

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: P583930

Luminaire Tested: **HC815D010-HM80520930-81WWBB**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P583930
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2109-368-17)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 10/21/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HC815D010-HM80520930-81WWBB
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, WHITE BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1197.7 lumens
Efficiency: N/A
Efficacy: 85.6 lumens/watt
Spacing Criteria (0/90/45): 1.15 / 1.07 / 1.16
Luminous Opening: Circular (Dia: 0.67' x H: 0')
CIE Type: Direct

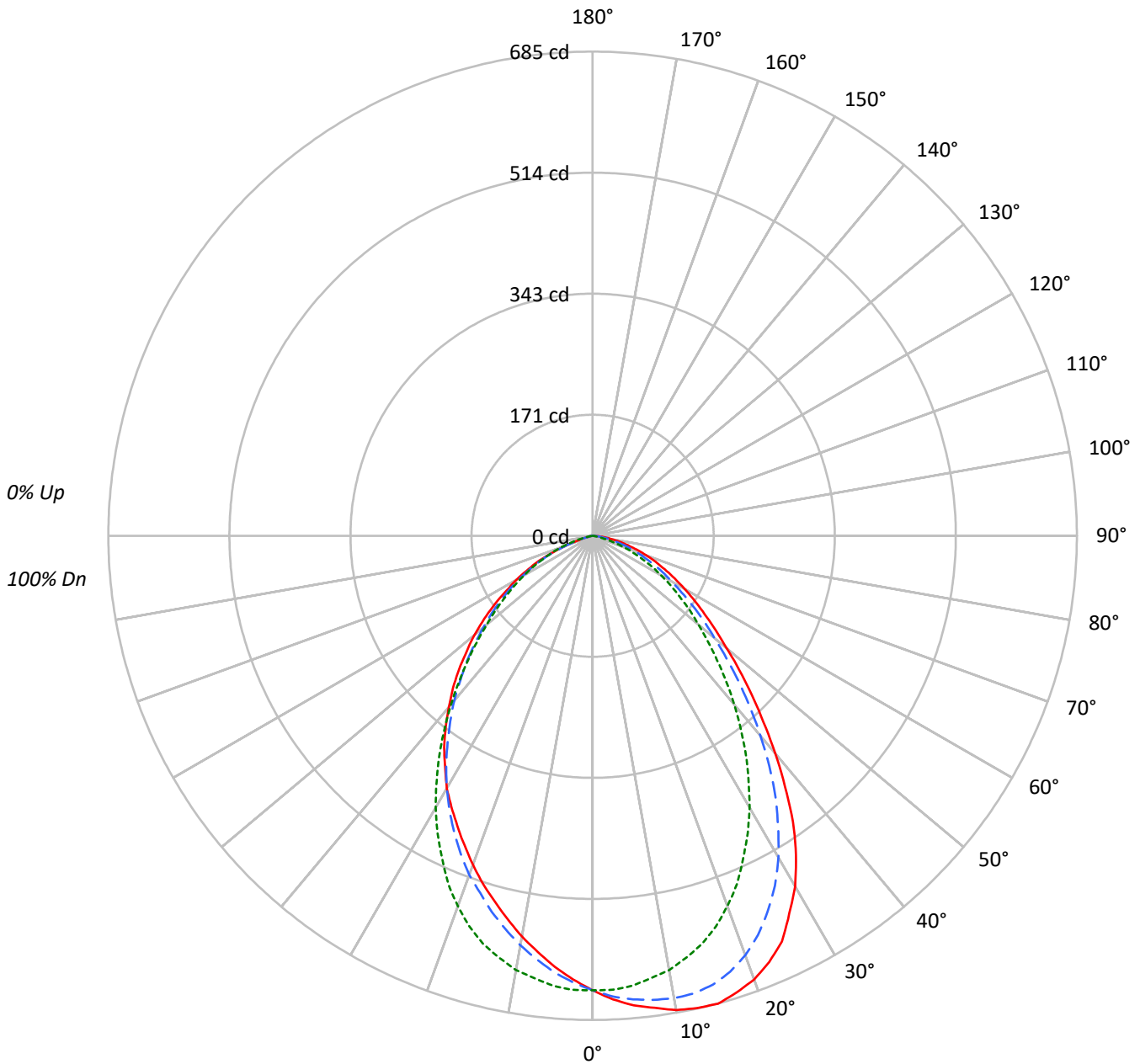
Input Watts (W): 14
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	86	100	94	89	85	91	86	83	88	84	81	85	82	79	77																			
3	95	86	79	74	93	85	78	73	82	76	72	79	74	71	77	73	69	67																			
4	88	78	70	64	86	76	69	64	74	68	63	72	66	62	70	65	61	59																			
5	82	70	63	57	80	69	62	56	67	61	56	65	60	55	64	59	55	53																			
6	76	64	56	51	74	63	56	50	62	55	50	60	54	50	58	53	49	47																			
7	71	59	51	45	69	58	51	45	57	50	45	55	49	45	54	49	44	43																			
8	66	54	46	41	65	53	46	41	52	46	41	51	45	41	50	44	40	39																			
9	62	50	43	37	61	50	42	37	48	42	37	47	41	37	46	41	37	35																			
10	59	47	39	34	57	46	39	34	45	39	34	44	38	34	43	38	34	32																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	19828	19828	19828
5°	20646	19783	18953
10°	21336	19532	18026
15°	21878	19084	17092
20°	21917	18291	16244
25°	21547	17138	15403
30°	20399	15809	14684
35°	18596	14222	13785
40°	16170	12535	12728
45°	13872	10859	11648
50°	11849	9359	10468
55°	10387	8059	9096
60°	9245	6876	7647
65°	8201	5611	6100
70°	7276	4165	3462
75°	6076	2180	1037
80°	4777	693	178
85°	3397	354	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	60.6	5.1
10°-20°	169.8	14.2
20°-30°	240.4	20.1
30°-40°	251.5	21.0
40°-50°	209.7	17.5
50°-60°	148.7	12.4
60°-70°	85.7	7.2
70°-80°	27.6	2.3
80°-90°	3.8	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°	470.8	39.3
0°-40°	722.2	60.3
0°-60°	1080.7	90.2
0°-90°	1197.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1197.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	643	643	643	643	643	
5°	667	658	639	620	612	64
15°	685	657	598	551	535	193
25°	633	586	504	463	453	289
