

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: P583880

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

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P583880
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-HM80520835-81WWW
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, WHITE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1504.3 lumens
Efficiency: N/A
Efficacy: 107.4 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

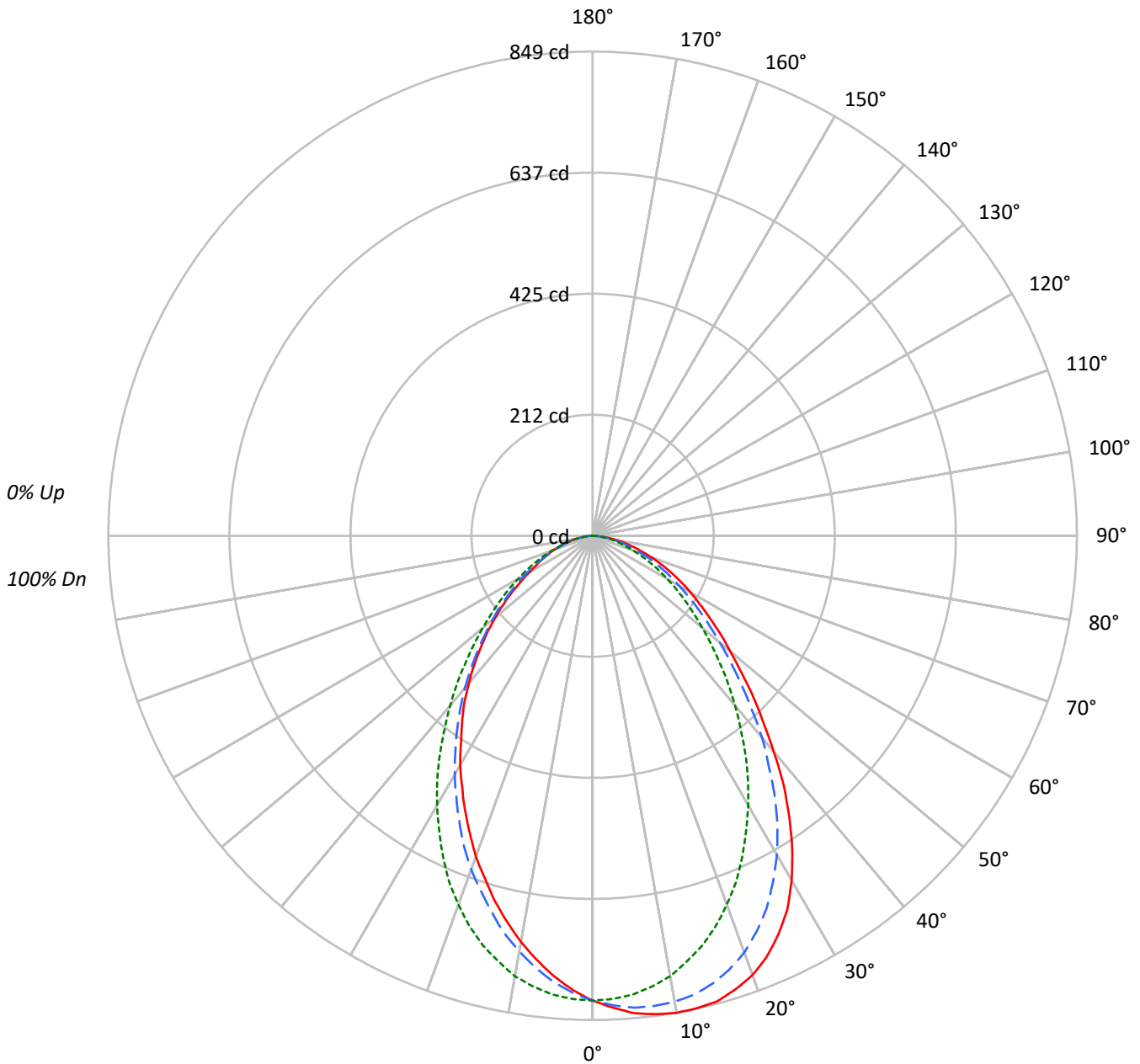
Input Watts (W): 14
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	25135	25135	25135
5°	26017	24992	23999
10°	26596	24552	22645
15°	26973	23726	21150
20°	26892	22574	19633
25°	26226	21112	18023
30°	24846	19416	16539
35°	22609	17569	15028
40°	19853	15631	13578
45°	17313	13746	12106
50°	15068	12041	10664
55°	13435	10586	9279
60°	12211	9276	7913
65°	10974	8070	7180
70°	9764	6879	6482
75°	8566	5802	5528
80°	7281	4706	4901
85°	5449	3538	3927



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	76.3	5.1
10°-20°	210.4	14.0
20°-30°	292.0	19.4
30°-40°	301.9	20.1
40°-50°	252.8	16.8
50°-60°	183.5	12.2
60°-70°	115.8	7.7
70°-80°	57.4	3.8
80°-90°	14.3	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°	578.7	38.5
0°-40°	880.6	58.5
0°-60°	1316.9	87.5
0°-90°	1504.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1504.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	815	815	815	815	815	
5°	840	831	807	785	775	80
15°	845	813	743	684	662	238
25°	771	721	620	553	530	353
35°	601	556	467	414	399	374
45°	397	368	315	284	278	307
55°	250	228	197	180	173	226
65°	150	132	111	97	98	150
75°	72	60	49	46	46	77
85°	15	12	10	11	11	19
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°	815.1	815.1	815.1	815.1	815.1	815.1	815.1	815.1	815.1	815.1	815.1
2.5°	828.3	828.3	829.5	828.3	828.3	828.3	827.2	827.2	826.1	826.1	824.0
5°	840.5	838.3	840.5	838.3	838.3	838.3	837.2	834.9	833.9	831.7	830.6
7.5°	846.0	844.9	844.9	843.9	843.9	842.8	841.7	840.5	836.1	834.9	831.7
10°	849.4	848.3	848.3	847.1	844.9	844.9	842.8	841.7	836.1	833.9	829.5
12.5°	848.3	848.3	848.3	847.1	843.9	842.8	840.5	837.2	832.8	828.3	824.0
15°	844.9	844.9	842.8	841.7	838.3	836.1	834.9	829.5	825.1	819.5	812.9
17.5°	833.9	833.9	832.8	830.6	827.2	825.1	822.8	817.4	812.9	804.0	797.3
