

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: P583515

Luminaire Tested: **HC805D010-HM80520930-81RWWC**

Issue Date: 10/21/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P583515  
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: HC805D010-HM80520930-81RWWC  
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, SPECULAR TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 607.4 lumens  
Efficiency: N/A  
Efficacy: 101.2 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

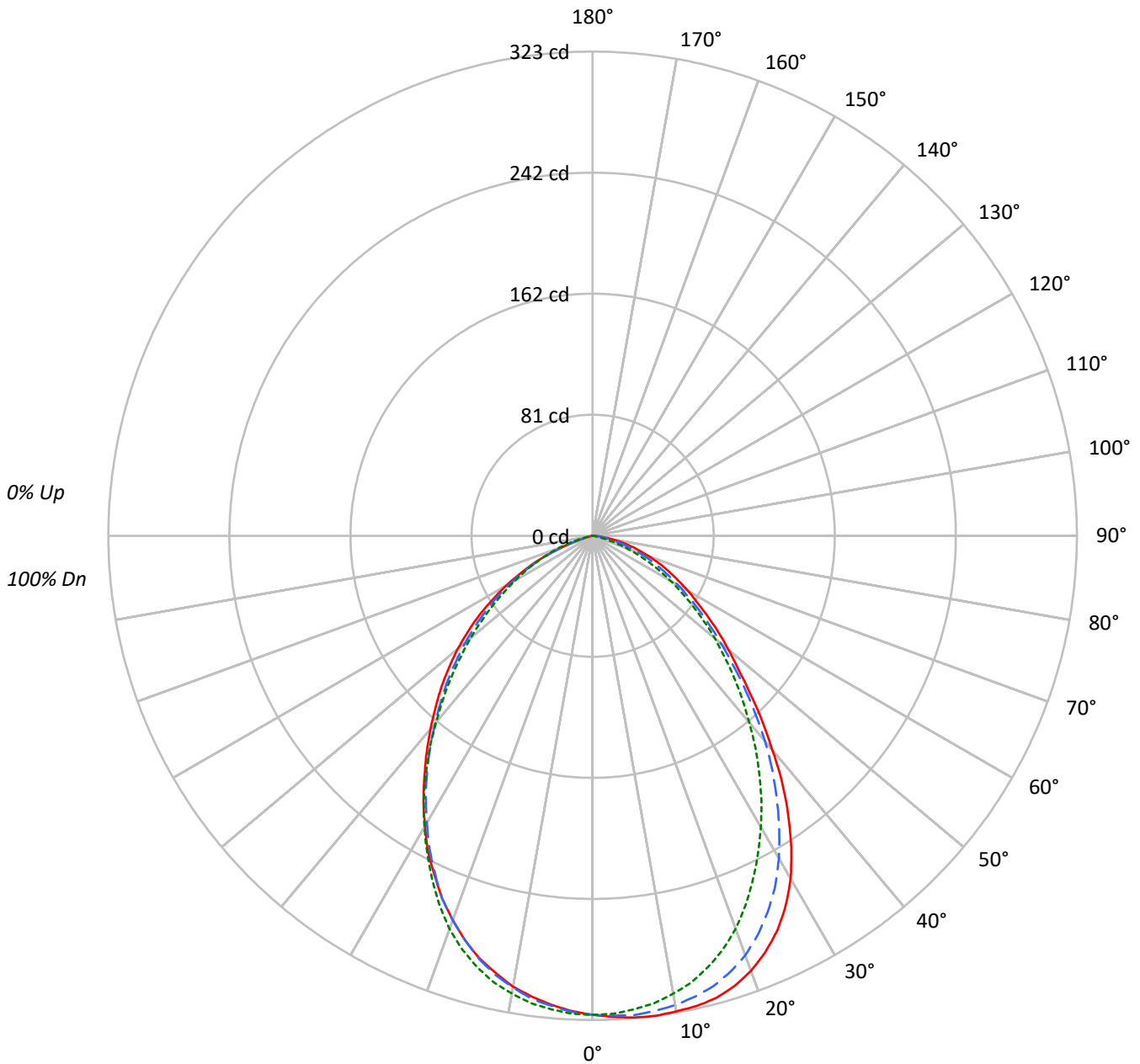
Input Watts (W): 6  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	9855	9855	9855
5°	9986	9816	9723
10°	10086	9710	9566
15°	10187	9507	9315
20°	10137	9155	8949
25°	9901	8608	8492
30°	9407	7990	7962
35°	8560	7292	7359
40°	7507	6529	6767
45°	6472	5804	6219
50°	5666	5100	5627
55°	5027	4382	4957
60°	4527	3682	4107
65°	4079	2962	3145
70°	3579	2155	1731
75°	3050	1108	453
80°	2362	302	89
85°	1521	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	30.2	5.0
10°-20°	84.8	14.0
20°-30°	120.3	19.8
30°-40°	126.6	20.9
40°-50°	107.7	17.7
50°-60°	77.9	12.8
60°-70°	44.3	7.3
70°-80°	14.0	2.3
80°-90°	1.7	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°	235.2	38.7
0°-40°	361.9	59.6
0°-60°	547.5	90.1
0°-90°	607.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	607.4	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	320	320	320	320	320	
5°	323	321	317	315	314	31
15°	319	311	298	292	292	90
25°	291	276	253	249	250	133
35°	227	214	194	192	196	142
45°	148	143	133	137	143	115
55°	94	87	82	86	92	84
65°	56	48	41	40	43	55
75°	26	20	9	4	4	28
85°	4	2	0	0	0	6
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°	319.6	319.6	319.6	319.6	319.6	319.6	319.6	319.6	319.6	319.6	319.6
2.5°	321.3	321.8	320.9	320.9	321.8	320.9	321.3	321.3	320.9	320.9	320.4
5°	322.6	322.1	322.1	322.1	322.6	321.8	321.3	321.8	320.9	320.9	320.9
7.5°	323.0	323.0	322.6	322.1	322.1	322.1	321.8	321.3	320.9	320.0	319.6
10°	322.1	322.1	322.6	321.8	321.8	320.9	320.9	320.0	320.0	319.1	317.9
12.5°	321.3	320.9	320.9	320.0	320.0	319.1	319.1	317.9	317.4	316.1	314.9