35°	494	451	378	358	366	306
45°	318	292	249	252	267	246
55°	193	173	150	158	169	175
65°	112	94	77	77	84	112
75°	51	38	18	9	9	55
85°	10	5	1	0	0	12
90°	0	0	0	0	0	



TEST NUMBER: P583930

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	643.0	643.0	643.0	643.0	643.0	643.0	643.0	643.0	643.0	643.0	643.0
2.5°	656.5	655.5	654.6	655.5	654.6	655.5	654.6	654.6	653.6	652.6	652.6
5°	667.0	666.0	666.0	666.0	665.2	664.2	664.2	663.2	661.3	660.3	658.4
7.5°	673.7	674.7	674.7	674.7	672.8	672.8	670.8	668.9	667.0	665.2	662.3
10°	681.4	681.4	680.5	679.5	677.6	676.6	675.6	673.7	670.8	667.0	664.2
12.5°	684.3	684.3	683.4	681.4	680.5	679.5	678.5	675.6	671.8	667.0	663.2
15°	685.3	683.4	682.4	681.4	679.5	676.6	676.6	672.8	667.9	662.3	657.4
17.5°	677.6	678.5	676.6	674.7	671.8	669.9	667.0	664.2	658.4	651.7	646.8
20°	667.9	667.0	666.0	663.2	659.4	658.4	655.5	650.7	645.9	638.2	631.4
22.5°	652.6	651.7	649.7	647.8	644.0	642.0	639.1	633.3	626.6	619.0	611.3
25°	633.3	631.4	628.5	624.8	621.9	620.0	616.1	610.3	602.6	593.9	586.2
27.5°	602.6	605.5	603.6	597.8	594.9	591.1	590.1	582.5	575.7	567.1	558.4
30°	572.9	572.9	570.0	567.1	562.3	559.4	555.5	549.7	543.1	532.5	525.7
32.5°	535.4	534.4	530.6	529.6	525.7	520.0	519.0	511.3	504.5	496.9	488.3
35°	494.0	492.1	488.3	485.4	483.4	480.6	477.7	470.9	464.2	456.6	450.8
37.5°	446.9	446.9	446.0	441.2	439.2	437.3	434.4	427.7	423.8	416.2	410.4
40°	401.7	400.8	397.9	396.9	395.0	392.1	390.2	386.3	380.7	374.9	369.1
42.5°	357.5	358.5	354.6	355.6	351.7	349.8	348.8	343.1	340.3	334.5	329.7
45°	318.1	317.2	315.2	314.3	312.3	310.4	308.5	305.6	300.9	295.1	292.2
47.5°	281.6	278.7	278.7	277.8	276.8	272.9	272.0	269.1	266.2	260.5	256.7
50°	247.0	247.0	247.0	246.1	243.2	242.2	240.3	237.4	234.5	230.6	224.9
52.5°	219.2	219.2	219.2	218.2	214.4	213.4	212.4	208.6	204.7	201.8	198.0
55°	193.2	194.1	193.2	191.2	188.3	188.3	185.4	183.5	179.8	176.9	173.0
57.5°	171.1	171.1	169.2	168.2	166.3	165.3	163.4	161.5	156.6	153.8	148.9
60°	149.9	148.9	148.9	147.0	145.1	143.2	142.2	139.4	137.5	132.7	128.8
62.5°	130.7	130.7	128.8	128.8	125.0	125.0	124.0	121.1	118.2	113.4	111.5
65°	112.4	112.4	111.5	110.5	107.6	106.6	105.7	102.8	100.0	97.1	94.2
67.5°	96.2	96.2	94.2	93.3	91.3	90.4	88.4	86.5	83.6	80.7	77.8
70°	80.7	79.8	78.8	77.8	75.9	75.0	73.0	71.1	68.2	66.3	63.4
72.5°	65.3	65.3	64.3	62.4	61.5	60.5	59.6	57.7	54.8	51.9	50.0
75°	51.0	51.0	51.0	49.0	47.1	46.2	46.2	44.2	42.3	39.4	37.5
