

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: P593562

Luminaire Tested: **HC815D010-HM80520850-81RWWC**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P593562
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-HM80520850-81RWWC
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, SPECULAR TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 5000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1692.2 lumens
Efficiency: N/A
Efficacy: 120.9 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

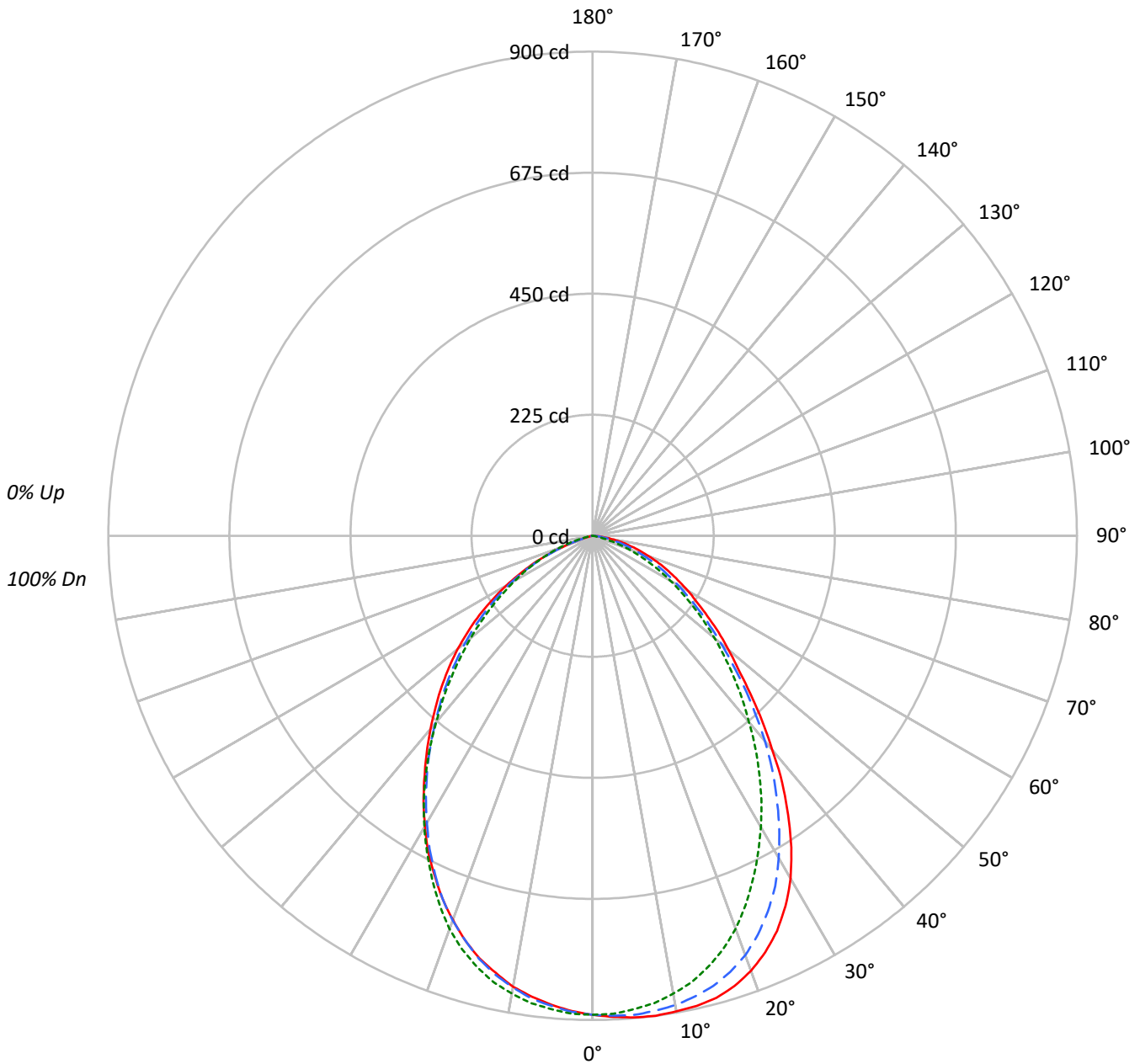
Input Watts (W): 14
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P593562

CATALOG NUMBER: HC815D010-HM80520850-81RWWC

Luminous Intensity Polar Plot





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CATALOG NUMBER: HC815D010-HM80520850-81RWWC

