

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: P583532

Luminaire Tested: **HC805D010-HM80520935-81RWWC**

Issue Date: 10/21/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P583532  
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-HM80520935-81RWWC  
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, SPECULAR TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 641.5 lumens  
Efficiency: N/A  
Efficacy: 106.9 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

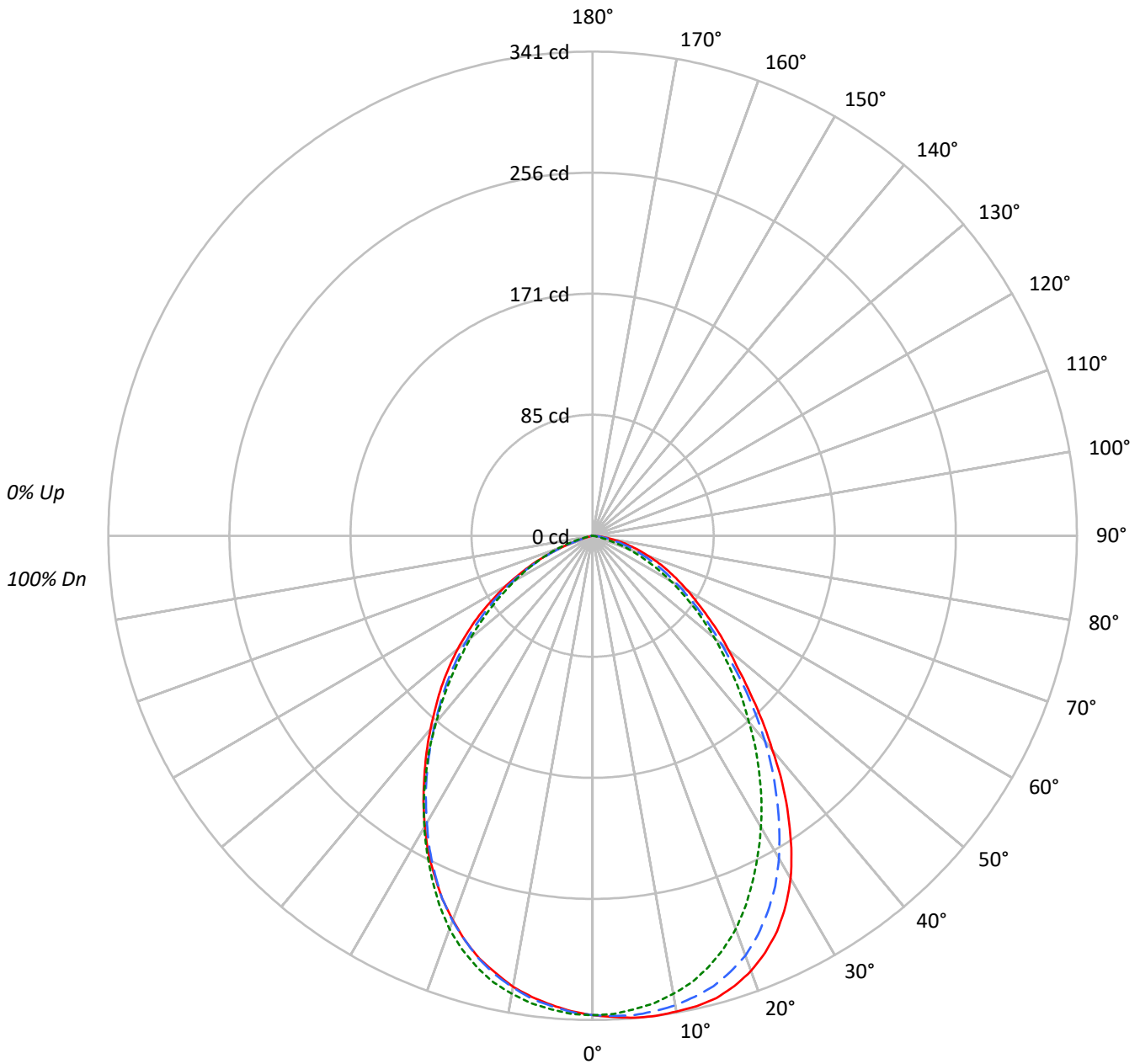
Input Watts (W): 6  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	10410	10410	10410
5°	10546	10363	10267
10°	10652	10258	10101
15°	10762	10043	9839
20°	10704	9671	9448
25°	10456	9091	8969
30°	9931	8439	8410
35°	9038	7702	7770
40°	7926	6891	7145
45°	6838	6131	6563
50°	5987	5383	5944
55°	5301	4629	5231
60°	4773	3892	4336
65°	4305	3130	3320
70°	3778	2281	1821
75°	3229	1180	488
80°	2486	320	89
85°	1592	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	31.8	5.0
10°-20°	89.5	14.0
20°-30°	127.1	19.8
30°-40°	133.7	20.9
40°-50°	113.8	17.7
50°-60°	82.2	12.8
60°-70°	46.8	7.3
70°-80°	14.7	2.3
80°-90°	1.8	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°	248.4	38.7
0°-40°	382.2	59.6
0°-60°	578.2	90.1
0°-90°	641.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	641.5	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	338	338	338	338	338	
5°	341	339	335	332	332	32
15°	337	328	315	309	308	95
25°	307	292	267	263	264	141
35°	240	226	205	203	206	149
45°	157	151	141	144	150	122
55°	99	92	86	91	97	89
65°	59	51	43	42	46	59
75°	27	21	10	4	4	29
85°	4	3	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°	337.6	337.6	337.6	337.6	337.6	337.6	337.6	337.6	337.6	337.6	337.6
2.5°	339.3	339.7	338.9	338.9	339.7	338.9	339.3	339.3	338.9	338.9	338.4
5°	340.7	340.2	340.2	340.2	340.7	339.7	339.3	339.7	338.9	338.9	338.9
7.5°	341.1	341.1	340.7	340.2	340.2	340.2	339.7	339.3	338.9	337.9	337.6
