

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: P583872

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

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P583872
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2109-368-14)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 10/21/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HC815D010-HM80520835-81RWWC
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, SPECULAR TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1575.1 lumens
Efficiency: N/A
Efficacy: 112.5 lumens/watt
Spacing Criteria (0/90/45): 1.15 / 1.08 / 1.17
Luminous Opening: Circular (Dia: 0.67' x H: 0')
CIE Type: Direct

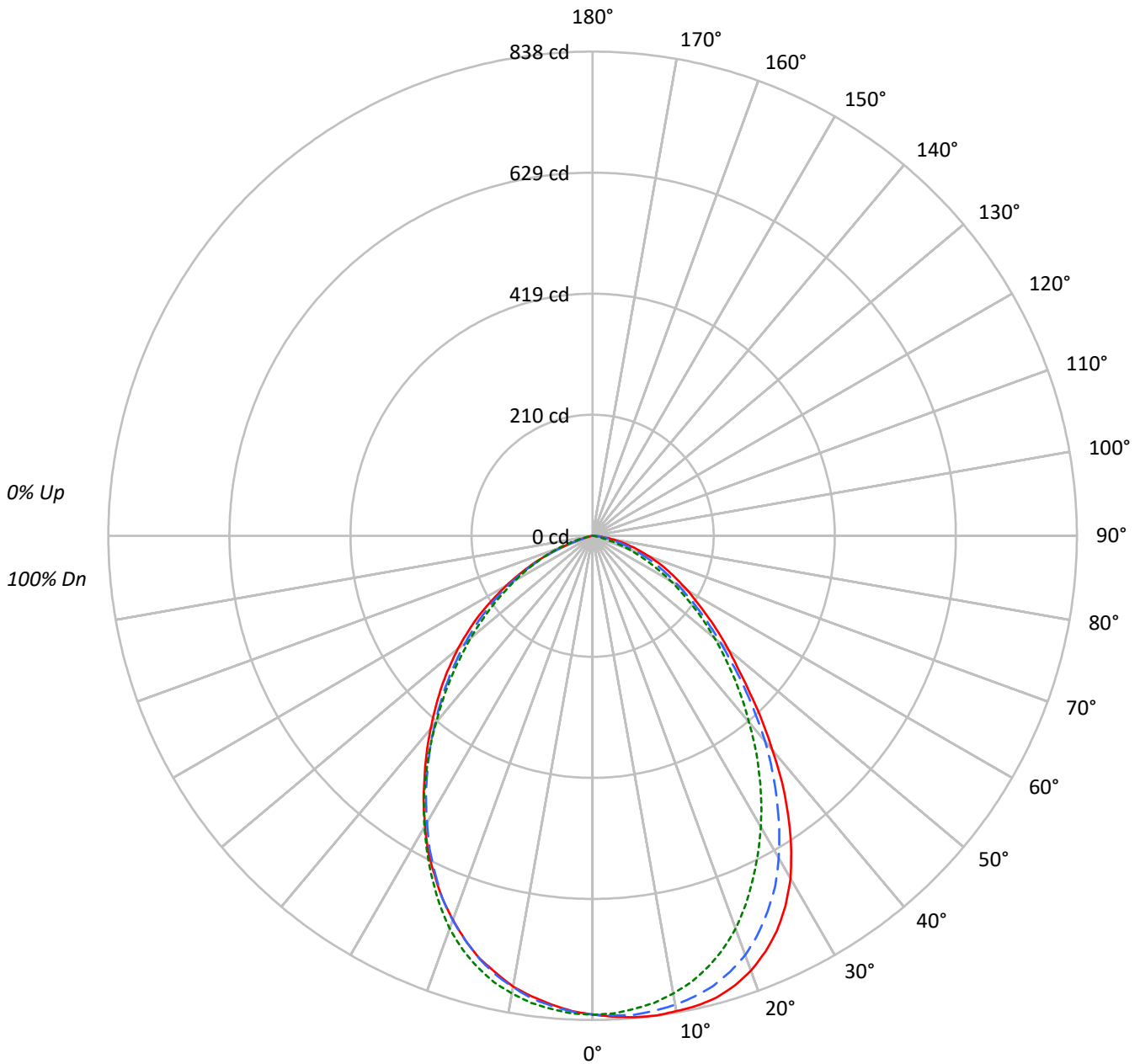
Input Watts (W): 14
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
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	111	107	104	101	108	105	102	99	101	98	96	97	95	93	93	92	90	88																			
2	103	96	90	85	100	94	89	84	91	86	82	87	84	81	84	82	79	77																			
3	95	86	79	73	93	84	78	73	82	76	72	79	74	70	76	73	69	67																			
4	88	77	70	64	86	76	69	64	74	68	63	72	66	62	69	65	61	59																			
5	81	70	62	56	80	69	62	56	67	61	56	65	59	55	63	58	54	52																			
6	76	64	56	50	74	63	55	50	61	55	50	60	54	49	58	53	49	47																			
7	71	59	51	45	69	58	50	45	56	50	45	55	49	44	54	48	44	42																			
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38																			
9	62	50	42	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35																			
10	58	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	25557	25557	25557
5°	25893	25447	25206
10°	26158	25184	24805
15°	26420	24655	24163
20°	26288	23745	23200
25°	25675	22323	22024
30°	24387	20723	20645
35°	22199	18912	19074
40°	19467	16923	17551
45°	16790	15054	16118
50°	14699	13217	14598
55°	13026	11365	12849
60°	11736	9559	10645
65°	10580	7669	8150
70°	9277	5581	4490
75°	7911	2895	1191
80°	6091	799	195
85°	3927	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	78.2	5.0
10°-20°	219.8	14.0
20°-30°	312.0	19.8
30°-40°	328.4	20.9
40°-50°	279.4	17.7
50°-60°	201.9	12.8
60°-70°	114.8	7.3
70°-80°	36.2	2.3
80°-90°	4.4	0.3
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°	610.0	38.7
0°-40°	938.4	59.6
0°-60°	1419.7	90.1
0°-90°	1575.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1575.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	829	829	829	829	829	