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°	27457	27457	27457
5°	27818	27342	27085
10°	28103	27060	26653
15°	28387	26491	25957
20°	28241	25514	24927
25°	27583	23984	23660
30°	26203	22265	22179
35°	23851	20317	20493
40°	20912	18187	18855
45°	18041	16175	17313
50°	15797	14195	15682
55°	13994	12204	13806
60°	12612	10262	11434
65°	11361	8238	8756
70°	9963	5996	4824
75°	8495	3110	1275
80°	6553	835	213
85°	4210	0	0



TEST NUMBER: P593562

CATALOG NUMBER: HC815D010-HM80520850-81RWWC

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	84.0	5.0
10°-20°	236.2	14.0
20°-30°	335.2	19.8
30°-40°	352.8	20.9
40°-50°	300.2	17.7
50°-60°	216.9	12.8
60°-70°	123.4	7.3
70°-80°	38.9	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°	655.4	38.7
0°-40°	1008.2	59.6
0°-60°	1525.3	90.1
0°-90°	1692.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1692.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	890	890	890	890	890	
5°	899	894	883	877	875	86
15°	889	867	830	814	813	250
25°	811	770	705	693	695	371
35°	634	597	540	536	544	394
45°	414	398	371	380	397	322
55°	260	241	227	240	257	235
65°	156	134	113	112	120	154
75°	71	55	26	12	11	77
85°	12	7	0	0	0	15
90°	0	0	0	0	0	



TEST NUMBER: P593562

CATALOG NUMBER: HC815D010-HM80520850-81RWWC

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	890.4	890.4	890.4	890.4	890.4	890.4	890.4	890.4	890.4	890.4	890.4
2.5°	895.2	896.3	894.0	894.0	896.3	894.0	895.2	895.2	894.0	894.0	892.8
5°	898.7	897.5	897.5	897.5	898.7	896.3	895.2	896.3	894.0	894.0	894.0
7.5°	899.9	899.9	898.7	897.5	897.5	897.5	896.3	895.2	894.0	891.6	890.4
10°	897.5	897.5	898.7	896.3	896.3	894.0	894.0	891.6	891.6	889.2	885.7
12.5°	895.2	894.0	894.0	891.6	891.6	889.2	889.2	885.7	884.5	880.9	877.4
15°	889.2	888.0	885.7	884.5	883.3	882.1	879.6	878.4	875.0	870.1	866.6
17.5°	877.4	876.2	875.0	872.5	870.1	869.0	867.8	864.2	859.5	855.9	850.0
20°	860.6	859.5	859.5	855.9	854.7	851.2	850.0	845.2	841.7	834.5	829.8
22.5°	838.1	839.3	836.9	834.5	832.2	828.6	826.1	821.4	815.5	808.3	802.4
25°	810.7	811.9	809.5	807.2	803.6	801.2	798.8	791.7	785.8	777.5	770.4
27.5°	776.3	776.3	776.3	773.9	767.9	766.7	764.3	757.2	748.9	741.8	734.7
30°	735.9	734.7	734.7	731.1	728.7	724.0	720.3	714.4	708.5	700.2	691.9
32.5°	687.1	688.3	684.7	682.4	678.8	678.8	674.1	669.3	662.1	653.8	645.5
35°	633.6	634.8	632.4	631.2	625.3	624.1	622.9	617.0	612.3	606.2	596.7
37.5°	578.9	577.8	576.6	576.6	573.0	570.6	568.3	564.7	557.6	552.7	548.0
40°	519.5	519.5	519.5	518.3	517.1	514.8	513.6	511.2	506.5	501.6	498.1
42.5°	466.0	466.0	464.8	463.6	461.3	462.5	460.1	457.7	453.0	449.3	446.9
45°	413.7	413.7	413.7	414.9	412.5	409.0	409.0	406.6	404.2	401.7	398.3
47.5°	367.3	370.9	368.5	367.3	368.5	363.8	363.8	361.4	359.0	356.7	351.9
50°	329.3	329.3	329.3	326.9	325.7	325.7	322.1	319.8	318.6	316.2	311.5
52.5°	294.9	292.5	292.5	291.2	290.0	287.6	287.6	285.3	280.5	278.1	274.6
55°	260.3	260.3	259.2	258.0	256.8	255.6	254.4	250.9	248.5	244.9	241.4
57.5°	229.4	231.8	230.6	228.2	225.8	225.8	223.5	221.1	217.5	214.0	210.4
60°	204.5	203.3	203.3	202.1	199.7	198.6	197.4	193.8	190.1	186.7	183.0
62.5°	178.3	178.3	178.3	175.9	173.5	172.3	171.2	168.8	164.0	160.5	158.1
65°	155.7	154.5	153.4	152.2	151.0	148.6	147.4	145.1	141.5	137.9	134.4
67.5°	133.2	131.9	131.9	130.7	127.2	126.0	126.0	122.4	118.9	115.3	111.7
70°	110.5	110.5	110.5	108.2	107.0	105.8	104.6	102.2	98.7	95.1	91.6
72.5°	91.6	90.4	90.4	89.2	85.6	84.4	83.3	80.9	77.2	75.0	72.5
75°	71.3	71.3	70.1	68.9	67.7	66.5	65.4	63.0	59.4	55.9	54.7
77.5°	54.7	53.5	53.5	52.3	49.9	48.7	48.7	46.4	42.8	40.4	38.1
80°	36.9	38.1	36.9	35.7	34.5	33.3	32.1	30.8	28.6	26.1	23.7
82.5°	22.5	23.7	22.5	22.5	21.4	20.2	20.2	17.8	16.6	15.4	14.2
85°	11.9	11.9	11.9	11.9	10.7	10.7	10.7	9.5	8.3	7.1	7.1
87.5°	3.6	4.7	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