15°	319.1	318.8	317.9	317.4	317.1	316.6	315.8	315.3	314.1	312.3	311.1
17.5°	314.9	314.5	314.1	313.1	312.3	311.9	311.5	310.1	308.5	307.3	305.1
20°	308.9	308.5	308.5	307.3	306.8	305.5	305.1	303.3	302.1	299.5	297.8
22.5°	300.8	301.3	300.4	299.5	298.7	297.5	296.5	294.8	292.7	290.2	288.0
25°	291.0	291.5	290.6	289.7	288.5	287.6	286.7	284.2	282.0	279.0	276.5
27.5°	278.7	278.7	278.7	277.8	275.7	275.2	274.4	271.8	268.8	266.2	263.7
30°	264.2	263.7	263.7	262.4	261.5	259.9	258.6	256.4	254.4	251.4	248.4
32.5°	246.6	247.1	245.7	244.9	243.6	243.6	241.9	240.2	237.7	234.7	231.7
35°	227.4	227.9	227.0	226.6	224.4	224.0	223.6	221.4	219.8	217.6	214.1
37.5°	207.8	207.3	207.0	207.0	205.6	204.8	204.0	202.7	200.1	198.5	196.7
40°	186.5	186.5	186.5	186.0	185.7	184.7	184.3	183.5	181.8	180.0	178.8
42.5°	167.2	167.2	166.9	166.4	165.5	166.0	165.2	164.2	162.6	161.2	160.4
45°	148.4	148.4	148.4	148.9	148.1	146.8	146.8	145.9	145.1	144.2	142.9
47.5°	131.8	133.1	132.3	131.8	132.3	130.6	130.6	129.8	128.9	128.0	126.3
50°	118.1	118.1	118.1	117.3	116.9	116.9	115.6	114.8	114.3	113.5	111.8
52.5°	105.8	105.0	105.0	104.5	104.1	103.3	103.3	102.5	100.7	99.8	98.5
55°	93.5	93.5	93.0	92.6	92.2	91.7	91.3	90.0	89.2	87.9	86.7
57.5°	82.4	83.2	82.8	81.9	81.0	81.0	80.2	79.4	78.0	76.8	75.5
60°	73.4	73.0	73.0	72.5	71.7	71.2	70.9	69.5	68.2	67.0	65.7
62.5°	64.0	64.0	64.0	63.2	62.2	61.9	61.4	60.6	58.9	57.6	56.7
65°	55.9	55.4	55.1	54.6	54.2	53.4	52.9	52.1	50.8	49.4	48.2
67.5°	47.8	47.4	47.4	46.9	45.6	45.2	45.2	43.9	42.6	41.4	40.1
70°	39.7	39.7	39.7	38.8	38.4	37.9	37.6	36.7	35.4	34.1	32.8
72.5°	32.8	32.4	32.4	32.0	30.8	30.3	29.9	29.0	27.8	26.9	26.0
75°	25.6	25.6	25.1	24.8	24.3	23.9	23.5	22.6	21.3	20.1	19.6
77.5°	19.6	19.2	19.2	18.8	18.0	17.5	17.5	16.6	15.3	14.5	13.6
80°	13.3	13.6	13.3	12.8	12.3	12.0	11.5	11.1	10.3	9.3	8.5
82.5°	8.1	8.5	8.1	8.1	7.7	7.3	7.3	6.3	6.0	5.5	5.1
85°	4.3	4.3	4.3	4.3	3.8	3.8	3.8	3.5	3.0	2.5	2.5
87.5°	1.3	1.7	1.3	1.3	1.3	1.3	1.3	1.3	0.8	0.8	0.8
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°	319.6	319.6	319.6	319.6	319.6	319.6	319.6	319.6	319.6	319.6	319.6
2.5°	320.9	320.4	320.0	320.0	320.0	320.0	320.0	319.6	319.1	319.1	319.1