5°	836	832	822	817	814	80
15°	828	807	772	758	757	233
25°	755	717	656	645	647	346
35°	590	555	502	499	507	367
45°	385	371	345	354	370	299
55°	242	225	211	224	239	218
65°	145	125	105	104	112	144
75°	66	51	24	11	10	71
85°	11	7	0	0	0	14
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°	828.8	828.8	828.8	828.8	828.8	828.8	828.8	828.8	828.8	828.8	828.8
2.5°	833.1	834.2	832.1	832.1	834.2	832.1	833.1	833.1	832.1	832.1	831.0
5°	836.5	835.4	835.4	835.4	836.5	834.2	833.1	834.2	832.1	832.1	832.1
7.5°	837.6	837.6	836.5	835.4	835.4	835.4	834.2	833.1	832.1	829.9	828.8
10°	835.4	835.4	836.5	834.2	834.2	832.1	832.1	829.9	829.9	827.6	824.3
12.5°	833.1	832.1	832.1	829.9	829.9	827.6	827.6	824.3	823.3	819.9	816.6
15°	827.6	826.5	824.3	823.3	822.1	821.0	818.8	817.7	814.3	809.9	806.6
17.5°	816.6	815.4	814.3	812.2	809.9	808.8	807.7	804.3	800.0	796.6	791.1
20°	801.1	800.0	800.0	796.6	795.5	792.2	791.1	786.7	783.4	776.7	772.3
22.5°	780.0	781.2	778.9	776.7	774.6	771.2	769.0	764.6	759.0	752.4	746.9
25°	754.6	755.7	753.5	751.3	747.9	745.8	743.5	736.9	731.3	723.6	717.0
27.5°	722.5	722.5	722.5	720.3	714.8	713.7	711.4	704.8	697.1	690.5	683.8
30°	684.9	683.8	683.8	680.5	678.3	673.8	670.5	665.0	659.5	651.7	644.0
32.5°	639.5	640.7	637.3	635.2	631.8	631.8	627.3	623.0	616.4	608.5	600.8
35°	589.7	590.8	588.6	587.6	582.0	580.9	579.8	574.3	569.8	564.3	555.4
37.5°	538.9	537.8	536.6	536.6	533.3	531.0	528.9	525.6	518.9	514.5	510.1
40°	483.6	483.6	483.6	482.4	481.3	479.1	478.0	475.7	471.4	466.9	463.6
42.5°	433.7	433.7	432.6	431.5	429.3	430.4	428.3	426.0	421.5	418.3	416.1
45°	385.0	385.0	385.0	386.2	383.9	380.7	380.7	378.4	376.2	374.0	370.7
47.5°	341.9	345.2	342.9	341.9	342.9	338.6	338.6	336.3	334.1	332.0	327.5
50°	306.4	306.4	306.4	304.3	303.2	303.2	299.8	297.6	296.6	294.3	289.9
52.5°	274.4	272.2	272.2	271.1	269.9	267.8	267.8	265.6	261.1	259.0	255.6
55°	242.3	242.3	241.2	240.2	239.0	237.9	236.8	233.4	231.2	228.0	224.6
57.5°	213.5	215.8	214.6	212.4	210.3	210.3	208.0	205.8	202.4	199.2	195.8
60°	190.3	189.2	189.2	188.1	185.9	184.7	183.6	180.4	177.0	173.8	170.4
62.5°	165.9	165.9	165.9	163.8	161.6	160.4	159.3	157.1	152.7	149.4	147.1
65°	145.0	143.9	142.8	141.6	140.5	138.3	137.2	135.0	131.7	128.3	125.1
67.5°	123.9	122.8	122.8	121.7	118.5	117.2	117.2	114.0	110.6	107.4	104.0
70°	102.9	102.9	102.9	100.7	99.5	98.4	97.4	95.2	91.8	88.6	85.2
