

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: P583940

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

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P583940
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-HM80520935-81RWWC
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, SPECULAR TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1445.5 lumens
Efficiency: N/A
Efficacy: 103.3 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

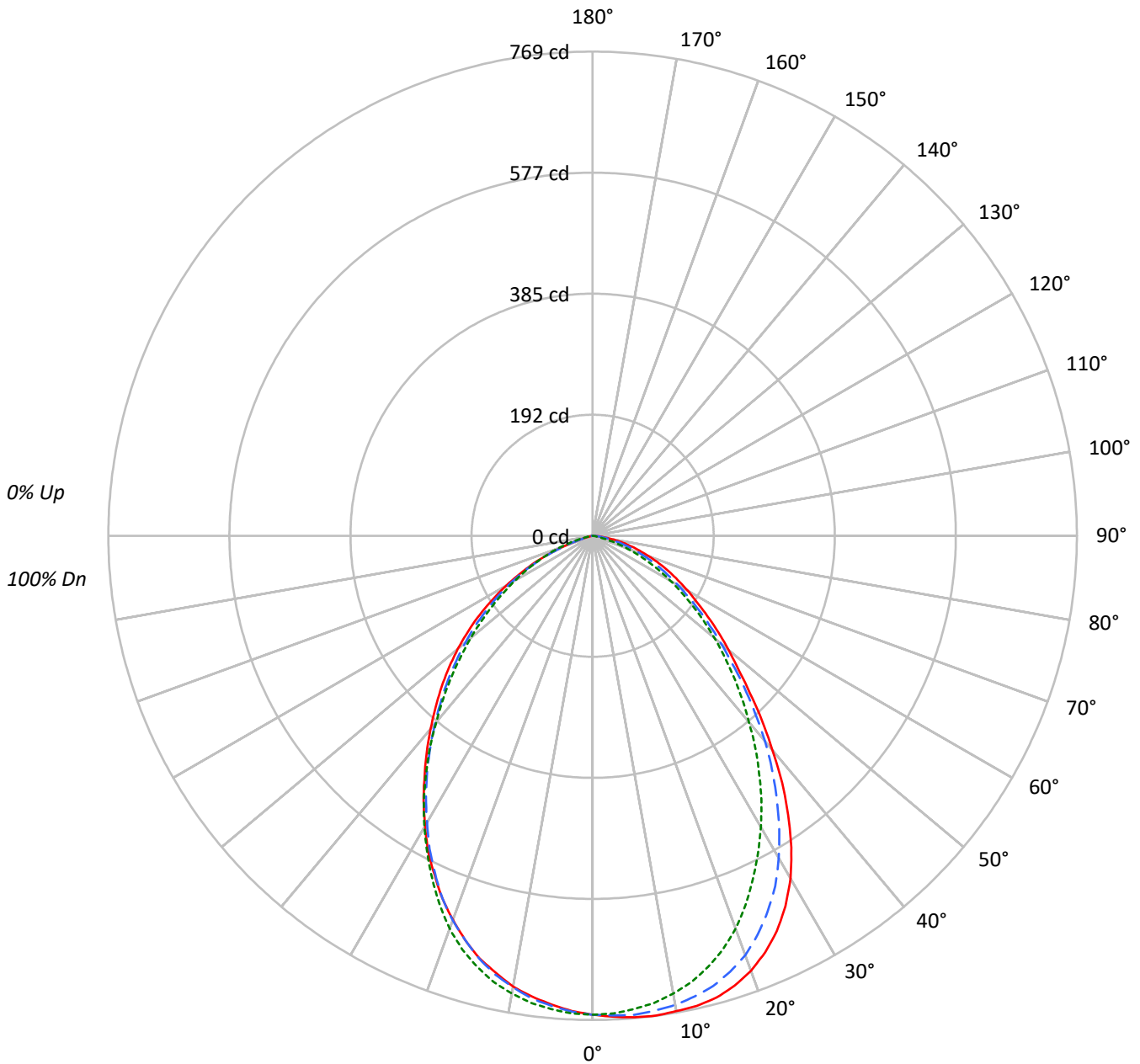
Input Watts (W): 14
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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	85	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°	23454	23454	23454
5°	23763	23355	23132
10°	24004	23115	22767
15°	24246	22628	22174
20°	24126	21793	21294
25°	23562	20486	20214
30°	22379	19021	18946
35°	20377	17354	17508
40°	17865	15530	16106
45°	15411	13815	14792
50°	13490	12128	13394
55°	11957	10430	11790
60°	10768	8770	9775
65°	9704	7041	7479
70°	8520	5130	4120
75°	7268	2657	1096
80°	5594	728	178
85°	3573	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	71.8	5.0
10°-20°	201.7	14.0
20°-30°	286.3	19.8
30°-40°	301.4	20.9
40°-50°	256.4	17.7
50°-60°	185.3	12.8
60°-70°	105.4	7.3
70°-80°	33.2	2.3
80°-90°	4.0	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°	559.8	38.7
0°-40°	861.2	59.6
0°-60°	1302.9	90.1
0°-90°	1445.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1445.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	761	761	761	761	761	
5°	768	764	754	749	747	73
15°	760	740	709	696	695	214
25°	692	658	602	592	594	317
35°	541	510	461	458	465	337
45°	353	340	317	325	339	275
55°	222	206	194	205	219	200
65°	133	115	96	95	102	132
75°	61	47	22	10	9	66
85°	10	6	0	0	0	13
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°	760.6	760.6	760.6	760.6	760.6	760.6	760.6	760.6	760.6	760.6	760.6
2.5°	764.7	765.7	763.6	763.6	765.7	763.6	764.7	764.7	763.6	763.6	762.6
5°	767.7	766.6	766.6	766.6	767.7	765.7	764.7	765.7	763.6	763.6	763.6
7.5°	768.7	768.7	767.7	766.6	766.6	766.6	765.7	764.7	763.6	761.6	760.6
10°	766.6	766.6	767.7	765.7	765.7	763.6	763.6	761.6	761.6	759.5	756.5
12.5°	764.7	763.6	763.6	761.6	761.6	759.5	759.5	756.5	755.5	752.4	749.4
