

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: P583896

Luminaire Tested: **HC815D010-HM80520840-81WWBB**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P583896
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-HM80520840-81WWBB
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, WHITE BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1480.7 lumens
Efficiency: N/A
Efficacy: 105.8 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

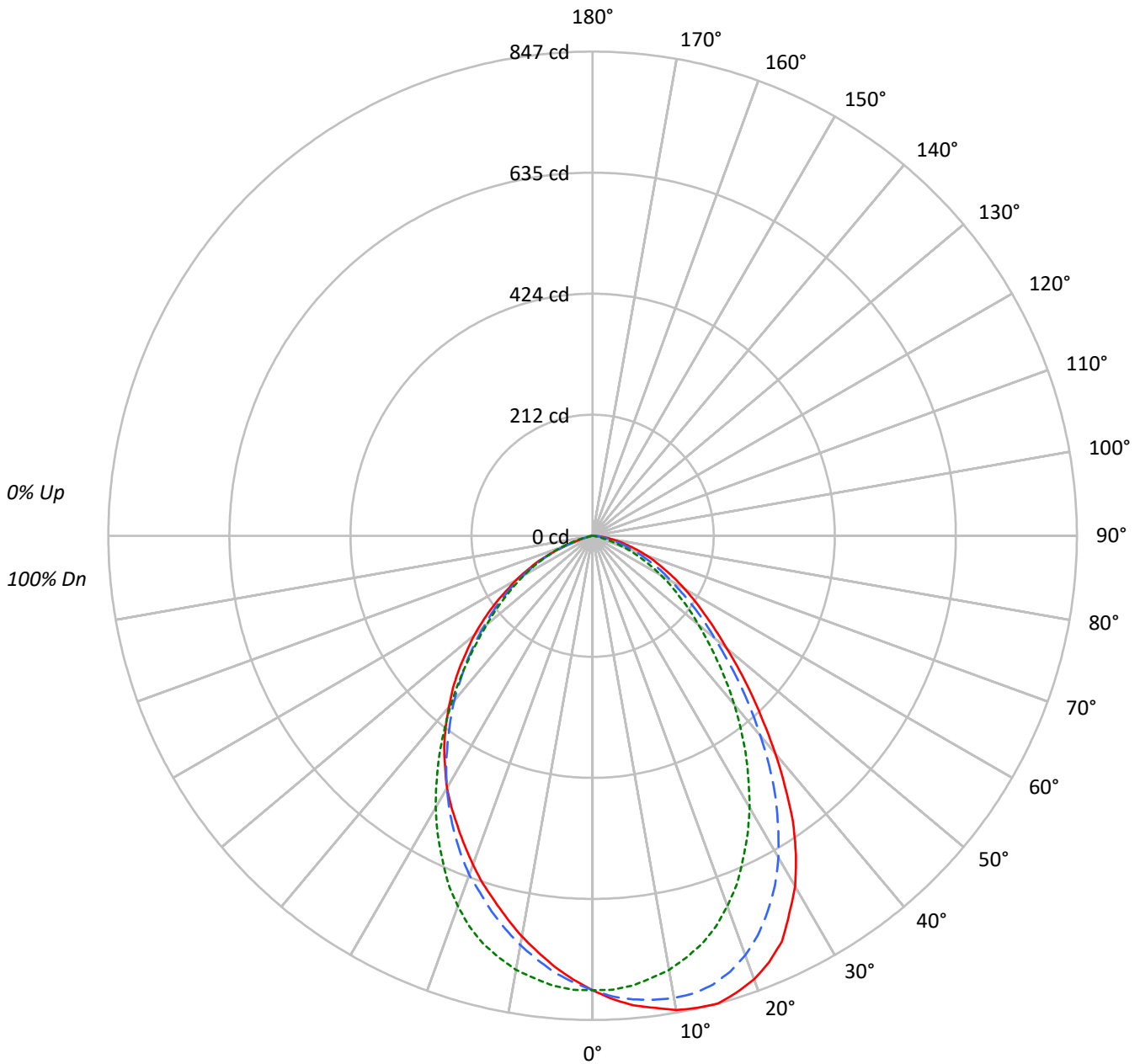
Input Watts (W): 14
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	24512	24512	24512
5°	25525	24457	23429
10°	26377	24148	22288
15°	27046	23592	21127
20°	27099	22613	20080
25°	26641	21183	19040
30°	25217	19548	18149
35°	22989	17576	17042
40°	19994	15498	15735
45°	17151	13423	14404
50°	14646	11571	12938
55°	12838	9962	11247
60°	11428	8505	9454
65°	10149	6939	7545
70°	8998	5139	4283
75°	7506	2681	1275
80°	5913	835	213
85°	4210	425	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	74.9	5.1
10°-20°	209.9	14.2
20°-30°	297.1	20.1
30°-40°	310.9	21.0
40°-50°	259.3	17.5
50°-60°	183.9	12.4
60°-70°	105.9	7.2
70°-80°	34.1	2.3
80°-90°	4.7	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°	582.0	39.3
0°-40°	892.9	60.3
0°-60°	1336.0	90.2
0°-90°	1480.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1480.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	795	795	795	795	795	
5°	825	814	790	766	757	79
15°	847	813	739	681	662	238
25°	783	725	623	573	560	357
35°	611	557	467	442	453	379
45°	393	361	308	311	330	305
55°	239	214	185	195	209	216
65°	139	116	95	95	103	139
75°	63	46	22	11	11	68
85°	12	6	1	0	0	15
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°	794.9	794.9	794.9	794.9	794.9	794.9	794.9	794.9	794.9	794.9	794.9
2.5°	811.6	810.4	809.2	810.4	809.2	810.4	809.2	809.2	808.0	806.9	806.9
5°	824.6	823.5	823.5	823.5	822.3	821.1	821.1	819.9	817.5	816.3	814.0
7.5°	832.9	834.1	834.1	834.1	831.8	831.8	829.4	827.0	824.6	822.3	818.7
10°	842.4	842.4	841.2	840.1	837.7	836.5	835.3	832.9	829.4	824.6	821.1
12.5°	846.0	846.0	844.8	842.4	841.2	840.1	838.9	835.3	830.6	824.6	819.9
15°	847.2	844.8	843.6	842.4	840.1	836.5	836.5	831.8	825.8	818.7	812.8