77.5°	39.4	38.4	37.5	37.5	35.5	34.6	33.6	32.7	29.8	28.8	26.9
80°	26.9	27.8	26.9	25.9	24.9	24.0	24.0	22.1	21.1	19.3	17.4
82.5°	18.3	17.4	17.4	16.4	16.4	15.4	15.4	13.5	12.5	11.6	10.6
85°	9.6	9.6	8.7	8.7	8.7	7.7	7.7	6.7	6.7	5.8	4.8
87.5°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	1.9	1.9	1.9
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°	643.0	643.0	643.0	643.0	643.0	643.0	643.0	643.0	643.0	643.0	643.0
2.5°	651.7	649.7	648.8	648.8	647.8	646.8	645.9	644.9	643.0	643.0	641.1
5°	656.5	654.6	653.6	650.7	648.8	648.8	644.9	644.0	641.1	639.1	637.2
7.5°	660.3	656.5	653.6	650.7	648.8	646.8	643.0	639.1	635.3	631.4	629.5
10°	660.3	656.5	651.7	646.8	644.9	643.0	638.2	632.4	627.6	623.8	619.0
12.5°	658.4	652.6	646.8	643.0	639.1	636.2	630.5	624.8	619.0	611.3	607.4
15°	652.6	644.9	639.1	632.4	629.5	624.8	620.0	611.3	604.5	597.8	593.0
17.5°	641.1	631.4	624.8	618.0	613.2	610.3	602.6	594.9	587.2	579.6	573.8
20°	623.8	615.2	607.4	598.8	594.9	591.1	581.5	573.8	566.1	557.4	551.6
22.5°	602.6	593.9	583.5	576.7	570.9	566.1	557.4	548.8	541.2	533.5	525.7
25°	576.7	568.0	558.4	547.8	544.1	539.2	529.6	520.9	512.2	503.7	496.9
27.5°	548.8	537.3	529.6	518.0	514.2	509.4	498.9	489.2	481.5	474.8	467.1
30°	515.1	506.5	496.0	485.4	481.5	476.7	468.0	459.5	451.8	444.0	436.3
32.5°	478.6	470.0	459.5	451.8	446.0	442.1	433.4	425.7	418.1	410.4	403.7
35°	440.2	430.5	423.0	415.2	410.4	405.6	396.9	390.2	384.4	377.8	371.0
37.5°	400.8	394.0	386.3	377.8	372.9	369.1	362.3	354.6	349.8	344.0	339.3
40°	362.3	354.6	347.9	340.3	336.4	333.5	326.8	321.0	316.2	311.4	308.5
42.5°	322.9	316.2	309.4	304.6	301.9	299.0	294.1	287.4	284.5	279.7	276.8
45°	286.4	280.6	275.8	269.1	267.1	265.2	259.6	254.7	251.8	249.0	247.0
47.5°	251.8	248.0	242.2	238.3	235.5	233.5	229.7	225.8	222.9	221.1	219.2
50°	222.0	217.3	213.4	209.5	207.6	204.7	200.9	198.9	197.0	195.1	195.1
52.5°	194.1	189.3	185.4	182.6	180.8	178.8	175.9	175.0	173.0	173.0	172.1
55°	168.2	165.3	161.5	157.6	156.6	155.7	153.8	151.8	150.9	149.9	150.9
57.5°	146.0	143.2	139.4	136.5	135.6	134.6	133.6	131.7	130.7	130.7	130.7
60°	125.9	123.0	120.1	117.2	117.2	115.3	114.4	113.4	112.4	111.5	111.5
62.5°	107.6	104.7	101.8	100.0	99.1	98.1	96.2	95.2	94.2	94.2	93.3
65°	91.3	87.5	86.5	83.6	82.7	81.7	80.7	78.8	77.8	76.9	75.9
67.5°	75.0	73.0	70.1	68.2	67.2	66.3	65.3	63.4	62.4	61.5	59.6
70°	60.5	58.7	56.8	54.8	53.9	52.9	51.0	49.0	48.1	46.2	43.3
