

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: P593566

Luminaire Tested: **HC815D010-HM80520850-81WWWB**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P593566
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-HM80520850-81WWWB
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, BLACK BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 5000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1682.7 lumens
Efficiency: N/A
Efficacy: 120.2 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

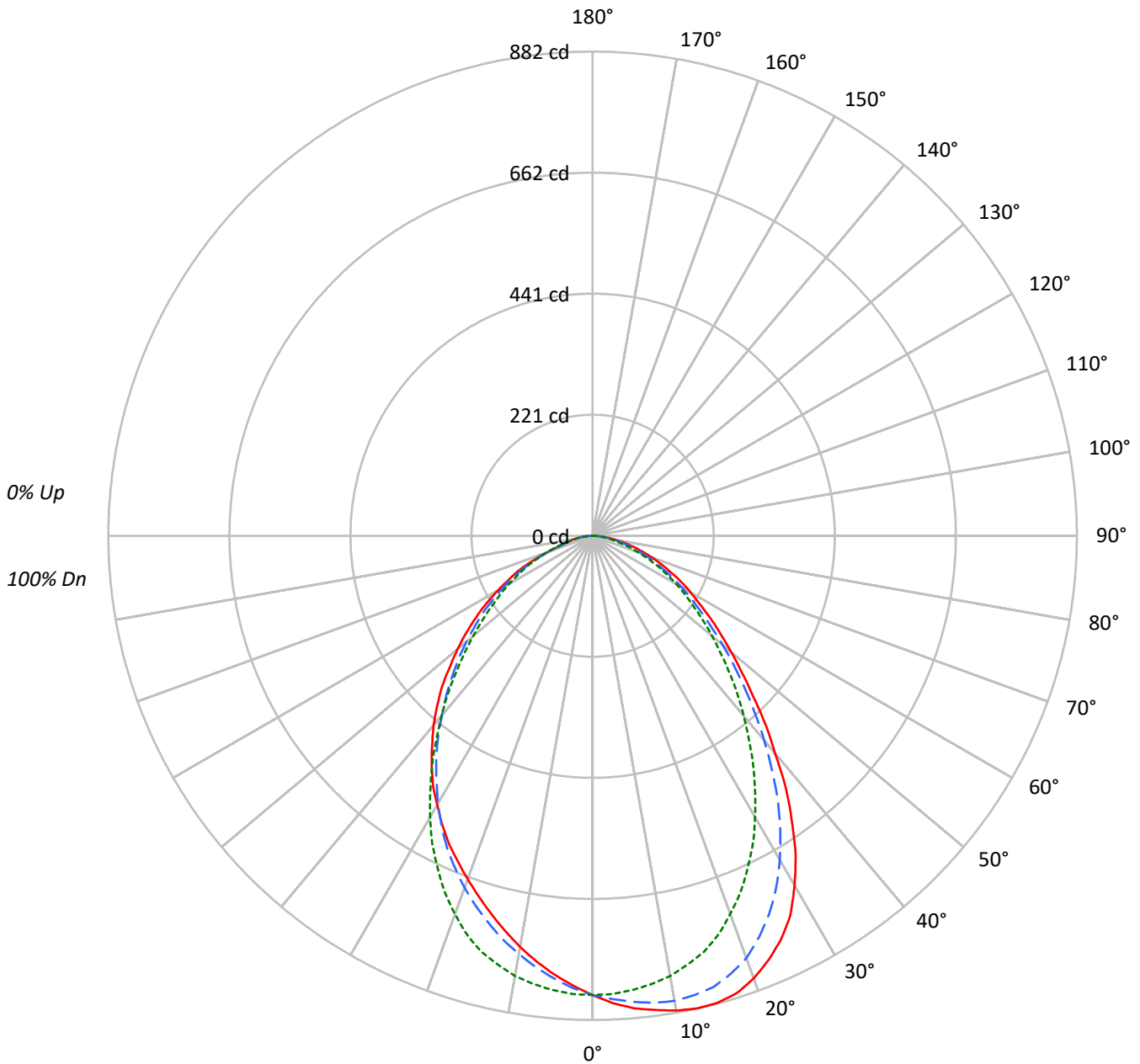
Input Watts (W): 14
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20					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°	25798	25798	25798
5°	26744	25714	24831
10°	27498	25491	23816
15°	28112	25038	22765
20°	28159	24060	21839
25°	27617	22725	21064
30°	26196	21076	20143
35°	23802	19191	19236
40°	20807	17225	18130
45°	18037	15337	16894
50°	15793	13624	15394
55°	14059	12075	13930
60°	12680	10848	12242
65°	11448	9537	10667
70°	10287	8042	7934
75°	9055	6374	5945
80°	7600	5292	5700
85°	5873	4599	5024



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	78.9	4.7
10°-20°	222.3	13.2
20°-30°	317.7	18.9
30°-40°	337.6	20.1
40°-50°	290.6	17.3
50°-60°	217.3	12.9
60°-70°	138.6	8.2
70°-80°	63.1	3.7
80°-90°	16.5	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°	618.9	36.8
0°-40°	956.5	56.8
0°-60°	1464.5	87.0
0°-90°	1682.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1682.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	837	837	837	837	837	
5°	864	852	831	809	802	83
15°	881	851	784	731	713	248
25°	812	761	668	627	619	372
35°	632	588	510	497	511	394
45°	414	391	352	361	387	321
55°	262	240	225	244	259	235
65°	157	139	131	137	146	156
75°	76	65	54	49	50	81
85°	17	14	13	14	14	20
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°	836.6	836.6	836.6	836.6	836.6	836.6	836.6	836.6	836.6	836.6	836.6
2.5°	852.1	849.8	851.0	849.8	851.0	851.0	848.6	848.6	848.6	848.6	844.9
5°	864.0	862.8	862.8	861.6	860.4	861.6	860.4	859.3	856.9	855.7	852.1
7.5°	871.1	871.1	871.1	871.1	869.9	868.8	867.6	865.2	862.8	860.4	858.1
10°	878.2	879.4	878.2	877.1	875.9	873.5	872.3	869.9	866.4	862.8	860.4
12.5°	881.8	881.8	880.6	880.6	878.2	877.1	873.5	869.9	866.4	862.8	856.9
15°	880.6	880.6	879.4	878.2	874.7	873.5	871.1	867.6	861.6	856.9	851.0