15°	759.5	758.5	756.5	755.5	754.5	753.5	751.4	750.5	747.3	743.4	740.2
17.5°	749.4	748.4	747.3	745.3	743.4	742.3	741.3	738.2	734.2	731.2	726.0
20°	735.2	734.2	734.2	731.2	730.1	727.1	726.0	722.0	718.9	712.9	708.8
22.5°	715.9	717.0	714.9	712.9	710.8	707.8	705.8	701.7	696.6	690.5	685.4
25°	692.5	693.6	691.5	689.5	686.5	684.4	682.4	676.2	671.2	664.1	658.1
27.5°	663.1	663.1	663.1	661.1	656.0	654.9	653.0	646.8	639.7	633.7	627.6
30°	628.5	627.6	627.6	624.6	622.5	618.4	615.4	610.3	605.3	598.2	591.1
32.5°	587.0	587.9	584.9	582.9	579.8	579.8	575.7	571.7	565.6	558.5	551.4
35°	541.3	542.2	540.2	539.2	534.2	533.1	532.1	527.1	523.0	517.9	509.7
37.5°	494.5	493.6	492.5	492.5	489.5	487.4	485.4	482.4	476.2	472.2	468.1
40°	443.8	443.8	443.8	442.7	441.8	439.7	438.7	436.7	432.6	428.5	425.5
42.5°	398.0	398.0	397.0	396.1	394.0	395.0	393.0	390.9	386.9	383.8	381.9
45°	353.4	353.4	353.4	354.4	352.3	349.3	349.3	347.3	345.2	343.2	340.2
47.5°	313.8	316.8	314.7	313.8	314.7	310.8	310.8	308.7	306.7	304.6	300.5
50°	281.2	281.2	281.2	279.2	278.2	278.2	275.2	273.2	272.1	270.2	266.1
52.5°	251.8	249.8	249.8	248.8	247.7	245.7	245.7	243.8	239.7	237.6	234.6
55°	222.4	222.4	221.4	220.4	219.3	218.3	217.3	214.2	212.2	209.2	206.2
57.5°	195.9	198.0	197.0	195.0	192.9	192.9	190.9	188.8	185.8	182.8	179.8
60°	174.6	173.6	173.6	172.7	170.6	169.5	168.6	165.6	162.4	159.4	156.4
62.5°	152.3	152.3	152.3	150.3	148.2	147.3	146.3	144.2	140.1	137.1	135.1
65°	133.0	132.1	131.0	130.0	128.9	126.9	125.9	123.9	120.9	117.8	114.7
67.5°	113.8	112.7	112.7	111.7	108.7	107.6	107.6	104.6	101.6	98.4	95.4
70°	94.5	94.5	94.5	92.4	91.3	90.4	89.4	87.4	84.2	81.2	78.2
72.5°	78.2	77.1	77.1	76.2	73.1	72.1	71.1	69.0	66.0	64.0	61.9
75°	61.0	61.0	59.9	58.9	57.8	56.9	55.8	53.9	50.7	47.7	46.8
77.5°	46.8	45.7	45.7	44.7	42.7	41.7	41.7	39.6	36.5	34.6	32.5
80°	31.5	32.5	31.5	30.5	29.4	28.4	27.5	26.4	24.3	22.3	20.4
82.5°	19.3	20.4	19.3	19.3	18.3	17.2	17.2	15.2	14.2	13.3	12.2
85°	10.1	10.1	10.1	10.1	9.2	9.2	9.2	8.1	7.1	6.1	6.1
87.5°	3.0	4.1	3.0	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0
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):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	760.6	760.6	760.6	760.6	760.6	760.6	760.6	760.6	760.6	760.6	760.6