20°	819.5	818.4	817.4	814.0	810.7	809.5	806.3	798.6	793.0	786.4	777.5
22.5°	798.6	797.3	796.3	794.1	788.6	786.4	784.1	778.6	768.7	762.0	751.0
25°	770.8	770.8	768.7	765.3	759.8	757.6	754.2	748.8	739.9	730.0	721.1
27.5°	738.8	737.7	734.3	732.2	727.7	724.4	718.9	712.3	703.4	695.6	684.6
30°	697.8	697.8	695.6	692.3	686.8	684.6	680.2	672.4	663.6	653.6	645.9
32.5°	651.4	651.4	648.0	645.9	642.5	637.1	635.9	627.1	619.4	611.5	602.7
35°	600.6	601.7	599.5	595.0	589.5	589.5	587.3	579.5	570.7	563.0	556.3
37.5°	549.7	546.3	545.3	543.0	539.7	535.3	533.1	529.7	522.0	516.5	506.6
40°	493.2	494.4	492.1	490.0	488.9	485.5	484.4	478.9	473.3	466.7	462.2
42.5°	442.4	442.4	442.4	440.2	438.0	434.6	433.6	430.2	423.6	419.1	412.5
45°	397.0	393.7	393.7	392.6	391.5	389.3	386.0	383.8	379.3	376.1	368.2
47.5°	352.8	353.9	352.8	351.7	348.4	347.3	346.2	341.7	337.3	334.0	328.5
50°	314.1	316.3	314.1	314.1	311.9	310.8	308.6	305.2	302.0	296.4	290.9
52.5°	282.0	282.0	280.9	279.8	276.5	274.3	273.2	272.1	266.5	262.1	257.6
55°	249.9	251.0	251.0	247.7	246.7	244.4	243.3	240.0	237.7	231.1	227.9
57.5°	222.3	221.2	222.3	220.0	217.9	215.7	214.6	212.3	209.1	204.6	200.2
60°	198.0	195.8	195.8	194.6	192.4	191.4	189.1	185.8	182.4	178.1	174.7
62.5°	173.6	172.6	171.5	170.3	168.1	167.0	165.9	162.6	159.3	155.9	152.7
65°	150.4	150.4	149.3	147.1	146.0	144.8	143.8	141.6	137.1	135.0	131.6
67.5°	129.4	128.3	128.3	126.0	123.9	122.8	122.8	120.5	117.2	113.9	111.7
70°	108.3	109.5	108.3	107.2	105.1	105.1	102.9	101.7	97.4	96.2	92.9
72.5°	89.5	89.5	88.4	88.4	86.3	85.2	85.2	82.9	80.7	78.6	76.3
75°	71.9	71.9	71.9	70.7	69.6	67.5	67.5	66.4	64.1	61.9	59.8
77.5°	56.4	55.3	55.3	54.2	53.1	51.9	51.9	50.9	48.7	47.6	45.3
80°	41.0	39.8	39.8	39.8	37.6	38.7	37.6	36.5	35.4	34.3	33.1
82.5°	26.5	27.6	27.6	26.5	25.4	25.4	25.4	24.3	24.3	23.3	22.2
85°	15.4	15.4	15.4	15.4	14.3	14.3	14.3	13.3	13.3	13.3	12.2
87.5°	6.6	6.6	6.6	6.6	6.6	6.6	5.5	5.5	5.5	5.5	5.5
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°	815.1	815.1	815.1	815.1	815.1	815.1	815.1	815.1	815.1	815.1	815.1
2.5°	824.0	821.7	820.6	819.5	819.5	818.4	817.4	815.1	815.1	812.9	811.8
5°	828.3	825.1	822.8	820.6	819.5	817.4	815.1	811.8	810.7	807.4	804.0
7.5°	829.5	824.0	821.7	817.4	815.1	812.9	808.4	805.2	800.7	797.3	793.0