72.5°	47.1	45.2	43.3	41.3	40.4	39.4	37.5	35.5	33.6	31.7	29.8
75°	35.5	33.6	30.7	28.8	27.8	27.8	24.9	23.0	21.1	18.3	16.4
77.5°	24.9	22.1	21.1	19.3	18.3	16.4	14.5	12.5	10.6	9.6	7.7
80°	16.4	14.5	12.5	11.6	10.6	9.6	8.7	6.7	4.8	3.9	2.9
82.5°	9.6	8.7	7.7	6.7	5.8	4.8	3.9	3.9	2.9	1.9	1.0
85°	4.8	3.9	2.9	2.9	1.9	1.9	1.9	1.0	1.0	1.0	1.0
87.5°	1.9	1.0	1.0	1.0	1.0	1.0	1.0	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°	643.0	643.0	643.0	643.0	643.0	643.0	643.0	643.0	643.0	643.0	643.0
2.5°	640.1	639.1	638.2	637.2	637.2	635.3	635.3	634.3	632.4	631.4	631.4
5°	634.3	631.4	629.5	628.5	627.6	624.8	623.8	621.9	620.0	618.0	617.1
7.5°	625.6	620.9	619.0	618.0	615.2	612.3	610.3	607.4	604.5	601.7	600.7
10°	615.2	610.3	605.5	603.6	600.7	598.8	594.9	591.1	588.2	585.3	582.5
12.5°	601.7	595.9	591.1	589.1	586.2	582.5	576.7	574.8	570.0	568.0	564.2
15°	586.2	579.6	574.8	571.9	569.0	563.2	559.4	555.5	550.7	548.8	544.9
17.5°	567.1	559.4	554.5	551.6	549.7	544.9	539.2	534.4	529.6	527.7	524.8
20°	544.1	539.2	532.5	529.6	527.7	521.9	516.1	514.2	510.3	506.5	503.7
22.5°	518.0	513.2	506.5	503.7	502.7	497.9	493.1	490.2	487.3	484.4	481.5
25°	491.2	485.4	479.6	477.7	475.7	471.9	468.0	466.1	463.3	461.4	459.5
27.5°	462.4	456.6	451.8	448.9	446.9	444.0	442.1	440.2	438.3	436.3	435.4
30°	431.5	425.7	422.0	420.1	418.1	417.2	414.3	413.3	412.4	410.4	411.4
32.5°	400.8	396.0	392.1	389.2	389.2	387.3	386.3	386.3	385.4	385.4	385.4
35°	367.2	364.3	361.4	360.4	359.5	358.5	357.5	358.5	357.5	358.5	359.5
37.5°	336.4	333.5	331.6	330.7	329.7	330.7	329.7	329.7	330.7	332.6	333.5
40°	304.6	302.7	300.9	301.9	300.9	300.9	300.9	303.7	304.6	305.6	306.6
42.5°	274.9	272.9	272.0	272.0	272.9	272.0	273.9	274.9	276.8	279.7	281.6
45°	246.1	245.1	245.1	246.1	245.1	247.0	247.0	249.0	251.8	253.8	255.7
47.5°	219.2	219.2	219.2	220.2	220.2	221.1	222.9	223.9	225.8	227.7	229.7
50°	194.1	195.1	196.1	196.1	196.1	198.0	199.9	200.9	201.8	202.8	205.7
52.5°	172.1	173.0	173.0	174.0	175.0	175.9	176.9	178.8	179.8	181.6	182.6
55°	150.9	150.9	152.8	153.8	153.8	153.8	155.7	155.7	157.6	158.6	160.5
57.5°	130.7	131.7	131.7	132.7	132.7	133.6	134.6	135.6	136.5	137.5	138.5
60°	111.5	111.5	111.5	112.4	113.4	114.4	113.4	115.3	115.3	117.2	118.2
62.5°	93.3	94.2	94.2	94.2	94.2	94.2	94.2	95.2	96.2	97.1	98.1
65°	75.9	75.9	75.9	75.0	75.9	75.0	75.9	76.9	76.9	77.8	78.8
67.5°	58.7	58.7	56.8	56.8	57.7	57.7	57.7	57.7	56.8	58.7	58.7
70°	42.3	41.3	40.4	39.4	39.4	38.4	38.4	37.5	37.5	37.5	37.5