TEST NUMBER: P593562

CATALOG NUMBER: HC815D010-HM80520850-81RWWC

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	890.4	890.4	890.4	890.4	890.4	890.4	890.4	890.4	890.4	890.4	890.4
2.5°	894.0	892.8	891.6	891.6	891.6	891.6	891.6	890.4	889.2	889.2	889.2
5°	891.6	891.6	891.6	890.4	889.2	889.2	886.8	885.7	884.5	883.3	882.1
7.5°	889.2	886.8	885.7	884.5	883.3	883.3	880.9	878.4	878.4	876.2	873.7
10°	882.1	880.9	878.4	876.2	875.0	873.7	871.3	867.8	866.6	864.2	861.8
12.5°	873.7	871.3	869.0	864.2	863.0	861.8	857.1	853.5	851.2	850.0	844.0
15°	863.0	858.3	854.7	848.8	847.6	845.2	841.7	838.1	833.4	829.8	827.4
17.5°	844.0	839.3	833.4	827.4	824.9	824.9	819.0	814.3	808.3	806.0	801.2
20°	821.4	815.5	810.7	803.6	800.0	796.5	792.9	785.8	781.0	777.5	771.6
22.5°	795.3	787.0	781.0	773.9	767.9	764.3	758.4	752.5	746.5	743.0	738.2
25°	762.0	754.8	745.4	738.2	734.7	729.9	722.8	716.9	710.8	704.9	702.5
27.5°	725.2	715.6	707.3	699.0	695.4	691.9	683.6	676.4	671.7	665.8	663.4
30°	684.7	675.2	665.8	658.5	655.0	649.0	644.3	636.0	630.1	625.3	619.4
32.5°	638.4	631.2	622.9	612.3	609.9	605.0	597.9	594.4	587.2	583.7	578.9
35°	588.4	583.7	575.4	567.1	563.5	561.0	555.1	548.0	543.2	539.7	537.3
37.5°	540.9	534.9	526.6	520.7	518.3	514.8	507.5	504.1	499.2	496.9	492.1
40°	489.7	483.8	477.9	474.3	470.8	468.4	463.6	460.1	455.2	451.8	450.5
42.5°	439.8	436.3	431.5	426.8	425.6	422.0	419.6	416.1	412.5	411.3	407.8
45°	394.6	391.1	386.3	381.6	380.4	378.0	376.8	373.3	370.9	370.9	370.9
47.5°	349.5	346.0	341.1	338.8	339.9	335.2	335.2	334.0	331.6	331.6	332.8
50°	309.1	304.4	303.2	300.8	298.4	295.9	297.2	293.7	293.7	295.9	294.9
52.5°	271.0	266.3	265.1	262.7	261.5	261.5	260.3	260.3	259.2	260.3	260.3
55°	236.5	233.0	230.6	228.2	227.0	227.0	227.0	225.8	224.7	227.0	228.2
57.5°	205.7	204.5	202.1	198.6	197.4	196.2	195.0	195.0	195.0	195.0	196.2
60°	178.3	175.9	173.5	170.0	170.0	168.8	167.6	166.4	166.4	166.4	166.4
62.5°	154.5	151.0	147.4	145.1	143.9	142.7	141.5	139.1	139.1	139.1	139.1
65°	130.7	127.2	124.8	122.4	120.0	120.0	117.7	116.5	114.1	112.9	110.5
67.5°	108.2	105.8	103.4	99.9	98.7	97.5	95.1	93.9	90.4	89.2	88.0
70°	88.0	84.4	82.1	79.7	78.4	76.0	73.7	71.3	68.9	66.5	64.2
72.5°	68.9	65.4	63.0	60.6	58.2	58.2	54.7	52.3	48.7	46.4	42.8
75°	51.1	47.6	45.2	41.6	40.4	39.3	35.7	33.3	29.8	26.1	23.7
77.5°	34.5	32.1	29.8	26.1	23.7	23.7	20.2	17.8	15.4	11.9	10.7
80°	21.4	19.0	16.6	14.2	14.2	11.9	10.7	8.3	5.9	4.7	3.6
82.5°	11.9	10.7	9.5	7.1	7.1	5.9	4.7	3.6	2.4	1.2	1.2
85°	5.9	4.7	3.6	3.6	2.4	2.4	2.4	1.2	1.2	0.0	0.0
87.5°	2.4	1.2	1.2	1.2	1.2	1.2	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: P593562