10°	340.2	340.2	340.7	339.7	339.7	338.9	338.9	337.9	337.9	337.1	335.8
12.5°	339.3	338.9	338.9	337.9	337.9	337.1	337.1	335.8	335.3	333.8	332.5
15°	337.1	336.6	335.8	335.3	334.8	334.3	333.5	333.0	331.7	329.9	328.5
17.5°	332.5	332.0	331.7	330.7	329.9	329.4	328.9	327.6	325.8	324.4	322.2
20°	326.2	325.8	325.8	324.4	324.0	322.6	322.2	320.4	319.0	316.4	314.6
22.5°	317.7	318.2	317.2	316.4	315.4	314.1	313.1	311.3	309.1	306.4	304.2
25°	307.3	307.7	306.9	306.0	304.6	303.7	302.8	300.1	297.8	294.7	291.9
27.5°	294.2	294.2	294.2	293.4	291.1	290.6	289.8	287.0	283.9	281.2	278.4
30°	278.9	278.4	278.4	277.1	276.3	274.5	273.0	270.8	268.6	265.4	262.3
32.5°	260.5	260.9	259.5	258.7	257.4	257.4	255.4	253.6	251.0	247.8	244.7
35°	240.1	240.6	239.8	239.3	237.0	236.5	236.2	233.9	232.1	229.8	226.2
37.5°	219.4	219.1	218.6	218.6	217.1	216.3	215.3	214.0	211.4	209.5	207.7
40°	196.9	196.9	196.9	196.4	196.1	195.1	194.6	193.8	192.0	190.2	188.8
42.5°	176.7	176.7	176.2	175.7	174.9	175.2	174.4	173.4	171.6	170.3	169.4
45°	156.8	156.8	156.8	157.3	156.3	155.0	155.0	154.1	153.2	152.3	150.9
47.5°	139.2	140.6	139.7	139.2	139.7	137.9	137.9	136.9	136.1	135.1	133.3
50°	124.8	124.8	124.8	123.9	123.4	123.4	122.1	121.3	120.8	119.8	118.0
52.5°	111.8	110.8	110.8	110.4	110.0	109.0	109.0	108.1	106.3	105.5	104.1
55°	98.6	98.6	98.3	97.8	97.3	96.8	96.5	95.0	94.2	92.8	91.5
57.5°	87.0	87.9	87.4	86.5	85.6	85.6	84.7	83.8	82.5	81.2	79.7
60°	77.4	77.1	77.1	76.6	75.7	75.3	74.8	73.5	72.1	70.7	69.4
62.5°	67.6	67.6	67.6	66.7	65.8	65.4	64.9	64.0	62.1	60.8	60.0
65°	59.0	58.5	58.2	57.7	57.2	56.4	55.9	54.9	53.6	52.3	50.9
67.5°	50.5	50.0	50.0	49.6	48.2	47.8	47.8	46.4	45.0	43.7	42.4
70°	41.9	41.9	41.9	41.1	40.6	40.1	39.6	38.8	37.3	36.0	34.7
72.5°	34.7	34.2	34.2	33.8	32.4	32.0	31.6	30.6	29.3	28.4	27.5
75°	27.1	27.1	26.6	26.1	25.7	25.3	24.8	23.9	22.5	21.2	20.7
77.5°	20.7	20.2	20.2	19.9	18.9	18.4	18.4	17.6	16.3	15.3	14.4
80°	14.0	14.4	14.0	13.5	13.0	12.6	12.2	11.7	10.8	9.9	9.0
82.5°	8.6	9.0	8.6	8.6	8.1	7.7	7.7	6.7	6.3	5.9	5.4