72.5°	27.8	25.9	24.0	23.0	22.1	22.1	20.1	19.3	20.1	20.1	20.1
75°	14.5	12.5	11.6	10.6	9.6	9.6	8.7	8.7	8.7	8.7	8.7
77.5°	5.8	4.8	3.9	3.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
80°	1.9	1.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
82.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
85°	1.0	0.0	0.0	1.0	0.0	1.0	1.0	1.0	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



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CATALOG NUMBER: HC815D010-HM80520930-81WWBB

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	643.0	643.0	643.0	643.0	643.0	643.0	643.0	643.0
2.5°	630.5	630.5	629.5	630.5	628.5	629.5	628.5	628.5
5°	616.1	614.2	614.2	614.2	613.2	613.2	612.3	612.3
7.5°	598.8	597.8	596.8	595.9	594.9	593.9	593.9	593.9
10°	581.5	579.6	579.6	578.6	576.7	575.7	575.7	575.7
12.5°	561.3	560.3	559.4	559.4	555.5	556.5	555.5	555.5
15°	542.1	541.2	541.2	538.3	536.3	536.3	536.3	535.4
17.5°	521.9	520.9	520.0	518.0	516.1	516.1	515.1	516.1
20°	500.8	499.8	497.9	497.9	496.9	496.0	494.0	495.0
22.5°	479.6	477.7	476.7	476.7	475.7	475.7	473.8	473.8
25°	457.5	456.6	455.6	456.6	454.6	454.6	452.7	452.7
27.5°	434.4	433.4	433.4	433.4	432.5	433.4	432.5	432.5
30°	411.4	411.4	410.4	410.4	411.4	410.4	411.4	412.4
32.5°	386.3	386.3	387.3	387.3	388.3	388.3	388.3	388.3
35°	360.4	362.3	362.3	363.3	364.3	365.2	365.2	366.2
37.5°	336.4	337.4	338.4	339.3	341.3	341.3	341.3	341.3
40°	310.4	311.4	313.3	312.3	316.2	317.2	316.2	316.2
42.5°	283.5	285.5	286.4	288.4	289.3	291.2	292.2	292.2
45°	258.6	259.6	261.5	263.3	264.3	267.1	267.1	267.1
47.5°	232.6	234.5	235.5	237.4	238.3	241.2	242.2	241.2
50°	207.6	209.5	211.5	211.5	214.4	215.3	217.3	218.2
52.5°	183.5	184.5	186.4	187.4	189.3	191.2	192.2	193.2
55°	160.5	161.5	163.4	163.4	166.3	167.3	169.2	169.2
57.5°	139.4	140.4	142.2	141.2	143.2	145.1	145.1	144.1
60°	119.2	119.2	119.2	121.1	122.1	123.0	124.0	124.0
62.5°	98.1	100.0	100.9	100.9	101.8	102.8	102.8	101.8
65°	78.8	80.7	81.7	81.7	82.7	82.7	82.7	83.6
67.5°	59.6	59.6	59.6	60.5	59.6	59.6	59.6	59.6
70°	37.5	37.5	37.5	37.5	36.5	37.5	37.5	38.4
72.5°	20.1	20.1	20.1	20.1	20.1	20.1	20.1	20.1
75°	8.7	8.7	8.7	9.6	8.7	8.7	8.7	8.7
77.5°	3.9	2.9	3.9	3.9	2.9	2.9	2.9	2.9
80°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
82.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
85°	0.0	1.0	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)