

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: P593579

Luminaire Tested: **HC815D010-HM80520950-81RWWC**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P593579
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-HM80520950-81RWWC
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, SPECULAR TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 5000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1488.4 lumens
Efficiency: N/A
Efficacy: 106.3 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

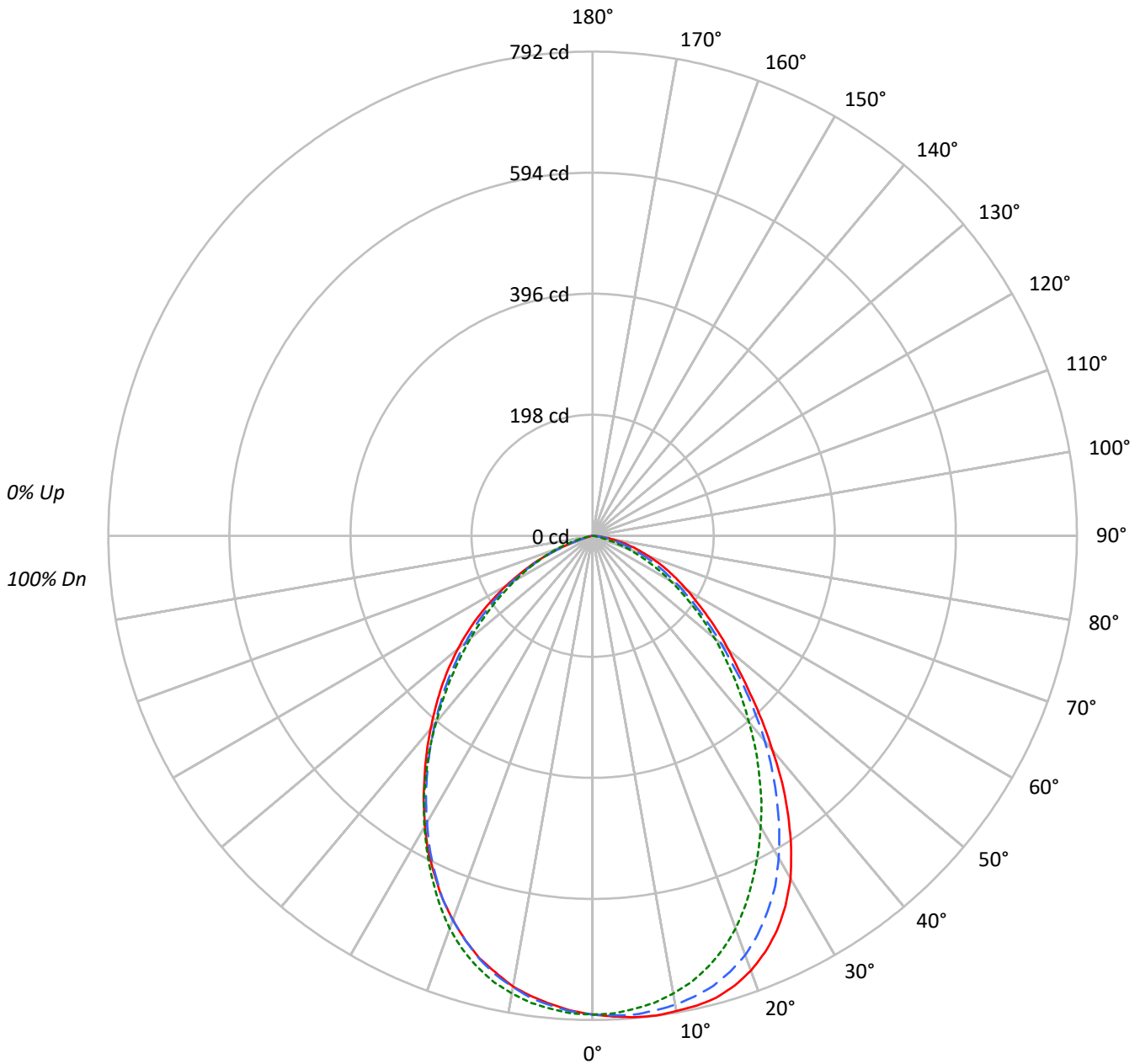
Input Watts (W): 14
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	24148	24148	24148
5°	24469	24048	23819
10°	24718	23800	23443
15°	24971	23301	22832
20°	24841	22439	21927
25°	24263	21098	20813
30°	23045	19584	19509
35°	20979	17866	18028
40°	18392	15993	16585
45°	15869	14225	15228
50°	13898	12492	13792
55°	12311	10736	12139
60°	11089	9029	10065
65°	9996	7245	7705
70°	8763	5283	4237
75°	7482	2740	1120
80°	5754	746	195
85°	3715	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	73.9	5.0
10°-20°	207.7	14.0
20°-30°	294.8	19.8
30°-40°	310.3	20.9
40°-50°	264.0	17.7
50°-60°	190.8	12.8
60°-70°	108.5	7.3
70°-80°	34.2	2.3
80°-90°	4.2	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°	576.4	38.7
0°-40°	886.8	59.6
0°-60°	1341.6	90.1
0°-90°	1488.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1488.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	783	783	783	783	783	
5°	790	786	777	772	770	75
15°	782	762	730	716	715	220
25°	713	678	620	610	612	327
35°	557	525	475	472	479	347
45°	364	350	326	335	349	283
55°	229	212	200	211	226	206
65°	137	118	99	98	106	136
75°	63	48	23	10	9	68
85°	10	6	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°	783.1	783.1	783.1	783.1	783.1	783.1	783.1	783.1	783.1	783.1	783.1
2.5°	787.3	788.4	786.3	786.3	788.4	786.3	787.3	787.3	786.3	786.3	785.3
5°	790.5	789.4	789.4	789.4	790.5	788.4	787.3	788.4	786.3	786.3	786.3
7.5°	791.6	791.6	790.5	789.4	789.4	789.4	788.4	787.3	786.3	784.2	783.1
10°	789.4	789.4	790.5	788.4	788.4	786.3	786.3	784.2	784.2	782.2	779.0
12.5°	787.3	786.3	786.3	784.2	784.2	782.2	782.2	779.0	777.9	774.8	771.7