CATALOG NUMBER: HC815D010-HM80520850-81RWWC

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	890.4	890.4	890.4	890.4	890.4	890.4	890.4	890.4	890.4	890.4	890.4
2.5°	888.0	888.0	886.8	886.8	886.8	885.7	886.8	885.7	885.7	885.7	886.8
5°	883.3	880.9	880.9	879.6	879.6	878.4	879.6	878.4	877.4	876.2	877.4
7.5°	873.7	871.3	870.1	869.0	869.0	869.0	867.8	866.6	867.8	864.2	866.6
10°	860.6	859.5	857.1	855.9	854.7	855.9	854.7	852.3	852.3	852.3	851.2
12.5°	844.0	841.7	840.5	839.3	836.9	836.9	838.1	835.7	835.7	833.4	833.4
15°	823.9	821.4	819.0	819.0	816.6	816.6	815.5	815.5	814.3	813.1	813.1
17.5°	798.8	795.3	792.9	794.1	792.9	791.7	791.7	789.4	788.2	789.4	789.4
20°	769.2	766.7	764.3	765.5	763.2	762.0	763.2	759.6	760.8	760.8	760.8
22.5°	735.9	734.7	731.1	731.1	728.7	727.6	728.7	728.7	729.9	728.7	728.7
25°	699.0	696.6	694.2	694.2	693.0	691.9	693.0	694.2	693.0	694.2	694.2
27.5°	659.7	656.2	656.2	653.8	653.8	655.0	653.8	655.0	656.2	656.2	658.5
30°	617.0	615.8	614.6	613.3	613.3	614.6	614.6	614.6	615.8	618.2	618.2
32.5°	576.6	574.2	571.8	571.8	574.2	573.0	574.2	574.2	576.6	576.6	578.9
35°	532.6	532.6	530.2	531.4	531.4	531.4	531.4	533.8	536.1	537.3	539.7
37.5°	492.1	488.6	489.7	489.7	490.9	489.7	493.3	493.3	495.7	495.7	498.1
40°	448.1	448.1	449.3	448.1	449.3	449.3	451.8	454.2	455.2	457.7	458.9
42.5°	406.6	409.0	406.6	407.8	409.0	410.2	411.3	412.5	417.3	419.6	423.2
45°	368.5	369.7	370.9	372.1	370.9	373.3	374.5	376.8	380.4	381.6	382.8
47.5°	331.6	332.8	334.0	335.2	335.2	337.6	338.8	341.1	343.5	344.8	346.0
50°	295.9	298.4	299.6	299.6	300.8	303.2	305.5	305.5	307.9	311.5	312.7
52.5°	263.9	263.9	266.3	267.5	268.7	268.7	272.2	273.4	274.6	277.0	279.3
55°	228.2	231.8	233.0	233.0	235.3	237.7	239.0	240.2	240.2	244.9	244.9
57.5°	197.4	198.6	200.9	200.9	200.9	204.5	204.5	206.9	208.0	209.2	211.6
60°	166.4	168.8	168.8	170.0	168.8	171.2	172.3	174.7	175.9	177.1	178.3
62.5°	137.9	137.9	139.1	139.1	139.1	139.1	141.5	141.5	143.9	145.1	146.2
65°	110.5	110.5	110.5	110.5	110.5	110.5	110.5	110.5	111.7	111.7	114.1
67.5°	85.6	84.4	82.1	83.3	82.1	82.1	80.9	80.9	82.1	82.1	84.4
70°	61.8	60.6	58.2	58.2	57.1	55.9	54.7	53.5	52.3	52.3	52.3
72.5°	40.4	38.1	34.5	33.3	33.3	30.8	28.6	27.4	27.4	27.4	27.4
75°	20.2	17.8	15.4	14.2	14.2	11.9	13.1	11.9	11.9	11.9	11.9
77.5°	8.3	5.9	4.7	4.7	4.7	3.6	3.6	3.6	3.6	3.6	3.6
80°	2.4	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
82.5°	1.2	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: P593562