5°	320.0	320.0	320.0	319.6	319.1	319.1	318.3	317.9	317.4	317.1	316.6
7.5°	319.1	318.3	317.9	317.4	317.1	317.1	316.1	315.3	315.3	314.5	313.6
10°	316.6	316.1	315.3	314.5	314.1	313.6	312.8	311.5	311.1	310.1	309.3
12.5°	313.6	312.8	311.9	310.1	309.8	309.3	307.6	306.3	305.5	305.1	303.0
15°	309.8	308.1	306.8	304.6	304.3	303.3	302.1	300.8	299.1	297.8	297.0
17.5°	303.0	301.3	299.1	297.0	296.1	296.1	294.0	292.3	290.2	289.3	287.6
20°	294.8	292.7	291.0	288.5	287.2	285.8	284.6	282.0	280.3	279.0	276.9
22.5°	285.5	282.5	280.3	277.8	275.7	274.4	272.2	270.0	268.0	266.7	265.0
25°	273.5	271.0	267.5	265.0	263.7	262.0	259.4	257.2	255.2	253.0	252.2
27.5°	260.2	256.9	253.9	250.9	249.6	248.4	245.4	242.8	241.1	238.9	238.1
30°	245.7	242.4	238.9	236.4	235.1	232.9	231.3	228.3	226.1	224.4	222.3
32.5°	229.1	226.6	223.6	219.8	218.9	217.1	214.6	213.3	210.8	209.5	207.8
35°	211.2	209.5	206.5	203.5	202.3	201.5	199.3	196.7	195.0	193.7	192.8
37.5°	194.2	192.0	189.0	186.9	186.0	184.7	182.2	180.9	179.2	178.4	176.7
40°	175.8	173.7	171.5	170.2	169.0	168.1	166.4	165.2	163.4	162.2	161.7
42.5°	157.9	156.6	154.9	153.2	152.7	151.4	150.6	149.4	148.1	147.6	146.4
45°	141.6	140.4	138.7	136.9	136.6	135.7	135.3	133.9	133.1	133.1	133.1
47.5°	125.4	124.1	122.5	121.6	122.0	120.3	120.3	119.9	119.1	119.1	119.5
50°	111.0	109.3	108.8	108.0	107.1	106.3	106.7	105.3	105.3	106.3	105.8
52.5°	97.3	95.5	95.2	94.3	93.8	93.8	93.5	93.5	93.0	93.5	93.5
55°	84.9	83.7	82.8	81.9	81.5	81.5	81.5	81.0	80.7	81.5	81.9
57.5°	73.9	73.4	72.5	71.2	70.9	70.4	70.0	70.0	70.0	70.0	70.4
60°	64.0	63.2	62.2	61.0	61.0	60.6	60.2	59.7	59.7	59.7	59.7
62.5°	55.4	54.2	52.9	52.1	51.6	51.2	50.8	49.9	49.9	49.9	49.9
65°	46.9	45.6	44.8	43.9	43.1	43.1	42.3	41.8	40.9	40.6	39.7
67.5°	38.8	37.9	37.1	35.8	35.4	35.0	34.1	33.8	32.4	32.0	31.6
70°	31.6	30.3	29.4	28.6	28.1	27.3	26.5	25.6	24.8	23.9	23.0
72.5°	24.8	23.5	22.6	21.8	20.9	20.9	19.6	18.8	17.5	16.6	15.3
75°	18.3	17.1	16.2	15.0	14.5	14.1	12.8	12.0	10.7	9.3	8.5
77.5°	12.3	11.5	10.7	9.3	8.5	8.5	7.3	6.3	5.5	4.3	3.8
80°	7.7	6.8	6.0	5.1	5.1	4.3	3.8	3.0	2.2	1.7	1.3
82.5°	4.3	3.8	3.5	2.5	2.5	2.2	1.7	1.3	0.8	0.5	0.5