15°	782.2	781.1	779.0	777.9	776.9	775.8	773.7	772.6	769.5	765.4	762.3
17.5°	771.7	770.6	769.5	767.5	765.4	764.3	763.2	760.1	756.0	752.9	747.6
20°	757.0	756.0	756.0	752.9	751.8	748.7	747.6	743.4	740.2	734.0	729.9
22.5°	737.1	738.2	736.1	734.0	731.9	728.8	726.7	722.5	717.3	711.1	705.8
25°	713.1	714.2	712.0	710.0	706.9	704.7	702.6	696.4	691.2	683.8	677.6
27.5°	682.8	682.8	682.8	680.7	675.4	674.4	672.3	666.0	658.8	652.5	646.2
30°	647.2	646.2	646.2	643.0	640.9	636.7	633.6	628.4	623.2	615.9	608.5
32.5°	604.3	605.4	602.3	600.2	597.1	597.1	592.9	588.6	582.4	575.0	567.8
35°	557.3	558.4	556.2	555.3	550.0	549.0	547.9	542.6	538.5	533.2	524.9
37.5°	509.2	508.1	507.1	507.1	503.9	501.9	499.8	496.7	490.4	486.2	482.0
40°	456.9	456.9	456.9	455.9	454.9	452.7	451.8	449.6	445.4	441.3	438.1
42.5°	409.8	409.8	408.9	407.8	405.7	406.7	404.6	402.6	398.4	395.2	393.2
45°	363.9	363.9	363.9	364.9	362.8	359.7	359.7	357.6	355.5	353.4	350.3
47.5°	323.1	326.2	324.1	323.1	324.1	319.9	319.9	317.9	315.8	313.7	309.4
50°	289.7	289.7	289.7	287.5	286.5	286.5	283.4	281.2	280.2	278.1	273.9
52.5°	259.3	257.3	257.3	256.2	255.1	253.0	253.0	251.0	246.8	244.6	241.5
55°	229.0	229.0	228.0	226.9	225.8	224.9	223.8	220.6	218.6	215.5	212.2
57.5°	201.8	203.9	202.8	200.8	198.7	198.7	196.5	194.5	191.4	188.2	185.1
60°	179.8	178.8	178.8	177.7	175.7	174.6	173.5	170.4	167.3	164.1	161.0
62.5°	156.9	156.9	156.9	154.7	152.7	151.6	150.6	148.5	144.2	141.1	139.1
65°	137.0	135.9	134.8	133.9	132.8	130.7	129.7	127.6	124.5	121.3	118.2
67.5°	117.1	116.0	116.0	115.0	111.8	110.9	110.9	107.7	104.6	101.5	98.3
70°	97.2	97.2	97.2	95.2	94.1	93.0	92.1	89.9	86.8	83.6	80.5
72.5°	80.5	79.4	79.4	78.4	75.3	74.2	73.1	71.1	68.0	65.9	63.7
75°	62.8	62.8	61.7	60.6	59.6	58.6	57.5	55.4	52.3	49.2	48.1
77.5°	48.1	47.0	47.0	46.0	43.9	42.9	42.9	40.7	37.6	35.5	33.5
80°	32.4	33.5	32.4	31.3	30.4	29.3	28.2	27.2	25.1	23.0	21.0
82.5°	19.9	21.0	19.9	19.9	18.8	17.8	17.8	15.7	14.6	13.6	12.5
85°	10.5	10.5	10.5	10.5	9.4	9.4	9.4	8.3	7.4	6.3	6.3
87.5°	3.1	4.2	3.1	3.1	3.1	3.1	3.1	3.1	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°	783.1	783.1	783.1	783.1	783.1	783.1	783.1	783.1	783.1	783.1	783.1
