.5	35.5	34.5	33.5	33.5	32.5
80°	29.4	28.4	27.4	27.4	27.4	26.4	25.4	25.4	24.3	24.3	23.4
82.5°	19.3	19.3	18.3	18.3	18.3	17.2	17.2	16.3	16.3	16.3	16.3
85°	11.2	11.2	11.2	10.1	10.1	10.1	10.1	10.1	10.1	9.2	10.1
87.5°	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	4.1	4.1	4.1
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°	748.1	748.1	748.1	748.1	748.1	748.1	748.1	748.1	748.1	748.1	748.1
2.5°	744.0	743.0	741.0	741.0	738.9	738.9	737.9	736.9	735.9	734.8	733.8
5°	736.9	732.9	730.8	729.7	727.7	726.7	723.7	721.7	720.7	718.7	716.6
7.5°	723.7	719.6	715.5	714.6	713.6	709.5	706.5	703.4	701.3	699.4	697.3
10°	708.4	704.4	699.4	697.3	695.3	690.2	686.1	683.1	679.0	674.9	674.0
12.5°	690.2	684.1	678.1	676.0	673.0	667.9	663.8	658.8	655.6	650.6	649.6
15°	668.9	661.8	656.7	651.7	649.6	644.6	637.4	633.3	627.3	625.3	620.2
17.5°	643.5	636.4	629.3	627.3	624.2	617.1	610.0	604.9	598.9	595.8	592.7
20°	617.1	608.0	600.9	598.9	594.8	588.6	581.7	576.5	571.4	565.4	562.3
22.5°	586.7	576.5	570.4	565.4	564.3	557.2	549.1	545.0	541.0	535.9	531.9
25°	553.2	544.1	536.9	532.9	530.8	524.8	518.6	513.6	507.5	504.4	499.4
27.5°	518.6	512.6	503.4	499.4	496.3	491.3	484.2	481.2	475.0	470.9	467.9
30°	485.1	476.1	470.9	465.9	462.8	457.8	451.6	448.6	443.6	439.5	436.5
32.5°	448.6	442.6	435.5	433.4	429.3	424.3	420.2	415.1	411.0	407.0	406.0
35°	415.1	407.0	399.9	397.9	394.9	389.8	387.8	384.6	379.6	378.6	374.5
37.5°	378.6	374.5	366.4	363.4	362.3	358.2	354.3	352.2	349.2	346.1	345.1
40°	344.0	339.0	335.0	331.9	329.9	326.8	322.8	321.7	319.7	315.7	314.6
42.5°	311.6	306.6	302.5	301.5	298.4	295.3	293.3	290.3	289.3	288.2	286.2
45°	280.2	277.2	273.1	272.0	271.0	266.9	264.9	262.9	260.9	259.8	257.9
47.5°	251.7	248.7	245.6	244.6	242.6	241.6	238.5	237.5	234.5	233.4	232.4
50°	224.4	222.3	220.3	219.2	217.3	216.2	214.1	212.1	210.2	209.1	208.1
52.5°	199.9	198.0	195.9	194.8	193.9	191.8	189.8	187.7	186.8	185.7	184.7
55°	176.7	174.6	173.5	172.6	171.6	170.5	167.5	166.4	165.4	164.5	162.4
57.5°	155.3	153.3	151.2	151.2	150.3	149.2	147.1	145.2	145.2	143.2	141.1
60°	136.0	134.0	131.9	131.0	129.9	127.9	126.9	125.8	124.8	123.9	121.8
62.5°	115.7	114.7	112.7	112.7	110.6	109.7	108.6	107.6	106.5	104.6	103.5
65°	98.4	97.5	95.4	94.4	94.4	93.4	91.3	90.4	89.3	89.3	88.3
67.5°	82.2	81.2	79.2	78.2	78.2	77.1	76.2	76.2	75.1	74.1	75.1
70°	68.0	66.0	66.0	64.9	64.9	64.0	62.9	62.9	62.9	64.0	64.0
72.5°	53.7	52.8	51.8	51.8	51.8	51.8	50.7	50.7	51.8	52.8	52.8