17.5°	873.5	872.3	869.9	869.9	865.2	864.0	861.6	856.9	851.0	843.7	836.6
20°	858.1	858.1	856.9	855.7	851.0	847.4	844.9	839.0	834.3	825.9	818.8
22.5°	836.6	839.0	836.6	834.3	828.3	827.1	823.6	816.5	809.3	799.8	791.4
25°	811.7	810.5	809.3	807.0	802.2	799.8	795.1	787.9	780.8	770.1	760.6
27.5°	779.6	774.8	774.8	770.1	766.5	763.0	760.6	753.5	744.0	735.7	723.7
30°	735.7	736.9	730.8	729.7	723.7	721.4	716.6	709.5	701.2	691.7	682.2
32.5°	688.1	684.6	684.6	679.7	675.0	671.4	670.2	661.9	654.8	645.3	635.8
35°	632.3	632.3	628.6	627.4	622.7	620.3	616.8	612.0	603.7	595.4	588.3
37.5°	577.6	575.1	574.1	571.7	568.0	564.5	564.5	556.2	555.0	545.5	536.0
40°	516.9	519.4	516.9	513.5	512.2	509.8	508.6	503.9	500.3	492.0	486.1
42.5°	465.9	463.4	463.4	462.4	457.5	457.5	455.1	452.8	446.8	444.5	437.3
45°	413.6	416.0	412.4	413.6	408.9	408.9	408.9	404.0	399.3	395.7	391.0
47.5°	368.4	369.6	369.6	366.1	364.9	364.9	362.5	360.1	356.6	351.7	348.2
50°	329.2	330.4	328.0	326.8	324.4	323.3	323.3	318.5	316.1	311.4	309.0
52.5°	293.5	293.5	292.3	292.3	288.8	288.8	286.4	282.8	280.5	278.1	272.2
55°	261.5	261.5	260.3	259.1	259.1	255.5	254.4	250.8	248.4	243.7	240.0
57.5°	230.5	231.7	230.5	229.3	228.2	227.0	224.6	221.0	218.7	215.1	212.7
60°	205.6	205.6	204.4	203.2	200.9	199.7	198.5	196.1	192.6	190.1	186.5
62.5°	181.8	180.6	179.4	178.2	175.9	175.9	173.5	171.1	167.6	165.2	162.8
65°	156.9	156.9	155.7	155.7	154.5	152.1	151.0	149.8	145.0	143.8	139.1
67.5°	134.2	135.4	133.2	133.2	130.7	130.7	129.5	125.9	124.8	122.4	120.0
70°	114.1	114.1	114.1	112.9	110.5	109.3	108.1	105.8	104.6	102.2	99.8
72.5°	93.9	93.9	92.7	92.7	91.5	90.4	89.2	86.8	86.8	84.4	82.1
75°	76.0	76.0	74.8	73.6	72.5	72.5	71.3	70.1	67.7	66.5	65.3
77.5°	58.2	58.2	58.2	57.0	55.9	55.9	55.9	53.5	51.1	51.1	49.9
80°	42.8	42.8	41.6	41.6	40.4	40.4	40.4	39.2	38.1	36.9	35.7
82.5°	28.6	28.6	28.6	28.6	27.4	27.4	27.4	26.1	24.9	24.9	24.9
85°	16.6	16.6	16.6	16.6	15.4	15.4	15.4	15.4	15.4	14.2	14.2
87.5°	7.1	5.9	7.1	5.9	7.1	5.9	7.1	5.9	5.9	5.9	5.9
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°	836.6	836.6	836.6	836.6	836.6	836.6	836.6	836.6	836.6	836.6	836.6
2.5°	846.2	844.9	843.7	842.7	842.7	841.5	839.0	837.8	836.6	835.4	835.4
5°	851.0	849.8	847.4	844.9	843.7	841.5	839.0	836.6	834.3	830.7	829.5