2.5°	786.3	785.3	784.2	784.2	784.2	784.2	784.2	783.1	782.2	782.2	782.2
5°	784.2	784.2	784.2	783.1	782.2	782.2	780.0	779.0	777.9	776.9	775.8
7.5°	782.2	780.0	779.0	777.9	776.9	776.9	774.8	772.6	772.6	770.6	768.5
10°	775.8	774.8	772.6	770.6	769.5	768.5	766.4	763.2	762.3	760.1	758.1
12.5°	768.5	766.4	764.3	760.1	759.2	758.1	753.8	750.7	748.7	747.6	742.4
15°	759.2	754.9	751.8	746.6	745.5	743.4	740.2	737.1	733.0	729.9	727.7
17.5°	742.4	738.2	733.0	727.7	725.7	725.7	720.5	716.3	711.1	708.9	704.7
20°	722.5	717.3	713.1	706.9	703.7	700.6	697.5	691.2	687.0	683.8	678.7
22.5°	699.5	692.2	687.0	680.7	675.4	672.3	667.1	661.9	656.6	653.5	649.4
25°	670.2	664.0	655.6	649.4	646.2	642.0	635.8	630.5	625.3	620.1	617.9
27.5°	637.8	629.5	622.1	614.8	611.7	608.5	601.2	594.9	590.8	585.5	583.5
30°	602.3	593.9	585.5	579.2	576.1	570.9	566.7	559.4	554.2	550.0	544.8
32.5°	561.5	555.3	547.9	538.5	536.3	532.2	526.0	522.8	516.6	513.5	509.2
35°	517.5	513.5	506.1	498.7	495.6	493.6	488.3	482.0	477.8	474.6	472.6
37.5°	475.7	470.6	463.2	458.0	455.9	452.7	446.5	443.3	439.1	437.1	432.8
40°	430.8	425.6	420.3	417.2	414.0	412.0	407.8	404.6	400.4	397.3	396.3
42.5°	386.9	383.8	379.6	375.4	374.3	371.1	369.1	366.0	362.8	361.7	358.6
45°	347.2	344.0	339.8	335.6	334.6	332.5	331.5	328.4	326.2	326.2	326.2
47.5°	307.4	304.3	300.0	298.0	299.1	294.9	294.9	293.8	291.7	291.7	292.8
50°	271.8	267.6	266.7	264.5	262.4	260.4	261.4	258.2	258.2	260.4	259.3
52.5°	238.3	234.3	233.2	231.1	230.0	230.0	229.0	229.0	228.0	229.0	229.0
55°	208.1	205.0	202.8	200.8	199.7	199.7	199.7	198.7	197.6	199.7	200.8
57.5°	180.9	179.8	177.7	174.6	173.5	172.6	171.5	171.5	171.5	171.5	172.6
60°	156.9	154.7	152.7	149.5	149.5	148.5	147.4	146.4	146.4	146.4	146.4
62.5°	135.9	132.8	129.7	127.6	126.5	125.4	124.5	122.3	122.3	122.3	122.3
65°	115.0	111.8	109.8	107.7	105.6	105.6	103.5	102.4	100.4	99.3	97.2
67.5°	95.2	93.0	91.0	87.8	86.8	85.8	83.6	82.5	79.4	78.4	77.4
70°	77.4	74.2	72.2	70.0	69.0	66.9	64.8	62.8	60.6	58.6	56.5
72.5°	60.6	57.5	55.4	53.4	51.2	51.2	48.1	46.0	42.9	40.7	37.6
75°	44.9	41.8	39.8	36.6	35.5	34.5	31.3	29.3	26.1	23.0	21.0
77.5°	30.4	28.2	26.1	23.0	21.0	21.0	17.8	15.7	13.6	10.5	9.4