17.5°	837.7	838.9	836.5	834.1	830.6	828.2	824.6	821.1	814.0	805.7	799.6
20°	825.8	824.6	823.5	819.9	815.2	814.0	810.4	804.5	798.4	789.0	780.7
22.5°	806.9	805.7	803.3	800.8	796.1	793.7	790.1	783.0	774.7	765.2	755.8
25°	783.0	780.7	777.1	772.4	768.8	766.4	761.7	754.6	745.1	734.3	724.8
27.5°	745.1	748.5	746.3	739.0	735.5	730.7	729.6	720.1	711.8	701.1	690.3
30°	708.2	708.2	704.6	701.1	695.2	691.5	686.8	679.6	671.3	658.3	650.0
32.5°	661.8	660.7	655.9	654.7	650.0	642.9	641.7	632.1	623.8	614.3	603.6
35°	610.7	608.4	603.6	600.1	597.7	594.1	590.6	582.3	573.9	564.4	557.3
37.5°	552.5	552.5	551.3	545.4	543.0	540.7	537.1	528.8	524.1	514.5	507.4
40°	496.7	495.5	491.9	490.8	488.4	484.8	482.5	477.7	470.6	463.4	456.3
42.5°	442.0	443.2	438.5	439.7	434.9	432.5	431.3	424.2	420.7	413.6	407.5
45°	393.3	392.1	389.7	388.6	386.2	383.8	381.4	377.9	371.9	364.8	361.3
47.5°	348.1	344.6	344.6	343.4	342.2	337.4	336.3	332.7	329.1	322.0	317.3
50°	305.3	305.3	305.3	304.1	300.6	299.4	297.0	293.5	289.9	285.2	278.0
52.5°	270.9	270.9	270.9	269.7	265.0	263.8	262.6	257.9	253.0	249.6	244.7
55°	238.8	240.0	238.8	236.4	232.9	232.9	229.3	226.9	222.2	218.6	213.9
57.5°	211.5	211.5	209.2	208.0	205.6	204.4	202.0	199.7	193.6	190.1	184.1
60°	185.3	184.1	184.1	181.8	179.4	177.0	175.8	172.3	169.9	164.0	159.2
62.5°	161.6	161.6	159.2	159.2	154.5	154.5	153.3	149.7	146.2	140.3	137.9
65°	139.1	139.1	137.9	136.6	133.0	131.9	130.7	127.1	123.6	120.0	116.4
67.5°	118.8	118.8	116.4	115.3	112.9	111.7	109.3	106.9	103.4	99.8	96.3
70°	99.8	98.6	97.5	96.3	93.9	92.7	90.3	88.0	84.4	81.9	78.4
72.5°	80.9	80.9	79.7	77.2	76.0	74.8	73.6	71.3	67.7	64.1	61.8
75°	63.0	63.0	63.0	60.6	58.2	57.0	57.0	54.7	52.3	48.7	46.4
77.5°	48.7	47.5	46.4	46.4	44.0	42.8	41.6	40.4	36.9	35.7	33.3
80°	33.3	34.5	33.3	32.1	30.8	29.8	29.8	27.4	26.1	23.7	21.3
82.5°	22.5	21.3	21.3	20.2	20.2	19.0	19.0	16.6	15.4	14.2	13.0
85°	11.9	11.9	10.7	10.7	10.7	9.5	9.5	8.3	8.3	7.1	5.9
87.5°	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	2.4	2.4	2.4
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°	794.9	794.9	794.9	794.9	794.9	794.9	794.9	794.9	794.9	794.9	794.9
2.5°	805.7	803.3	802.0	802.0	800.8	799.6	798.4	797.3	794.9	794.9	792.5
5°	811.6	809.2	808.0	804.5	802.0	802.0	797.3	796.1	792.5	790.1	787.8