72.5°	85.2	84.1	84.1	83.0	79.7	78.6	77.5	75.2	71.9	69.6	67.5
75°	66.4	66.4	65.3	64.2	63.0	61.9	60.9	58.7	55.3	52.1	50.9
77.5°	50.9	49.8	49.8	48.7	46.5	45.3	45.3	43.1	39.9	37.6	35.4
80°	34.3	35.4	34.3	33.1	32.1	31.0	29.9	28.8	26.5	24.3	22.2
82.5°	21.0	22.2	21.0	21.0	19.9	18.8	18.8	16.6	15.5	14.3	13.3
85°	11.1	11.1	11.1	11.1	10.0	10.0	10.0	8.8	7.7	6.6	6.6
87.5°	3.4	4.5	3.4	3.4	3.4	3.4	3.4	3.4	2.2	2.2	2.2
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°	828.8	828.8	828.8	828.8	828.8	828.8	828.8	828.8	828.8	828.8	828.8
2.5°	832.1	831.0	829.9	829.9	829.9	829.9	829.9	828.8	827.6	827.6	827.6
5°	829.9	829.9	829.9	828.8	827.6	827.6	825.4	824.3	823.3	822.1	821.0
7.5°	827.6	825.4	824.3	823.3	822.1	822.1	819.9	817.7	817.7	815.4	813.3
10°	821.0	819.9	817.7	815.4	814.3	813.3	811.1	807.7	806.6	804.3	802.2
12.5°	813.3	811.1	808.8	804.3	803.3	802.2	797.7	794.5	792.2	791.1	785.5
15°	803.3	798.9	795.5	790.0	788.9	786.7	783.4	780.0	775.7	772.3	770.1
17.5°	785.5	781.2	775.7	770.1	767.8	767.8	762.4	757.9	752.4	750.2	745.8
20°	764.6	759.0	754.6	747.9	744.7	741.3	738.1	731.3	727.0	723.6	718.1
22.5°	740.2	732.5	727.0	720.3	714.8	711.4	705.9	700.3	694.8	691.5	687.1
25°	709.3	702.6	693.7	687.1	683.8	679.4	672.8	667.2	661.7	656.1	654.0
27.5°	674.9	666.1	658.3	650.6	647.3	644.0	636.2	629.6	625.2	619.6	617.4
30°	637.3	628.5	619.6	613.0	609.6	604.2	599.7	592.0	586.5	582.0	576.5
32.5°	594.2	587.6	579.8	569.8	567.6	563.2	556.6	553.2	546.6	543.2	538.9
35°	547.7	543.2	535.5	527.8	524.4	522.2	516.7	510.1	505.6	502.4	500.1
37.5°	503.4	497.9	490.2	484.7	482.4	479.1	472.5	469.1	464.8	462.5	458.0
40°	455.9	450.3	444.8	441.5	438.1	436.0	431.5	428.3	423.8	420.4	419.3
42.5°	409.3	406.1	401.6	397.2	396.1	392.8	390.5	387.3	383.9	382.8	379.6
45°	367.4	364.0	359.6	355.2	354.0	351.9	350.8	347.4	345.2	345.2	345.2
47.5°	325.4	322.0	317.5	315.3	316.4	312.0	312.0	310.9	308.7	308.7	309.8
50°	287.6	283.3	282.1	279.9	277.8	275.5	276.7	273.3	273.3	275.5	274.4
52.5°	252.3	247.9	246.8	244.5	243.4	243.4	242.3	242.3	241.2	242.3	242.3
55°	220.2	216.9	214.6	212.4	211.4	211.4	211.4	210.3	209.1	211.4	212.4
57.5°	191.5	190.3	188.1	184.7	183.6	182.6	181.5	181.5	181.5	181.5	182.6
60°	165.9	163.8	161.6	158.2	158.2	157.1	156.0	155.0	155.0	155.0	155.0
62.5°	143.9	140.5	137.2	135.0	133.9	132.8	131.7	129.4	129.4	129.4	129.4
65°	121.7	118.5	116.2	114.0	111.7	111.7	109.5	108.4	106.2	105.1	102.9
67.5°	100.7	98.4	96.3	92.9	91.8	90.7	88.6	87.4	84.1	83.0	81.8