80°	18.8	16.7	14.6	12.5	12.5	10.5	9.4	7.4	5.2	4.2	3.1
82.5°	10.5	9.4	8.3	6.3	6.3	5.2	4.2	3.1	2.0	1.1	1.1
85°	5.2	4.2	3.1	3.1	2.0	2.0	2.0	1.1	1.1	0.0	0.0
87.5°	2.0	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°	783.1	783.1	783.1	783.1	783.1	783.1	783.1	783.1	783.1	783.1	783.1
2.5°	781.1	781.1	780.0	780.0	780.0	779.0	780.0	779.0	779.0	779.0	780.0
5°	776.9	774.8	774.8	773.7	773.7	772.6	773.7	772.6	771.7	770.6	771.7
7.5°	768.5	766.4	765.4	764.3	764.3	764.3	763.2	762.3	763.2	760.1	762.3
10°	757.0	756.0	753.8	752.9	751.8	752.9	751.8	749.8	749.8	749.8	748.7
12.5°	742.4	740.2	739.3	738.2	736.1	736.1	737.1	735.1	735.1	733.0	733.0
15°	724.6	722.5	720.5	720.5	718.3	718.3	717.3	717.3	716.3	715.2	715.2
17.5°	702.6	699.5	697.5	698.4	697.5	696.4	696.4	694.3	693.2	694.3	694.3
20°	676.5	674.4	672.3	673.4	671.3	670.2	671.3	668.2	669.1	669.1	669.1
22.5°	647.2	646.2	643.0	643.0	640.9	639.9	640.9	640.9	642.0	640.9	640.9
25°	614.8	612.7	610.6	610.6	609.6	608.5	609.6	610.6	609.6	610.6	610.6
27.5°	580.3	577.2	577.2	575.0	575.0	576.1	575.0	576.1	577.2	577.2	579.2
30°	542.6	541.6	540.6	539.5	539.5	540.6	540.6	540.6	541.6	543.7	543.7
32.5°	507.1	505.0	503.0	503.0	505.0	503.9	505.0	505.0	507.1	507.1	509.2
35°	468.4	468.4	466.3	467.4	467.4	467.4	467.4	469.5	471.5	472.6	474.6
37.5°	432.8	429.7	430.8	430.8	431.9	430.8	433.9	433.9	436.0	436.0	438.1
40°	394.2	394.2	395.2	394.2	395.2	395.2	397.3	399.5	400.4	402.6	403.6
42.5°	357.6	359.7	357.6	358.6	359.7	360.8	361.7	362.8	367.0	369.1	372.2
45°	324.1	325.2	326.2	327.3	326.2	328.4	329.3	331.5	334.6	335.6	336.7
47.5°	291.7	292.8	293.8	294.9	294.9	296.9	298.0	300.0	302.2	303.2	304.3
50°	260.4	262.4	263.5	263.5	264.5	266.7	268.7	268.7	270.8	273.9	275.0
52.5°	232.1	232.1	234.3	235.2	236.3	236.3	239.4	240.5	241.5	243.7	245.7
55°	200.8	203.9	205.0	205.0	207.0	209.1	210.2	211.2	211.2	215.5	215.5
57.5°	173.5	174.6	176.7	176.7	176.7	179.8	179.8	182.0	183.0	184.0	186.2
60°	146.4	148.5	148.5	149.5	148.5	150.6	151.6	153.8	154.7	155.8	156.9
62.5°	121.3	121.3	122.3	122.3	122.3	122.3	124.5	124.5	126.5	127.6	128.6
65°	97.2	97.2	97.2	97.2	97.2	97.2	97.2	97.2	98.3	98.3	100.4
67.5°	75.3	74.2	72.2	73.1	72.2	72.2	71.1	71.1	72.2	72.2	74.2