85°	2.2	1.7	1.3	1.3	0.8	0.8	0.8	0.5	0.5	0.0	0.0
87.5°	0.8	0.5	0.5	0.5	0.5	0.5	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°	319.6	319.6	319.6	319.6	319.6	319.6	319.6	319.6	319.6	319.6	319.6
2.5°	318.8	318.8	318.3	318.3	318.3	317.9	318.3	317.9	317.9	317.9	318.3
5°	317.1	316.1	316.1	315.8	315.8	315.3	315.8	315.3	314.9	314.5	314.9
7.5°	313.6	312.8	312.3	311.9	311.9	311.9	311.5	311.1	311.5	310.1	311.1
10°	308.9	308.5	307.6	307.3	306.8	307.3	306.8	306.0	306.0	306.0	305.5
12.5°	303.0	302.1	301.6	301.3	300.4	300.4	300.8	300.0	300.0	299.1	299.1
15°	295.7	294.8	294.0	294.0	293.1	293.1	292.7	292.7	292.3	291.8	291.8
17.5°	286.7	285.5	284.6	285.0	284.6	284.2	284.2	283.3	282.9	283.3	283.3
20°	276.0	275.2	274.4	274.8	273.9	273.5	273.9	272.7	273.0	273.0	273.0
22.5°	264.2	263.7	262.4	262.4	261.5	261.2	261.5	261.5	262.0	261.5	261.5
25°	250.9	250.1	249.2	249.2	248.7	248.4	248.7	249.2	248.7	249.2	249.2
27.5°	236.8	235.6	235.6	234.7	234.7	235.1	234.7	235.1	235.6	235.6	236.4
30°	221.4	221.0	220.6	220.1	220.1	220.6	220.6	220.6	221.0	221.9	221.9
32.5°	207.0	206.1	205.3	205.3	206.1	205.6	206.1	206.1	207.0	207.0	207.8
35°	191.2	191.2	190.3	190.7	190.7	190.7	190.7	191.6	192.5	192.8	193.7
37.5°	176.7	175.4	175.8	175.8	176.2	175.8	177.0	177.0	177.9	177.9	178.8
40°	160.9	160.9	161.2	160.9	161.2	161.2	162.2	163.0	163.4	164.2	164.7
42.5°	145.9	146.8	145.9	146.4	146.8	147.2	147.6	148.1	149.7	150.6	151.9
45°	132.3	132.7	133.1	133.6	133.1	133.9	134.4	135.3	136.6	136.9	137.4
47.5°	119.1	119.5	119.9	120.3	120.3	121.1	121.6	122.5	123.3	123.8	124.1
50°	106.3	107.1	107.5	107.5	108.0	108.8	109.6	109.6	110.5	111.8	112.2
52.5°	94.7	94.7	95.5	96.0	96.5	96.5	97.7	98.2	98.5	99.5	100.3
55°	81.9	83.2	83.7	83.7	84.5	85.3	85.7	86.2	86.2	87.9	87.9
57.5°	70.9	71.2	72.1	72.1	72.1	73.4	73.4	74.2	74.7	75.1	76.0
60°	59.7	60.6	60.6	61.0	60.6	61.4	61.9	62.7	63.2	63.6	64.0
62.5°	49.4	49.4	49.9	49.9	49.9	49.9	50.8	50.8	51.6	52.1	52.4
65°	39.7	39.7	39.7	39.7	39.7	39.7	39.7	39.7	40.1	40.1	40.9
67.5°	30.8	30.3	29.4	29.9	29.4	29.4	29.0	29.0	29.4	29.4	30.3
70°	22.1	21.8	20.9	20.9	20.5	20.1	19.6	19.2	18.8	18.8	18.8