2.5°	763.6	762.6	761.6	761.6	761.6	761.6	761.6	760.6	759.5	759.5	759.5
5°	761.6	761.6	761.6	760.6	759.5	759.5	757.6	756.5	755.5	754.5	753.5
7.5°	759.5	757.6	756.5	755.5	754.5	754.5	752.4	750.5	750.5	748.4	746.4
10°	753.5	752.4	750.5	748.4	747.3	746.4	744.3	741.3	740.2	738.2	736.3
12.5°	746.4	744.3	742.3	738.2	737.2	736.3	732.2	729.1	727.1	726.0	721.0
15°	737.2	733.1	730.1	725.0	724.1	722.0	718.9	715.9	711.8	708.8	706.7
17.5°	721.0	717.0	711.8	706.7	704.7	704.7	699.6	695.6	690.5	688.5	684.4
20°	701.7	696.6	692.5	686.5	683.4	680.3	677.3	671.2	667.2	664.1	659.0
22.5°	679.4	672.3	667.2	661.1	656.0	653.0	647.8	642.7	637.7	634.7	630.6
25°	650.9	644.8	636.7	630.6	627.6	623.5	617.4	612.4	607.2	602.1	600.1
27.5°	619.5	611.3	604.2	597.1	594.1	591.1	583.9	577.8	573.7	568.6	566.6
30°	584.9	576.8	568.6	562.6	559.5	554.4	550.3	543.2	538.2	534.2	529.1
32.5°	545.3	539.2	532.1	523.0	520.9	516.8	510.8	507.8	501.6	498.6	494.5
35°	502.6	498.6	491.5	484.4	481.3	479.3	474.2	468.1	464.0	461.0	459.0
37.5°	462.0	456.9	449.8	444.8	442.7	439.7	433.6	430.5	426.4	424.5	420.4
40°	418.4	413.3	408.3	405.1	402.1	400.1	396.1	393.0	389.0	385.8	384.9
42.5°	375.7	372.7	368.6	364.5	363.5	360.5	358.5	355.4	352.3	351.4	348.2
45°	337.2	334.1	330.0	326.0	325.0	322.9	321.9	318.8	316.8	316.8	316.8
47.5°	298.6	295.5	291.5	289.4	290.4	286.3	286.3	285.3	283.3	283.3	284.4
50°	264.0	259.9	259.0	256.9	254.9	252.8	253.9	250.8	250.8	252.8	251.8
52.5°	231.5	227.5	226.4	224.4	223.4	223.4	222.4	222.4	221.4	222.4	222.4
55°	202.1	199.1	197.0	195.0	194.0	194.0	194.0	192.9	192.0	194.0	195.0
57.5°	175.7	174.6	172.7	169.5	168.6	167.5	166.5	166.5	166.5	166.5	167.5
60°	152.3	150.3	148.2	145.2	145.2	144.2	143.2	142.2	142.2	142.2	142.2
62.5°	132.1	128.9	125.9	123.9	122.9	121.8	120.9	118.8	118.8	118.8	118.8
65°	111.7	108.7	106.6	104.6	102.5	102.5	100.5	99.5	97.5	96.5	94.5
67.5°	92.4	90.4	88.3	85.3	84.2	83.3	81.2	80.3	77.1	76.2	75.2
70°	75.2	72.1	70.0	68.1	67.0	64.9	62.9	61.0	58.9	56.9	54.8
72.5°	58.9	55.8	53.9	51.8	49.8	49.8	46.8	44.7	41.7	39.6	36.5
75°	43.6	40.6	38.6	35.5	34.6	33.5	30.5	28.4	25.4	22.3	20.4
77.5°	29.4	27.5	25.4	22.3	20.4	20.4	17.2	15.2	13.3	10.1	9.2
80°	18.3	16.3	14.2	12.2	12.2	10.1	9.2	7.1	5.1	4.1	3.0
82.5°	10.1	9.2	8.1	6.1	6.1	5.1	4.1	3.0	2.0	1.0	1.0