70°	54.3	53.4	51.2	51.2	50.2	49.2	48.1	47.0	46.0	46.0	46.0
72.5°	35.5	33.5	30.4	29.3	29.3	27.2	25.1	24.1	24.1	24.1	24.1
75°	17.8	15.7	13.6	12.5	12.5	10.5	11.4	10.5	10.5	10.5	10.5
77.5°	7.4	5.2	4.2	4.2	4.2	3.1	3.1	3.1	3.1	3.1	3.1
80°	2.0	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: P593579

CATALOG NUMBER: HC815D010-HM80520950-81RWWC

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	783.1	783.1	783.1	783.1	783.1	783.1	783.1	783.1
2.5°	779.0	779.0	776.9	777.9	777.9	777.9	777.9	777.9
5°	769.5	770.6	769.5	770.6	770.6	769.5	769.5	769.5
7.5°	760.1	761.2	760.1	761.2	761.2	761.2	760.1	760.1
10°	748.7	748.7	748.7	748.7	748.7	747.6	748.7	748.7
12.5°	733.0	733.0	733.0	734.0	734.0	733.0	733.0	731.9
15°	716.3	714.2	715.2	716.3	715.2	715.2	715.2	715.2
17.5°	693.2	694.3	693.2	693.2	693.2	693.2	694.3	693.2
20°	669.1	669.1	670.2	669.1	669.1	669.1	669.1	668.2
22.5°	642.0	640.9	640.9	642.0	642.0	640.9	642.0	642.0
25°	611.7	612.7	611.7	611.7	612.7	612.7	612.7	611.7
27.5°	579.2	580.3	581.4	580.3	580.3	580.3	581.4	582.4
30°	545.9	547.9	545.9	545.9	547.9	546.8	547.9	547.9
32.5°	510.2	513.5	511.3	513.5	513.5	514.4	513.5	514.4
35°	474.6	477.8	477.8	477.8	478.9	480.0	480.0	478.9
37.5°	441.3	442.2	442.2	444.4	445.4	446.5	446.5	445.4
40°	406.7	408.9	409.8	409.8	409.8	412.0	414.0	412.0
42.5°	373.3	374.3	375.4	375.4	377.4	378.5	379.6	379.6
45°	340.9	342.9	344.0	345.0	346.1	348.2	347.2	349.2
47.5°	307.4	310.5	311.6	312.6	314.7	315.8	316.8	317.9
50°	277.0	279.2	279.2	281.2	284.4	284.4	286.5	287.5
52.5°	246.8	247.7	248.8	249.9	252.0	254.1	254.1	256.2
55°	217.5	218.6	218.6	219.6	220.6	224.9	225.8	225.8
57.5°	187.1	187.1	189.3	190.3	191.4	193.4	193.4	193.4
60°	157.9	158.9	158.9	160.0	161.0	163.2	164.1	163.2
62.5°	128.6	129.7	129.7	130.7	132.8	133.9	132.8	132.8
65°	101.5	102.4	102.4	103.5	105.6	105.6	104.6	105.6
67.5°	74.2	74.2	74.2	74.2	74.2	74.2	74.2	74.2
70°	47.0	46.0	44.9	46.0	46.0	46.0	44.9	47.0
72.5°	23.0	24.1	24.1	24.1	24.1	24.1	24.1	23.0
75°	10.5	10.5	9.4	9.4	9.4	10.5	10.5	9.4
77.5°	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
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)