72.5°	14.5	13.6	12.3	12.0	12.0	11.1	10.3	9.8	9.8	9.8	9.8
75°	7.3	6.3	5.5	5.1	5.1	4.3	4.7	4.3	4.3	4.3	4.3
77.5°	3.0	2.2	1.7	1.7	1.7	1.3	1.3	1.3	1.3	1.3	1.3
80°	0.8	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
82.5°	0.5	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





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**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	319.6	319.6	319.6	319.6	319.6	319.6	319.6	319.6
2.5°	317.9	317.9	317.1	317.4	317.4	317.4	317.4	317.4
5°	314.1	314.5	314.1	314.5	314.5	314.1	314.1	314.1
7.5°	310.1	310.6	310.1	310.6	310.6	310.6	310.1	310.1
10°	305.5	305.5	305.5	305.5	305.5	305.1	305.5	305.5
12.5°	299.1	299.1	299.1	299.5	299.5	299.1	299.1	298.7
15°	292.3	291.5	291.8	292.3	291.8	291.8	291.8	291.8
17.5°	282.9	283.3	282.9	282.9	282.9	282.9	283.3	282.9
20°	273.0	273.0	273.5	273.0	273.0	273.0	273.0	272.7
22.5°	262.0	261.5	261.5	262.0	262.0	261.5	262.0	262.0
25°	249.6	250.1	249.6	249.6	250.1	250.1	250.1	249.6
27.5°	236.4	236.8	237.2	236.8	236.8	236.8	237.2	237.7
30°	222.8	223.6	222.8	222.8	223.6	223.1	223.6	223.6
32.5°	208.3	209.5	208.6	209.5	209.5	210.0	209.5	210.0
35°	193.7	195.0	195.0	195.0	195.5	195.8	195.8	195.5
37.5°	180.0	180.5	180.5	181.3	181.8	182.2	182.2	181.8
40°	166.0	166.9	167.2	167.2	167.2	168.1	169.0	168.1
42.5°	152.4	152.7	153.2	153.2	154.1	154.4	154.9	154.9
45°	139.1	139.9	140.4	140.8	141.2	142.1	141.6	142.6
47.5°	125.4	126.8	127.1	127.6	128.4	128.9	129.3	129.8
50°	113.1	114.0	114.0	114.8	116.1	116.1	116.9	117.3
52.5°	100.7	101.1	101.5	102.0	102.8	103.7	103.7	104.5
55°	88.7	89.2	89.2	89.7	90.0	91.7	92.2	92.2
57.5°	76.4	76.4	77.2	77.7	78.0	78.9	78.9	78.9
60°	64.4	64.9	64.9	65.2	65.7	66.6	67.0	66.6
62.5°	52.4	52.9	52.9	53.4	54.2	54.6	54.2	54.2
65°	41.4	41.8	41.8	42.3	43.1	43.1	42.6	43.1
67.5°	30.3	30.3	30.3	30.3	30.3	30.3	30.3	30.3
70°	19.2	18.8	18.3	18.8	18.8	18.8	18.3	19.2
72.5°	9.3	9.8	9.8	9.8	9.8	9.8	9.8	9.3
75°	4.3	4.3	3.8	3.8	3.8	4.3	4.3	3.8
77.5°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
80°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
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)