10°	825.1	820.6	815.1	809.5	808.4	805.2	798.6	794.1	788.6	784.1	777.5
12.5°	818.4	811.8	806.3	799.6	796.3	793.0	786.4	779.8	771.9	764.2	757.6
15°	807.4	799.6	791.9	784.1	779.8	776.4	768.7	761.0	753.1	743.2	736.6
17.5°	790.7	781.9	774.2	764.2	759.8	756.5	746.5	737.7	727.7	717.8	711.2
20°	769.8	758.7	749.9	738.8	735.4	730.0	720.0	710.0	699.0	687.9	680.2
22.5°	742.0	731.1	721.1	710.0	704.4	699.0	689.0	676.8	665.8	657.0	649.3
25°	710.0	700.1	687.9	677.9	671.3	664.7	653.6	643.7	633.7	620.5	612.7
27.5°	674.7	662.5	653.6	640.3	633.7	629.3	617.1	603.8	595.0	582.9	573.9
30°	634.8	623.7	613.8	600.6	593.9	589.5	578.4	566.2	557.4	545.3	536.3
32.5°	592.7	580.6	568.5	559.6	551.9	547.4	535.3	527.5	516.5	506.6	496.6
35°	547.4	535.3	526.5	514.3	509.8	505.4	495.5	485.5	475.6	466.7	459.0
37.5°	498.7	490.0	480.0	471.2	467.8	463.4	451.3	442.4	434.6	425.8	419.1
40°	451.3	443.4	436.8	428.0	422.5	419.1	410.3	402.6	393.7	388.3	381.5
42.5°	408.1	399.2	392.6	386.0	380.4	377.2	369.3	363.9	357.3	351.7	343.9
45°	362.7	358.4	350.5	345.1	341.7	337.3	331.7	325.1	319.6	315.2	309.7
47.5°	322.9	318.5	312.9	306.3	304.1	300.8	295.3	290.9	286.4	282.0	276.5
50°	286.4	280.9	276.5	272.1	269.8	266.5	261.0	258.8	255.5	251.0	247.7
52.5°	253.3	248.8	244.4	238.8	237.7	235.6	232.2	227.9	224.5	222.3	220.0
55°	223.4	218.9	215.7	211.2	210.2	207.9	203.5	201.2	199.1	196.9	194.6
57.5°	196.9	192.4	188.0	185.8	183.6	181.4	180.3	176.9	174.7	173.6	171.5
60°	172.6	168.1	164.8	161.5	160.4	159.3	157.0	154.8	152.7	150.4	149.3
62.5°	149.3	144.8	142.7	140.5	138.2	138.2	136.0	133.9	131.6	130.5	128.3
65°	128.3	126.0	122.8	119.4	118.3	118.3	115.1	113.9	112.8	110.6	108.3
67.5°	108.3	106.2	102.9	101.7	100.6	99.5	98.4	96.2	94.0	92.9	90.7
70°	90.7	88.4	86.3	85.2	84.1	82.9	80.7	79.7	77.4	76.3	75.2
72.5°	73.0	71.9	69.6	68.6	67.5	66.4	65.3	64.1	61.9	60.9	59.8
75°	58.6	57.5	55.3	54.2	53.1	53.1	51.9	49.8	48.7	48.7	47.6
77.5°	44.2	43.1	42.1	41.0	39.8	39.8	38.7	37.6	36.5	36.5	35.4
80°	32.1	31.0	29.9	29.9	29.9	28.8	27.6	27.6	26.5	26.5	25.4
82.5°	21.0	21.0	19.9	19.9	19.9	18.8	18.8	17.7	17.7	17.7	17.7
85°	12.2	12.2	12.2	11.1	11.1	11.1	11.1	11.1	11.1	10.0	11.1
87.5°	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	4.5	4.5	4.5
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°	815.1	815.1	815.1	815.1	815.1	815.1	815.1	815.1	815.1	815.1	815.1