85°	5.1	4.1	3.0	3.0	2.0	2.0	2.0	1.0	1.0	0.0	0.0
87.5°	2.0	1.0	1.0	1.0	1.0	1.0	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



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CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	760.6	760.6	760.6	760.6	760.6	760.6	760.6	760.6	760.6	760.6	760.6
2.5°	758.5	758.5	757.6	757.6	757.6	756.5	757.6	756.5	756.5	756.5	757.6
5°	754.5	752.4	752.4	751.4	751.4	750.5	751.4	750.5	749.4	748.4	749.4
7.5°	746.4	744.3	743.4	742.3	742.3	742.3	741.3	740.2	741.3	738.2	740.2
10°	735.2	734.2	732.2	731.2	730.1	731.2	730.1	728.1	728.1	728.1	727.1
12.5°	721.0	718.9	717.9	717.0	714.9	714.9	715.9	713.8	713.8	711.8	711.8
15°	703.7	701.7	699.6	699.6	697.6	697.6	696.6	696.6	695.6	694.6	694.6
17.5°	682.4	679.4	677.3	678.3	677.3	676.2	676.2	674.3	673.2	674.3	674.3
20°	657.0	654.9	653.0	654.0	651.9	650.9	651.9	648.9	649.9	649.9	649.9
22.5°	628.5	627.6	624.6	624.6	622.5	621.4	622.5	622.5	623.5	622.5	622.5
25°	597.1	595.0	593.0	593.0	592.0	591.1	592.0	593.0	592.0	593.0	593.0
27.5°	563.6	560.6	560.6	558.5	558.5	559.5	558.5	559.5	560.6	560.6	562.6
30°	527.1	526.0	525.0	523.9	523.9	525.0	525.0	525.0	526.0	528.0	528.0
32.5°	492.5	490.4	488.4	488.4	490.4	489.5	490.4	490.4	492.5	492.5	494.5
35°	454.9	454.9	452.8	453.9	453.9	453.9	453.9	456.0	458.0	459.0	461.0
37.5°	420.4	417.4	418.4	418.4	419.3	418.4	421.4	421.4	423.4	423.4	425.5
40°	382.8	382.8	383.8	382.8	383.8	383.8	385.8	387.9	389.0	390.9	392.0
42.5°	347.3	349.3	347.3	348.2	349.3	350.3	351.4	352.3	356.4	358.5	361.5
45°	314.7	315.8	316.8	317.9	316.8	318.8	319.9	321.9	325.0	326.0	327.0
47.5°	283.3	284.4	285.3	286.3	286.3	288.4	289.4	291.5	293.4	294.5	295.5
50°	252.8	254.9	255.9	255.9	256.9	259.0	261.0	261.0	263.1	266.1	267.0
52.5°	225.5	225.5	227.5	228.5	229.6	229.6	232.6	233.5	234.6	236.7	238.6
55°	195.0	198.0	199.1	199.1	201.1	203.0	204.1	205.1	205.1	209.2	209.2
57.5°	168.6	169.5	171.6	171.6	171.6	174.6	174.6	176.7	177.7	178.7	180.8
60°	142.2	144.2	144.2	145.2	144.2	146.3	147.3	149.3	150.3	151.3	152.3
62.5°	117.8	117.8	118.8	118.8	118.8	118.8	120.9	120.9	122.9	123.9	125.0
65°	94.5	94.5	94.5	94.5	94.5	94.5	94.5	94.5	95.4	95.4	97.5
67.5°	73.1	72.1	70.0	71.1	70.0	70.0	69.0	69.0	70.0	70.0	72.1