7.5°	854.5	851.0	848.6	843.7	842.7	840.2	836.6	833.1	828.3	823.6	820.0
10°	854.5	849.8	846.2	840.2	837.8	835.4	830.7	824.8	818.8	814.1	808.2
12.5°	852.1	846.2	840.2	834.3	830.7	827.1	820.0	814.1	807.0	799.8	795.1
15°	843.7	836.6	829.5	822.4	818.8	814.1	807.0	798.7	791.4	784.3	776.0
17.5°	828.3	821.2	812.9	804.6	799.8	796.3	785.5	779.6	768.9	761.8	754.7
20°	808.2	799.8	789.2	780.8	774.8	771.3	763.0	752.3	744.0	733.2	726.1
22.5°	782.0	771.3	760.6	752.3	746.4	741.6	730.8	720.2	713.1	703.6	695.3
25°	751.1	740.4	729.7	717.8	711.9	707.1	697.6	688.1	678.7	667.9	660.8
27.5°	714.2	702.4	692.9	682.2	676.2	669.1	658.4	648.9	639.4	632.3	622.7
30°	673.8	660.8	651.3	640.6	634.7	628.6	618.0	608.5	600.2	591.9	587.1
32.5°	625.2	615.6	606.1	595.4	590.7	587.1	576.4	566.8	557.4	550.2	546.7
35°	578.8	568.0	559.7	550.2	544.3	540.7	531.3	523.0	518.2	509.8	505.1
37.5°	530.1	521.8	512.2	502.7	499.1	495.6	488.5	480.1	473.0	467.1	464.6
40°	479.0	471.8	463.4	457.5	453.9	450.4	444.5	438.5	433.8	427.9	425.5
42.5°	430.2	425.5	418.4	411.1	407.7	406.4	399.3	394.5	392.2	389.8	387.4
45°	386.2	379.1	374.4	369.6	366.1	363.7	360.1	356.6	354.1	351.7	349.5
47.5°	343.4	337.5	332.8	329.2	325.6	324.4	322.1	318.5	316.1	316.1	316.1
50°	304.3	299.4	294.7	292.3	291.1	288.8	286.4	285.2	284.0	284.0	284.0
52.5°	269.8	265.0	261.5	259.1	259.1	256.7	254.4	253.2	253.2	253.2	253.2
55°	237.7	234.1	231.7	229.3	227.0	225.8	225.8	225.8	224.6	224.6	225.8
57.5°	209.2	206.8	203.2	200.9	199.7	199.7	198.5	197.3	198.5	199.7	200.9
60°	183.0	180.6	179.4	175.9	175.9	175.9	174.7	174.7	174.7	175.9	177.1
62.5°	159.3	158.1	155.7	154.5	153.3	153.3	152.1	152.1	152.1	152.1	153.3
65°	137.9	135.4	133.2	133.2	133.2	131.9	131.9	129.5	130.7	130.7	129.5
67.5°	117.6	115.3	114.1	112.9	111.7	111.7	110.5	109.3	108.1	108.1	108.1
70°	98.7	96.3	96.3	93.9	93.9	92.7	91.5	91.5	90.4	89.2	88.0
72.5°	79.7	78.4	77.2	76.0	76.0	76.0	74.8	73.6	72.5	71.3	68.9
75°	63.0	63.0	60.6	59.4	59.4	58.2	57.0	55.9	54.7	53.5	52.3
77.5°	48.7	47.6	45.2	44.0	44.0	44.0	42.8	41.6	40.4	39.2	38.1
80°	35.7	34.5	33.3	32.1	32.1	32.1	30.8	30.8	29.8	29.8	29.8
82.5°	23.7	23.7	22.5	22.5	22.5	22.5	21.4	21.4	21.4	21.4	21.4
85°	14.2	14.2	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0
87.5°	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