85°	4.5	4.5	4.5	4.5	4.1	4.1	4.1	3.6	3.1	2.8	2.8
87.5°	1.3	1.8	1.3	1.3	1.3	1.3	1.3	1.3	1.0	1.0	1.0
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°	337.6	337.6	337.6	337.6	337.6	337.6	337.6	337.6	337.6	337.6	337.6
2.5°	338.9	338.4	337.9	337.9	337.9	337.9	337.9	337.6	337.1	337.1	337.1
5°	337.9	337.9	337.9	337.6	337.1	337.1	336.1	335.8	335.3	334.8	334.3
7.5°	337.1	336.1	335.8	335.3	334.8	334.8	333.8	333.0	333.0	332.0	331.2
10°	334.3	333.8	333.0	332.0	331.7	331.2	330.3	328.9	328.5	327.6	326.7
12.5°	331.2	330.3	329.4	327.6	327.1	326.7	324.9	323.5	322.6	322.2	320.0
15°	327.1	325.3	324.0	321.8	321.3	320.4	319.0	317.7	315.9	314.6	313.6
17.5°	320.0	318.2	315.9	313.6	312.8	312.8	310.5	308.7	306.4	305.5	303.7
20°	311.3	309.1	307.3	304.6	303.2	301.9	300.6	297.8	296.0	294.7	292.4
22.5°	301.4	298.3	296.0	293.4	291.1	289.8	287.5	285.2	283.0	281.7	279.9
25°	288.8	286.1	282.5	279.9	278.4	276.6	274.0	271.7	269.4	267.2	266.3
27.5°	274.8	271.2	268.1	265.0	263.6	262.3	259.2	256.4	254.6	252.3	251.5
30°	259.5	255.9	252.3	249.7	248.3	246.0	244.2	241.1	238.8	237.0	234.7
32.5°	242.0	239.3	236.2	232.1	231.1	229.3	226.7	225.3	222.6	221.2	219.4
35°	223.0	221.2	218.1	215.0	213.5	212.7	210.4	207.7	205.9	204.6	203.7
37.5°	205.0	202.8	199.7	197.4	196.4	195.1	192.4	191.0	189.2	188.4	186.5
40°	185.7	183.4	181.1	179.8	178.5	177.5	175.7	174.4	172.6	171.2	170.8
42.5°	166.7	165.4	163.6	161.7	161.4	159.9	159.1	157.8	156.3	156.0	154.5
45°	149.6	148.3	146.4	144.6	144.2	143.3	142.8	141.5	140.6	140.6	140.6
47.5°	132.5	131.1	129.3	128.4	128.9	127.1	127.1	126.6	125.7	125.7	126.2
50°	117.2	115.4	114.9	114.0	113.1	112.2	112.6	111.3	111.3	112.2	111.8
52.5°	102.7	100.9	100.4	99.6	99.1	99.1	98.6	98.6	98.3	98.6	98.6
55°	89.7	88.3	87.4	86.5	86.1	86.1	86.1	85.6	85.1	86.1	86.5
57.5°	77.9	77.4	76.6	75.3	74.8	74.3	73.9	73.9	73.9	73.9	74.3
60°	67.6	66.7	65.8	64.4	64.4	64.0	63.6	63.1	63.1	63.1	63.1
62.5°	58.5	57.2	55.9	54.9	54.6	54.1	53.6	52.7	52.7	52.7	52.7