70°	52.8	51.8	49.8	49.8	48.8	47.7	46.8	45.7	44.7	44.7	44.7
72.5°	34.6	32.5	29.4	28.4	28.4	26.4	24.3	23.4	23.4	23.4	23.4
75°	17.2	15.2	13.3	12.2	12.2	10.1	11.2	10.1	10.1	10.1	10.1
77.5°	7.1	5.1	4.1	4.1	4.1	3.0	3.0	3.0	3.0	3.0	3.0
80°	2.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
82.5°	1.0	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: P583940

CATALOG NUMBER: HC815D010-HM80520935-81RWWC

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	760.6	760.6	760.6	760.6	760.6	760.6	760.6	760.6
2.5°	756.5	756.5	754.5	755.5	755.5	755.5	755.5	755.5
5°	747.3	748.4	747.3	748.4	748.4	747.3	747.3	747.3
7.5°	738.2	739.3	738.2	739.3	739.3	739.3	738.2	738.2
10°	727.1	727.1	727.1	727.1	727.1	726.0	727.1	727.1
12.5°	711.8	711.8	711.8	712.9	712.9	711.8	711.8	710.8
15°	695.6	693.6	694.6	695.6	694.6	694.6	694.6	694.6
17.5°	673.2	674.3	673.2	673.2	673.2	673.2	674.3	673.2
20°	649.9	649.9	650.9	649.9	649.9	649.9	649.9	648.9
22.5°	623.5	622.5	622.5	623.5	623.5	622.5	623.5	623.5
25°	594.1	595.0	594.1	594.1	595.0	595.0	595.0	594.1
27.5°	562.6	563.6	564.5	563.6	563.6	563.6	564.5	565.6
30°	530.1	532.1	530.1	530.1	532.1	531.0	532.1	532.1
32.5°	495.5	498.6	496.6	498.6	498.6	499.6	498.6	499.6
35°	461.0	464.0	464.0	464.0	465.1	466.1	466.1	465.1
37.5°	428.5	429.6	429.6	431.6	432.6	433.6	433.6	432.6
40°	395.0	397.0	398.0	398.0	398.0	400.1	402.1	400.1
42.5°	362.5	363.5	364.5	364.5	366.6	367.6	368.6	368.6
45°	331.0	333.1	334.1	335.1	336.1	338.1	337.2	339.2
47.5°	298.6	301.6	302.6	303.7	305.7	306.7	307.6	308.7
50°	269.1	271.1	271.1	273.2	276.2	276.2	278.2	279.2
52.5°	239.7	240.6	241.7	242.7	244.7	246.8	246.8	248.8
55°	211.2	212.2	212.2	213.3	214.2	218.3	219.3	219.3
57.5°	181.7	181.7	183.8	184.8	185.8	187.9	187.9	187.9
60°	153.3	154.4	154.4	155.3	156.4	158.5	159.4	158.5
62.5°	125.0	125.9	125.9	126.9	128.9	130.0	128.9	128.9
65°	98.4	99.5	99.5	100.5	102.5	102.5	101.6	102.5
67.5°	72.1	72.1	72.1	72.1	72.1	72.1	72.1	72.1
70°	45.7	44.7	43.6	44.7	44.7	44.7	43.6	45.7
72.5°	22.3	23.4	23.4	23.4	23.4	23.4	23.4	22.3
75°	10.1	10.1	9.2	9.2	9.2	10.1	10.1	9.2
77.5°	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
80°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
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)