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°	836.6	836.6	836.6	836.6	836.6	836.6	836.6	836.6	836.6	836.6	836.6
2.5°	833.1	833.1	830.7	829.5	828.3	829.5	827.1	825.9	824.8	824.8	823.6
5°	825.9	824.8	820.0	818.8	817.6	816.5	814.1	811.7	809.3	808.2	807.0
7.5°	816.5	812.9	808.2	807.0	805.8	802.2	798.7	796.3	792.6	791.4	789.2
10°	803.4	798.7	795.1	791.4	789.2	785.5	782.0	778.4	773.7	772.5	768.9
12.5°	787.9	782.0	774.8	773.7	770.1	765.3	760.6	757.0	753.5	751.1	747.6
15°	768.9	763.0	755.9	752.3	748.7	745.2	739.1	734.4	730.8	727.3	723.7
17.5°	746.4	739.1	733.2	729.7	727.3	721.4	716.6	710.7	707.1	703.6	700.0
20°	719.0	713.1	704.7	701.2	700.0	695.3	689.3	687.0	682.2	678.7	676.2
22.5°	688.1	682.2	675.0	672.6	667.9	665.5	659.6	657.2	654.8	651.3	650.1
25°	653.6	647.7	641.8	640.6	637.0	634.7	631.1	627.4	627.4	623.9	623.9
27.5°	618.0	612.0	607.3	604.9	603.7	601.3	597.8	596.6	595.4	594.2	594.2
30°	580.0	572.9	570.4	569.2	568.0	565.7	564.5	562.1	563.3	564.5	563.3
32.5°	539.6	537.2	532.4	530.1	531.3	530.1	527.7	530.1	528.9	531.3	532.4
35°	500.3	497.9	495.6	495.6	493.2	493.2	493.2	494.4	496.8	497.9	500.3
37.5°	462.4	458.7	457.5	456.3	457.5	457.5	457.5	459.9	462.4	464.6	468.3
40°	421.9	419.5	419.5	419.5	419.5	423.1	421.9	424.3	426.7	430.2	433.8
42.5°	383.9	383.9	385.0	385.0	385.0	385.0	387.4	391.0	394.5	398.1	401.7
45°	348.2	348.2	348.2	350.5	350.5	351.7	356.6	358.8	361.3	364.9	368.4
47.5°	315.0	315.0	316.1	317.3	318.5	320.9	323.3	326.8	330.4	332.8	336.3
50°	284.0	285.2	287.6	289.9	289.9	291.1	294.7	297.2	299.4	303.1	304.3
52.5°	254.4	256.7	259.1	260.3	261.5	263.8	265.0	268.6	269.8	273.3	274.5
55°	227.0	228.2	231.7	232.9	232.9	235.3	237.7	240.0	243.7	243.7	246.1
57.5°	202.1	203.2	205.6	206.8	205.6	209.2	210.4	212.7	213.9	216.3	217.5
60°	177.1	179.4	180.6	180.6	181.8	183.0	185.4	185.4	187.7	190.1	190.1
62.5°	153.3	154.5	155.7	156.9	158.1	156.9	160.4	160.4	162.8	164.0	166.4
65°	130.7	131.9	131.9	133.2	133.2	134.2	134.2	135.4	136.6	139.1	140.3
67.5°	108.1	108.1	108.1	109.3	108.1	109.3	109.3	110.5	110.5	112.9	114.1
70°	88.0	86.8	85.6	85.6	85.6	85.6	84.4	85.6	85.6	86.8	86.8
72.5°	67.7	66.5	65.3	64.2	64.2	63.0	61.8	63.0	63.0	64.2	64.2
75°	51.1	48.7	48.7	48.7	47.6	47.6	47.6	48.7	48.7	48.7	49.9
77.5°	38.1	38.1	36.9	36.9	36.9	38.1	38.1	39.2	39.2	39.2	39.2
80°	28.6	29.8	29.8	29.8	29.8	30.8	30.8	30.8	30.8	32.1	32.1