7.5°	816.3	811.6	808.0	804.5	802.0	799.6	794.9	790.1	785.4	780.7	778.3
10°	816.3	811.6	805.7	799.6	797.3	794.9	789.0	781.8	775.9	771.2	765.2
12.5°	814.0	806.9	799.6	794.9	790.1	786.6	779.5	772.4	765.2	755.8	751.0
15°	806.9	797.3	790.1	781.8	778.3	772.4	766.4	755.8	747.3	739.0	733.1
17.5°	792.5	780.7	772.4	764.1	758.1	754.6	745.1	735.5	726.0	716.5	709.4
20°	771.2	760.5	751.0	740.2	735.5	730.7	718.9	709.4	699.9	689.1	682.0
22.5°	745.1	734.3	721.3	713.0	705.8	699.9	689.1	678.5	669.0	659.5	650.0
25°	713.0	702.3	690.3	677.3	672.5	666.6	654.7	644.1	633.3	622.6	614.3
27.5°	678.5	664.2	654.7	640.5	635.8	629.7	616.7	604.8	595.3	587.0	577.4
30°	636.8	626.2	613.1	600.1	595.3	589.4	578.6	567.9	558.5	549.0	539.5
32.5°	591.8	581.1	567.9	558.5	551.3	546.6	535.9	526.3	516.8	507.4	499.1
35°	544.2	532.4	522.8	513.3	507.4	501.4	490.8	482.5	475.3	466.9	458.6
37.5°	495.5	487.2	477.7	466.9	461.0	456.3	448.0	438.5	432.5	425.4	419.5
40°	448.0	438.5	430.2	420.7	415.8	412.4	404.0	396.9	390.9	385.0	381.4
42.5°	399.2	390.9	382.6	376.7	373.1	369.6	363.5	355.2	351.7	345.8	342.2
45°	354.1	346.9	341.0	332.7	330.3	328.0	320.8	314.9	311.4	307.8	305.3
47.5°	311.4	306.6	299.4	294.6	291.1	288.7	284.0	279.2	275.7	273.3	270.9
50°	274.5	268.6	263.8	259.1	256.7	253.0	248.4	245.9	243.5	241.2	241.2
52.5°	240.0	234.1	229.3	225.8	223.4	221.0	217.5	216.3	213.9	213.9	212.7
55°	208.0	204.4	199.7	194.8	193.6	192.4	190.1	187.7	186.5	185.3	186.5
57.5°	180.6	177.0	172.3	168.7	167.5	166.4	165.2	162.8	161.6	161.6	161.6
60°	155.7	152.1	148.6	145.0	145.0	142.6	141.3	140.3	139.1	137.9	137.9
62.5°	133.0	129.5	125.9	123.6	122.4	121.2	118.8	117.6	116.4	116.4	115.3
65°	112.9	108.1	106.9	103.4	102.2	101.0	99.8	97.5	96.3	95.1	93.9
67.5°	92.7	90.3	86.8	84.4	83.1	81.9	80.9	78.4	77.2	76.0	73.6
70°	74.8	72.5	70.1	67.7	66.5	65.3	63.0	60.6	59.4	57.0	53.5
72.5°	58.2	55.8	53.5	51.1	49.9	48.7	46.4	44.0	41.6	39.2	36.9
75°	44.0	41.6	38.1	35.7	34.5	34.5	30.8	28.6	26.1	22.5	20.2
77.5°	30.8	27.4	26.1	23.7	22.5	20.2	17.8	15.4	13.0	11.9	9.5
80°	20.2	17.8	15.4	14.2	13.0	11.9	10.7	8.3	5.9	4.7	3.6
82.5°	11.9	10.7	9.5	8.3	7.1	5.9	4.7	4.7	3.6	2.4	1.2
85°	5.9	4.7	3.6	3.6	2.4	2.4	2.4	1.2	1.2	1.2	1.2