75°	42.7	41.6	41.6	41.6	40.6	40.6	41.6	41.6	42.7	42.7	42.7
77.5°	31.5	31.5	31.5	31.5	31.5	31.5	32.5	32.5	33.5	33.5	33.5
80°	23.4	23.4	23.4	23.4	23.4	24.3	24.3	24.3	24.3	24.3	25.4
82.5°	16.3	16.3	16.3	16.3	16.3	16.3	16.3	17.2	17.2	17.2	17.2
85°	9.2	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1
87.5°	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
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: P583948

CATALOG NUMBER: HC815D010-HM80520935-81WWW

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	748.1	748.1	748.1	748.1	748.1	748.1	748.1	748.1
2.5°	732.9	732.9	732.9	733.8	731.8	731.8	731.8	731.8
5°	715.5	714.6	713.6	714.6	712.5	712.5	711.6	711.6
7.5°	694.3	693.2	692.3	692.3	690.2	690.2	689.1	688.2
10°	670.9	668.9	669.9	667.9	666.8	665.9	664.8	663.8
12.5°	645.5	643.5	642.5	640.5	638.4	637.4	638.4	636.4
15°	618.2	615.0	614.1	612.0	610.0	609.0	609.0	608.0
17.5°	587.7	585.6	584.7	582.6	581.7	579.6	578.5	577.6
20°	559.2	554.2	555.3	553.2	552.1	548.2	548.2	549.1
22.5°	527.8	524.8	522.7	520.7	519.7	517.7	517.7	516.6
25°	496.3	493.3	492.2	490.2	489.2	487.2	486.2	486.2
27.5°	465.9	461.9	461.9	459.8	457.8	456.7	455.7	454.8
30°	433.4	430.3	429.3	429.3	428.4	428.4	425.2	426.3
32.5°	403.0	400.9	399.9	397.9	397.9	396.8	396.8	393.8
35°	372.5	369.5	370.4	368.5	367.4	366.4	367.4	366.4
37.5°	343.1	341.0	341.0	339.0	339.0	338.0	337.0	339.0
40°	313.7	312.6	311.6	310.6	311.6	310.6	308.6	309.6
42.5°	284.3	284.3	283.2	283.2	282.2	282.2	282.2	282.2
45°	257.9	256.8	256.8	255.8	255.8	255.8	255.8	254.7
47.5°	231.5	230.4	230.4	230.4	229.4	229.4	228.3	229.4
50°	206.1	206.1	205.0	205.0	206.1	205.0	204.0	204.0
52.5°	182.7	182.7	181.7	181.7	180.6	179.7	180.6	180.6
55°	161.3	160.4	159.3	159.3	158.3	157.4	157.4	158.3
57.5°	141.1	140.0	139.1	139.1	137.0	136.0	136.0	136.0
60°	121.8	119.8	119.8	118.8	118.8	117.7	117.7	117.7
62.5°	103.5	102.5	102.5	102.5	102.5	101.5	101.5	101.5
65°	88.3	88.3	88.3	89.3	89.3	90.4	90.4	90.4
67.5°	76.2	77.1	77.1	77.1	78.2	78.2	78.2	77.1
70°	64.9	64.9	64.9	66.0	66.0	66.0	66.0	66.0
72.5°	53.7	53.7	53.7	53.7	53.7	53.7	53.7	53.7
75°	42.7	43.6	43.6	43.6	42.7	43.6	43.6	42.7
77.5°	33.5	33.5	33.5	33.5	33.5	33.5	33.5	33.5
80°	25.4	25.4	25.4	25.4	25.4	25.4	25.4	25.4
82.5°	17.2	17.2	17.2	17.2	17.2	17.2	17.2	17.2
85°	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1
87.5°	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
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)