65°	49.6	48.2	47.3	46.4	45.5	45.5	44.6	44.2	43.2	42.9	41.9
67.5°	41.1	40.1	39.3	37.8	37.3	37.0	36.0	35.6	34.2	33.8	33.4
70°	33.4	32.0	31.1	30.2	29.7	28.8	27.9	27.1	26.1	25.3	24.3
72.5°	26.1	24.8	23.9	23.0	22.0	22.0	20.7	19.9	18.4	17.6	16.3
75°	19.4	18.1	17.1	15.8	15.3	14.8	13.5	12.6	11.3	9.9	9.0
77.5°	13.0	12.2	11.3	9.9	9.0	9.0	7.7	6.7	5.9	4.5	4.1
80°	8.1	7.2	6.3	5.4	5.4	4.5	4.1	3.1	2.3	1.8	1.3
82.5°	4.5	4.1	3.6	2.8	2.8	2.3	1.8	1.3	1.0	0.5	0.5
85°	2.3	1.8	1.3	1.3	1.0	1.0	1.0	0.5	0.5	0.0	0.0
87.5°	1.0	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°	337.6	337.6	337.6	337.6	337.6	337.6	337.6	337.6	337.6	337.6	337.6
2.5°	336.6	336.6	336.1	336.1	336.1	335.8	336.1	335.8	335.8	335.8	336.1
5°	334.8	333.8	333.8	333.5	333.5	333.0	333.5	333.0	332.5	332.0	332.5
7.5°	331.2	330.3	329.9	329.4	329.4	329.4	328.9	328.5	328.9	327.6	328.5
10°	326.2	325.8	324.9	324.4	324.0	324.4	324.0	323.1	323.1	323.1	322.6
12.5°	320.0	319.0	318.5	318.2	317.2	317.2	317.7	316.7	316.7	315.9	315.9
15°	312.3	311.3	310.5	310.5	309.5	309.5	309.1	309.1	308.7	308.2	308.2
17.5°	302.8	301.4	300.6	301.0	300.6	300.1	300.1	299.2	298.8	299.2	299.2
20°	291.6	290.6	289.8	290.2	289.3	288.8	289.3	287.9	288.4	288.4	288.4
22.5°	278.9	278.4	277.1	277.1	276.3	275.8	276.3	276.3	276.6	276.3	276.3
25°	265.0	264.1	263.1	263.1	262.7	262.3	262.7	263.1	262.7	263.1	263.1
27.5°	250.1	248.7	248.7	247.8	247.8	248.3	247.8	248.3	248.7	248.7	249.7
30°	233.9	233.4	232.9	232.5	232.5	232.9	232.9	232.9	233.4	234.4	234.4
32.5°	218.6	217.6	216.8	216.8	217.6	217.1	217.6	217.6	218.6	218.6	219.4
35°	201.8	201.8	201.0	201.5	201.5	201.5	201.5	202.3	203.3	203.7	204.6
37.5°	186.5	185.2	185.7	185.7	186.1	185.7	187.0	187.0	187.9	187.9	188.8
40°	169.9	169.9	170.3	169.9	170.3	170.3	171.2	172.1	172.6	173.4	173.9
42.5°	154.1	155.0	154.1	154.5	155.0	155.5	156.0	156.3	158.1	159.1	160.4
45°	139.7	140.2	140.6	141.0	140.6	141.5	142.0	142.8	144.2	144.6	145.1
47.5°	125.7	126.2	126.6	127.1	127.1	128.0	128.4	129.3	130.2	130.7	131.1