2.5°	810.7	809.5	807.4	807.4	805.2	805.2	804.0	802.9	801.8	800.7	799.6
5°	802.9	798.6	796.3	795.2	793.0	791.9	788.6	786.4	785.2	783.0	780.8
7.5°	788.6	784.1	779.8	778.6	777.5	773.0	769.8	766.4	764.2	762.0	759.8
10°	771.9	767.6	762.0	759.8	757.6	752.0	747.6	744.3	739.9	735.4	734.3
12.5°	752.0	745.4	738.8	736.6	733.2	727.7	723.2	717.8	714.4	708.9	707.8
15°	728.8	721.1	715.5	710.0	707.8	702.3	694.6	690.1	683.5	681.3	675.8
17.5°	701.2	693.5	685.6	683.5	680.2	672.4	664.7	659.1	652.5	649.3	645.9
20°	672.4	662.5	654.7	652.5	648.0	641.4	633.7	628.2	622.6	616.0	612.7
22.5°	639.3	628.2	621.5	616.0	614.9	607.2	598.3	593.9	589.5	583.9	579.5
25°	602.7	592.7	585.0	580.6	578.4	571.8	565.1	559.6	553.0	549.7	544.2
27.5°	565.1	558.5	548.5	544.2	540.8	535.3	527.5	524.2	517.5	513.2	509.8
30°	528.6	518.8	513.2	507.7	504.3	498.7	492.1	488.9	483.3	478.9	475.6
32.5°	488.9	482.2	474.4	472.2	467.8	462.2	457.9	452.4	447.9	443.4	442.4
35°	452.4	443.4	435.7	433.6	430.2	424.6	422.5	419.1	413.7	412.5	408.1
37.5°	412.5	408.1	399.2	396.0	394.9	390.4	386.0	383.8	380.4	377.2	376.1
40°	374.9	369.3	365.0	361.6	359.5	356.1	351.7	350.5	348.4	343.9	342.8
42.5°	339.6	334.0	329.6	328.5	325.1	321.9	319.6	316.3	315.2	314.1	311.9
45°	305.2	302.0	297.5	296.4	295.3	290.9	288.6	286.4	284.3	283.2	280.9
47.5°	274.3	271.0	267.6	266.5	264.4	263.2	259.9	258.8	255.5	254.4	253.3
50°	244.4	242.2	240.0	238.8	236.7	235.6	233.4	231.1	229.0	227.9	226.8
52.5°	217.9	215.7	213.4	212.3	211.2	209.1	206.8	204.6	203.5	202.4	201.2
55°	192.4	190.3	189.1	188.0	186.9	185.8	182.4	181.4	180.3	179.2	176.9
57.5°	169.2	167.0	164.8	164.8	163.6	162.6	160.4	158.1	158.1	155.9	153.8
60°	148.2	146.0	143.8	142.7	141.6	139.3	138.2	137.1	136.0	135.0	132.7
62.5°	126.0	125.0	122.8	122.8	120.5	119.4	118.3	117.2	116.2	113.9	112.8
65°	107.2	106.2	104.0	102.9	102.9	101.7	99.5	98.4	97.4	97.4	96.2
67.5°	89.5	88.4	86.3	85.2	85.2	84.1	82.9	82.9	81.8	80.7	81.8
70°	74.1	71.9	71.9	70.7	70.7	69.6	68.6	68.6	68.6	69.6	69.6
72.5°	58.6	57.5	56.4	56.4	56.4	56.4	55.3	55.3	56.4	57.5	57.5
75°	46.4	45.3	45.3	45.3	44.2	44.2	45.3	45.3	46.4	46.4	46.4
77.5°	34.3	34.3	34.3	34.3	34.3	34.3	35.4	35.4	36.5	36.5	36.5
80°	25.4	25.4	25.4	25.4	25.4	26.5	26.5	26.5	26.5	26.5	27.6