87.5°	2.4	1.2	1.2	1.2	1.2	1.2	1.2	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°	794.9	794.9	794.9	794.9	794.9	794.9	794.9	794.9	794.9	794.9	794.9
2.5°	791.3	790.1	789.0	787.8	787.8	785.4	785.4	784.2	781.8	780.7	780.7
5°	784.2	780.7	778.3	777.1	775.9	772.4	771.2	768.8	766.4	764.1	762.9
7.5°	773.5	767.6	765.2	764.1	760.5	756.9	754.6	751.0	747.3	743.8	742.6
10°	760.5	754.6	748.5	746.3	742.6	740.2	735.5	730.7	727.2	723.6	720.1
12.5°	743.8	736.7	730.7	728.4	724.8	720.1	713.0	710.6	704.6	702.3	697.5
15°	724.8	716.5	710.6	707.0	703.5	696.2	691.5	686.8	680.8	678.5	673.7
17.5°	701.1	691.5	685.6	682.0	679.6	673.7	666.6	660.7	654.7	652.4	648.8
20°	672.5	666.6	658.3	654.7	652.4	645.2	638.0	635.8	630.9	626.2	622.6
22.5°	640.5	634.6	626.2	622.6	621.4	615.5	609.6	606.0	602.4	598.9	595.3
25°	607.2	600.1	593.0	590.6	588.2	583.5	578.6	576.4	572.7	570.3	567.9
27.5°	571.5	564.4	558.5	554.9	552.5	549.0	546.6	544.2	541.9	539.5	538.3
30°	533.6	526.3	521.6	519.2	516.8	515.7	512.1	510.9	509.7	507.4	508.5
32.5°	495.5	489.6	484.8	481.3	481.3	478.9	477.7	477.7	476.5	476.5	476.5
35°	453.9	450.3	446.8	445.6	444.4	443.2	442.0	443.2	442.0	443.2	444.4
37.5°	415.8	412.4	409.9	408.7	407.5	408.7	407.5	407.5	408.7	411.1	412.4
40°	376.7	374.3	371.9	373.1	371.9	371.9	371.9	375.5	376.7	377.9	379.1
42.5°	339.8	337.4	336.3	336.3	337.4	336.3	338.6	339.8	342.2	345.8	348.1
45°	304.1	303.1	303.1	304.1	303.1	305.3	305.3	307.8	311.4	313.7	316.1
47.5°	270.9	270.9	270.9	272.1	272.1	273.3	275.7	276.9	279.2	281.6	284.0
50°	240.0	241.2	242.4	242.4	242.4	244.7	247.1	248.4	249.6	250.8	254.3
52.5°	212.7	213.9	213.9	215.1	216.3	217.5	218.6	221.0	222.2	224.6	225.8
55°	186.5	186.5	188.9	190.1	190.1	190.1	192.4	192.4	194.8	196.1	198.5
57.5°	161.6	162.8	162.8	164.0	164.0	165.2	166.4	167.5	168.7	169.9	171.1
60°	137.9	137.9	137.9	139.1	140.3	141.3	140.3	142.6	142.6	145.0	146.2
62.5°	115.3	116.4	116.4	116.4	116.4	116.4	116.4	117.6	118.8	120.0	121.2
65°	93.9	93.9	93.9	92.7	93.9	92.7	93.9	95.1	95.1	96.3	97.5
67.5°	72.5	72.5	70.1	70.1	71.3	71.3	71.3	71.3	70.1	72.5	72.5
70°	52.3	51.1	49.9	48.7	48.7	47.5	47.5	46.4	46.4	46.4	46.4
72.5°	34.5	32.1	29.8	28.6	27.4	27.4	24.9	23.7	24.9	24.9	24.9
75°	17.8	15.4	14.2	13.0	11.9	11.9	10.7	10.7	10.7	10.7	10.7