82.5°	21.4	21.4	21.4	21.4	22.5	22.5	22.5	22.5	22.5	22.5	22.5
85°	13.0	14.2	14.2	13.0	14.2	14.2	14.2	14.2	14.2	14.2	14.2
87.5°	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
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: P593566

CATALOG NUMBER: HC815D010-HM80520850-81WWWB

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	836.6	836.6	836.6	836.6	836.6	836.6	836.6	836.6
2.5°	822.4	822.4	822.4	822.4	821.2	821.2	821.2	820.0
5°	804.6	804.6	804.6	802.2	803.4	803.4	801.0	802.2
7.5°	786.7	785.5	784.3	784.3	783.1	782.0	780.8	782.0
10°	766.5	763.0	763.0	761.8	761.8	759.4	759.4	760.6
12.5°	744.0	741.6	741.6	740.4	739.1	738.1	736.9	736.9
15°	721.4	719.0	717.8	716.6	715.4	713.1	714.2	713.1
17.5°	698.8	695.3	695.3	694.1	692.9	690.5	690.5	689.3
20°	672.6	671.4	669.1	670.2	669.1	666.7	665.5	665.5
22.5°	646.5	646.5	645.3	645.3	644.1	643.0	641.8	641.8
25°	621.5	620.3	621.5	621.5	618.0	618.0	618.0	619.1
27.5°	593.0	594.2	593.0	593.0	593.0	593.0	594.2	593.0
30°	564.5	564.5	564.5	565.7	568.0	566.8	566.8	565.7
32.5°	533.6	534.8	534.8	536.0	537.2	539.6	539.6	540.7
35°	502.7	505.1	506.2	505.1	508.6	508.6	511.0	511.0
37.5°	470.7	471.8	474.2	475.4	477.8	479.0	480.1	480.1
40°	436.2	440.9	442.1	443.3	446.8	446.8	448.0	450.4
42.5°	404.0	408.9	410.1	411.1	413.6	417.2	416.0	418.4
45°	373.2	376.7	377.9	379.1	382.7	383.9	383.9	387.4
47.5°	339.9	342.2	343.4	345.8	348.2	350.5	352.9	351.7
50°	306.7	310.2	312.6	313.8	317.3	318.5	319.7	320.9
52.5°	276.9	279.3	280.5	281.6	285.2	286.4	287.6	289.9
55°	248.4	249.6	252.0	250.8	254.4	255.5	256.7	259.1
57.5°	219.9	221.0	222.2	222.2	224.6	227.0	228.2	229.3
60°	192.6	194.8	196.1	196.1	196.1	198.5	198.5	198.5
62.5°	167.6	167.6	168.7	168.7	171.1	171.1	171.1	171.1
65°	141.5	142.7	143.8	143.8	146.2	145.0	147.4	146.2
67.5°	114.1	114.1	116.5	116.5	115.3	116.5	116.5	116.5
70°	86.8	86.8	88.0	88.0	88.0	88.0	88.0	88.0
72.5°	64.2	64.2	64.2	65.3	64.2	64.2	65.3	64.2
75°	49.9	49.9	49.9	49.9	49.9	49.9	49.9	49.9
77.5°	39.2	39.2	40.4	40.4	40.4	40.4	40.4	40.4
80°	32.1	32.1	32.1	32.1	33.3	32.1	32.1	32.1
82.5°	23.7	22.5	23.7	22.5	23.7	23.7	23.7	23.7
85°	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2
87.5°	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
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)