82.5°	17.7	17.7	17.7	17.7	17.7	17.7	17.7	18.8	18.8	18.8	18.8
85°	10.0	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1
87.5°	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
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: P583880

CATALOG NUMBER: HC815D010-HM80520835-81WWW

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	815.1	815.1	815.1	815.1	815.1	815.1	815.1	815.1
2.5°	798.6	798.6	798.6	799.6	797.3	797.3	797.3	797.3
5°	779.8	778.6	777.5	778.6	776.4	776.4	775.3	775.3
7.5°	756.5	755.4	754.2	754.2	752.0	752.0	751.0	749.9
10°	731.1	728.8	730.0	727.7	726.6	725.5	724.4	723.2
12.5°	703.4	701.2	700.1	697.8	695.6	694.6	695.6	693.5
15°	673.5	670.2	669.1	666.8	664.7	663.6	663.6	662.5
17.5°	640.3	638.2	637.1	634.8	633.7	631.5	630.5	629.3
20°	609.4	603.8	604.9	602.7	601.7	597.2	597.2	598.3
22.5°	575.1	571.8	569.6	567.3	566.2	564.1	564.1	563.0
25°	540.8	537.6	536.3	534.2	533.1	530.8	529.7	529.7
27.5°	507.7	503.2	503.2	501.0	498.7	497.7	496.6	495.5
30°	472.2	469.0	467.8	467.8	466.7	466.7	463.4	464.5
32.5°	439.1	436.8	435.7	433.6	433.6	432.5	432.5	429.1
35°	405.8	402.6	403.7	401.5	400.3	399.2	400.3	399.2
37.5°	373.8	371.6	371.6	369.3	369.3	368.2	367.2	369.3
40°	341.7	340.7	339.6	338.4	339.6	338.4	336.2	337.3
42.5°	309.7	309.7	308.6	308.6	307.5	307.5	307.5	307.5
45°	280.9	279.8	279.8	278.7	278.7	278.7	278.7	277.6
47.5°	252.2	251.0	251.0	251.0	249.9	249.9	248.8	249.9
50°	224.5	224.5	223.4	223.4	224.5	223.4	222.3	222.3
52.5°	199.1	199.1	198.0	198.0	196.9	195.8	196.9	196.9
55°	175.8	174.7	173.6	173.6	172.6	171.5	171.5	172.6
57.5°	153.8	152.7	151.5	151.5	149.3	148.2	148.2	148.2
60°	132.7	130.5	130.5	129.4	129.4	128.3	128.3	128.3
62.5°	112.8	111.7	111.7	111.7	111.7	110.6	110.6	110.6
65°	96.2	96.2	96.2	97.4	97.4	98.4	98.4	98.4
67.5°	82.9	84.1	84.1	84.1	85.2	85.2	85.2	84.1
70°	70.7	70.7	70.7	71.9	71.9	71.9	71.9	71.9
72.5°	58.6	58.6	58.6	58.6	58.6	58.6	58.6	58.6
75°	46.4	47.6	47.6	47.6	46.4	47.6	47.6	46.4
77.5°	36.5	36.5	36.5	36.5	36.5	36.5	36.5	36.5
80°	27.6	27.6	27.6	27.6	27.6	27.6	27.6	27.6
82.5°	18.8	18.8	18.8	18.8	18.8	18.8	18.8	18.8
85°	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1
87.5°	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
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)