77.5°	7.1	5.9	4.7	4.7	3.6	3.6	3.6	3.6	3.6	3.6	3.6
80°	2.4	2.4	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
82.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
85°	1.2	0.0	0.0	1.2	0.0	1.2	1.2	1.2	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: P583896

CATALOG NUMBER: HC815D010-HM80520840-81WWBB

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	794.9	794.9	794.9	794.9	794.9	794.9	794.9	794.9
2.5°	779.5	779.5	778.3	779.5	777.1	778.3	777.1	777.1
5°	761.7	759.3	759.3	759.3	758.1	758.1	756.9	756.9
7.5°	740.2	739.0	737.9	736.7	735.5	734.3	734.3	734.3
10°	718.9	716.5	716.5	715.3	713.0	711.8	711.8	711.8
12.5°	694.0	692.8	691.5	691.5	686.8	687.9	686.8	686.8
15°	670.2	669.0	669.0	665.4	663.0	663.0	663.0	661.8
17.5°	645.2	644.1	642.9	640.5	638.0	638.0	636.8	638.0
20°	619.1	617.9	615.5	615.5	614.3	613.1	610.7	611.9
22.5°	593.0	590.6	589.4	589.4	588.2	588.2	585.8	585.8
25°	565.6	564.4	563.2	564.4	562.0	562.0	559.6	559.6
27.5°	537.1	535.9	535.9	535.9	534.7	535.9	534.7	534.7
30°	508.5	508.5	507.4	507.4	508.5	507.4	508.5	509.7
32.5°	477.7	477.7	478.9	478.9	480.1	480.1	480.1	480.1
35°	445.6	448.0	448.0	449.1	450.3	451.5	451.5	452.7
37.5°	415.8	417.1	418.3	419.5	421.9	421.9	421.9	421.9
40°	383.8	385.0	387.4	386.2	390.9	392.1	390.9	390.9
42.5°	350.5	352.9	354.1	356.4	357.6	360.1	361.3	361.3
45°	319.7	320.8	323.2	325.6	326.8	330.3	330.3	330.3
47.5°	287.5	289.9	291.1	293.5	294.6	298.2	299.4	298.2
50°	256.7	259.1	261.4	261.4	265.0	266.2	268.6	269.7
52.5°	226.9	228.1	230.5	231.7	234.1	236.4	237.6	238.8
55°	198.5	199.7	202.0	202.0	205.6	206.8	209.2	209.2
57.5°	172.3	173.5	175.8	174.7	177.0	179.4	179.4	178.2
60°	147.4	147.4	147.4	149.7	150.9	152.1	153.3	153.3
62.5°	121.2	123.6	124.7	124.7	125.9	127.1	127.1	125.9
65°	97.5	99.8	101.0	101.0	102.2	102.2	102.2	103.4
67.5°	73.6	73.6	73.6	74.8	73.6	73.6	73.6	73.6
70°	46.4	46.4	46.4	46.4	45.2	46.4	46.4	47.5
72.5°	24.9	24.9	24.9	24.9	24.9	24.9	24.9	24.9
75°	10.7	10.7	10.7	11.9	10.7	10.7	10.7	10.7
77.5°	4.7	3.6	4.7	4.7	3.6	3.6	3.6	3.6
80°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
82.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
85°	0.0	1.2	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)