CATALOG NUMBER: HC815D010-HM80520850-81RWWC

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	890.4	890.4	890.4	890.4	890.4	890.4	890.4	890.4
2.5°	885.7	885.7	883.3	884.5	884.5	884.5	884.5	884.5
5°	875.0	876.2	875.0	876.2	876.2	875.0	875.0	875.0
7.5°	864.2	865.4	864.2	865.4	865.4	865.4	864.2	864.2
10°	851.2	851.2	851.2	851.2	851.2	850.0	851.2	851.2
12.5°	833.4	833.4	833.4	834.5	834.5	833.4	833.4	832.2
15°	814.3	811.9	813.1	814.3	813.1	813.1	813.1	813.1
17.5°	788.2	789.4	788.2	788.2	788.2	788.2	789.4	788.2
20°	760.8	760.8	762.0	760.8	760.8	760.8	760.8	759.6
22.5°	729.9	728.7	728.7	729.9	729.9	728.7	729.9	729.9
25°	695.4	696.6	695.4	695.4	696.6	696.6	696.6	695.4
27.5°	658.5	659.7	660.9	659.7	659.7	659.7	660.9	662.1
30°	620.6	622.9	620.6	620.6	622.9	621.8	622.9	622.9
32.5°	580.1	583.7	581.3	583.7	583.7	584.9	583.7	584.9
35°	539.7	543.2	543.2	543.2	544.4	545.6	545.6	544.4
37.5°	501.6	502.8	502.8	505.3	506.5	507.5	507.5	506.5
40°	462.5	464.8	466.0	466.0	466.0	468.4	470.8	468.4
42.5°	424.4	425.6	426.8	426.8	429.1	430.3	431.5	431.5
45°	387.5	389.9	391.1	392.3	393.4	395.8	394.6	397.0
47.5°	349.5	353.1	354.3	355.5	357.8	359.0	360.2	361.4
50°	315.0	317.4	317.4	319.8	323.3	323.3	325.7	326.9
52.5°	280.5	281.7	282.9	284.1	286.5	288.8	288.8	291.2
55°	247.3	248.5	248.5	249.7	250.9	255.6	256.8	256.8
57.5°	212.8	212.8	215.2	216.3	217.5	219.9	219.9	219.9
60°	179.5	180.8	180.8	181.8	183.0	185.4	186.7	185.4
62.5°	146.2	147.4	147.4	148.6	151.0	152.2	151.0	151.0
65°	115.3	116.5	116.5	117.7	120.0	120.0	118.9	120.0
67.5°	84.4	84.4	84.4	84.4	84.4	84.4	84.4	84.4
70°	53.5	52.3	51.1	52.3	52.3	52.3	51.1	53.5
72.5°	26.1	27.4	27.4	27.4	27.4	27.4	27.4	26.1
75°	11.9	11.9	10.7	10.7	10.7	11.9	11.9	10.7
77.5°	3.6	3.6	3.6	3.6	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°	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)