70°	81.8	78.6	76.4	74.1	73.0	70.9	68.6	66.4	64.2	61.9	59.8
72.5°	64.2	60.9	58.7	56.4	54.2	54.2	50.9	48.7	45.3	43.1	39.9
75°	47.6	44.2	42.1	38.7	37.6	36.5	33.1	31.0	27.7	24.3	22.2
77.5°	32.1	29.9	27.7	24.3	22.2	22.2	18.8	16.6	14.3	11.1	10.0
80°	19.9	17.7	15.5	13.3	13.3	11.1	10.0	7.7	5.5	4.5	3.4
82.5°	11.1	10.0	8.8	6.6	6.6	5.5	4.5	3.4	2.2	1.1	1.1
85°	5.5	4.5	3.4	3.4	2.2	2.2	2.2	1.1	1.1	0.0	0.0
87.5°	2.2	1.1	1.1	1.1	1.1	1.1	0.0	0.0	0.0	0.0	0.0
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°	828.8	828.8	828.8	828.8	828.8	828.8	828.8	828.8	828.8	828.8	828.8
2.5°	826.5	826.5	825.4	825.4	825.4	824.3	825.4	824.3	824.3	824.3	825.4
5°	822.1	819.9	819.9	818.8	818.8	817.7	818.8	817.7	816.6	815.4	816.6
7.5°	813.3	811.1	809.9	808.8	808.8	808.8	807.7	806.6	807.7	804.3	806.6
10°	801.1	800.0	797.7	796.6	795.5	796.6	795.5	793.4	793.4	793.4	792.2
12.5°	785.5	783.4	782.3	781.2	778.9	778.9	780.0	777.8	777.8	775.7	775.7
15°	766.7	764.6	762.4	762.4	760.1	760.1	759.0	759.0	757.9	756.9	756.9
17.5°	743.5	740.2	738.1	739.1	738.1	736.9	736.9	734.7	733.6	734.7	734.7
20°	715.9	713.7	711.4	712.5	710.3	709.3	710.3	707.0	708.2	708.2	708.2
22.5°	684.9	683.8	680.5	680.5	678.3	677.2	678.3	678.3	679.4	678.3	678.3
25°	650.6	648.4	646.1	646.1	645.0	644.0	645.0	646.1	645.0	646.1	646.1
27.5°	614.1	610.8	610.8	608.5	608.5	609.6	608.5	609.6	610.8	610.8	613.0
30°	574.3	573.1	572.0	570.9	570.9	572.0	572.0	572.0	573.1	575.4	575.4
32.5°	536.6	534.4	532.2	532.2	534.4	533.3	534.4	534.4	536.6	536.6	538.9
35°	495.7	495.7	493.4	494.5	494.5	494.5	494.5	496.8	499.0	500.1	502.4
37.5°	458.0	454.8	455.9	455.9	456.9	455.9	459.2	459.2	461.4	461.4	463.6
40°	417.2	417.2	418.3	417.2	418.3	418.3	420.4	422.7	423.8	426.0	427.1
42.5°	378.4	380.7	378.4	379.6	380.7	381.7	382.8	383.9	388.4	390.5	393.9
45°	342.9	344.1	345.2	346.3	345.2	347.4	348.5	350.8	354.0	355.2	356.3
47.5°	308.7	309.8	310.9	312.0	312.0	314.3	315.3	317.5	319.8	320.9	322.0
50°	275.5	277.8	278.8	278.8	279.9	282.1	284.4	284.4	286.5	289.9	291.0
52.5°	245.6	245.6	247.9	249.0	250.0	250.0	253.4	254.5	255.6	257.7	260.0
55°	212.4	215.8	216.9	216.9	219.1	221.2	222.4	223.5	223.5	228.0	228.0
57.5°	183.6	184.7	187.0	187.0	187.0	190.3	190.3	192.6	193.6	194.7	196.9
60°	155.0	157.1	157.1	158.2	157.1	159.3	160.4	162.7	163.8	164.8	165.9
62.5°	128.3	128.3	129.4	129.4	129.4	129.4	131.7	131.7	133.9	135.0	136.0
65°	102.9	102.9	102.9	102.9	102.9	102.9	102.9	102.9	104.0	104.0	106.2
67.5°	79.7	78.6	76.4	77.5	76.4	76.4	75.2	75.2	76.4	76.4	78.6
70°	57.5	56.4	54.2	54.2	53.1	52.1	50.9	49.8	48.7	48.7	48.7
72.5°	37.6	35.4	32.1	31.0	31.0	28.8	26.5	25.4	25.4	25.4	25.4
75°	18.8	16.6	14.3	13.3	13.3	11.1	12.2	11.1	11.1	11.1	11.1
77.5°	7.7	5.5	4.5	4.5	4.5	3.4	3.4	3.4	3.4	3.4	3.4
80°	2.2	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
82.5°	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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: P583872

CATALOG NUMBER: HC815D010-HM80520835-81RWWC

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	828.8	828.8	828.8	828.8	828.8	828.8	828.8	828.8
2.5°	824.3	824.3	822.1	823.3	823.3	823.3	823.3	823.3
5°	814.3	815.4	814.3	815.4	815.4	814.3	814.3	814.3
7.5°	804.3	805.5	804.3	805.5	805.5	805.5	804.3	804.3
10°	792.2	792.2	792.2	792.2	792.2	791.1	792.2	792.2
12.5°	775.7	775.7	775.7	776.7	776.7	775.7	775.7	774.6
15°	757.9	755.7	756.9	757.9	756.9	756.9	756.9	756.9
17.5°	733.6	734.7	733.6	733.6	733.6	733.6	734.7	733.6
20°	708.2	708.2	709.3	708.2	708.2	708.2	708.2	707.0
22.5°	679.4	678.3	678.3	679.4	679.4	678.3	679.4	679.4
25°	647.3	648.4	647.3	647.3	648.4	648.4	648.4	647.3
27.5°	613.0	614.1	615.2	614.1	614.1	614.1	615.2	616.4
30°	577.6	579.8	577.6	577.6	579.8	578.6	579.8	579.8
32.5°	540.0	543.2	541.0	543.2	543.2	544.4	543.2	544.4
35°	502.4	505.6	505.6	505.6	506.7	507.9	507.9	506.7
37.5°	466.9	468.0	468.0	470.2	471.4	472.5	472.5	471.4
40°	430.4	432.6	433.7	433.7	433.7	436.0	438.1	436.0
42.5°	395.0	396.1	397.2	397.2	399.5	400.5	401.6	401.6
45°	360.7	362.9	364.0	365.1	366.2	368.5	367.4	369.6
47.5°	325.4	328.6	329.7	330.8	333.1	334.1	335.2	336.3
50°	293.2	295.5	295.5	297.6	301.0	301.0	303.2	304.3
52.5°	261.1	262.2	263.3	264.5	266.7	268.8	268.8	271.1
55°	230.2	231.2	231.2	232.3	233.4	237.9	239.0	239.0
57.5°	198.1	198.1	200.3	201.4	202.4	204.7	204.7	204.7
60°	167.1	168.2	168.2	169.3	170.4	172.6	173.8	172.6
62.5°	136.0	137.2	137.2	138.3	140.5	141.6	140.5	140.5
65°	107.4	108.4	108.4	109.5	111.7	111.7	110.6	111.7
67.5°	78.6	78.6	78.6	78.6	78.6	78.6	78.6	78.6
70°	49.8	48.7	47.6	48.7	48.7	48.7	47.6	49.8
72.5°	24.3	25.4	25.4	25.4	25.4	25.4	25.4	24.3
75°	11.1	11.1	10.0	10.0	10.0	11.1	11.1	10.0
77.5°	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
80°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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)