50°	112.2	113.1	113.6	113.6	114.0	114.9	115.7	115.7	116.7	118.0	118.5
52.5°	100.1	100.1	100.9	101.4	101.9	101.9	103.2	103.7	104.1	105.0	105.9
55°	86.5	87.9	88.3	88.3	89.2	90.1	90.6	91.0	91.0	92.8	92.8
57.5°	74.8	75.3	76.1	76.1	76.1	77.4	77.4	78.4	78.9	79.4	80.2
60°	63.1	64.0	64.0	64.4	64.0	64.9	65.4	66.2	66.7	67.2	67.6
62.5°	52.3	52.3	52.7	52.7	52.7	52.7	53.6	53.6	54.6	54.9	55.4
65°	41.9	41.9	41.9	41.9	41.9	41.9	41.9	41.9	42.4	42.4	43.2
67.5°	32.4	32.0	31.1	31.6	31.1	31.1	30.6	30.6	31.1	31.1	32.0
70°	23.5	23.0	22.0	22.0	21.7	21.2	20.7	20.2	19.9	19.9	19.9
72.5°	15.3	14.4	13.0	12.6	12.6	11.7	10.8	10.4	10.4	10.4	10.4
75°	7.7	6.7	5.9	5.4	5.4	4.5	4.9	4.5	4.5	4.5	4.5
77.5°	3.1	2.3	1.8	1.8	1.8	1.3	1.3	1.3	1.3	1.3	1.3
80°	1.0	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°	337.6	337.6	337.6	337.6	337.6	337.6	337.6	337.6
2.5°	335.8	335.8	334.8	335.3	335.3	335.3	335.3	335.3
5°	331.7	332.0	331.7	332.0	332.0	331.7	331.7	331.7
7.5°	327.6	328.1	327.6	328.1	328.1	328.1	327.6	327.6
10°	322.6	322.6	322.6	322.6	322.6	322.2	322.6	322.6
12.5°	315.9	315.9	315.9	316.4	316.4	315.9	315.9	315.4
15°	308.7	307.7	308.2	308.7	308.2	308.2	308.2	308.2
17.5°	298.8	299.2	298.8	298.8	298.8	298.8	299.2	298.8
20°	288.4	288.4	288.8	288.4	288.4	288.4	288.4	287.9
22.5°	276.6	276.3	276.3	276.6	276.6	276.3	276.6	276.6
25°	263.6	264.1	263.6	263.6	264.1	264.1	264.1	263.6
27.5°	249.7	250.1	250.5	250.1	250.1	250.1	250.5	251.0
30°	235.2	236.2	235.2	235.2	236.2	235.7	236.2	236.2
32.5°	219.9	221.2	220.4	221.2	221.2	221.7	221.2	221.7
35°	204.6	205.9	205.9	205.9	206.4	206.8	206.8	206.4
37.5°	190.2	190.6	190.6	191.5	192.0	192.4	192.4	192.0
40°	175.2	176.2	176.7	176.7	176.7	177.5	178.5	177.5
42.5°	160.9	161.4	161.7	161.7	162.7	163.2	163.6	163.6
45°	146.9	147.8	148.3	148.7	149.1	150.1	149.6	150.5
47.5°	132.5	133.8	134.3	134.8	135.6	136.1	136.6	136.9
50°	119.5	120.3	120.3	121.3	122.6	122.6	123.4	123.9
52.5°	106.3	106.8	107.3	107.7	108.6	109.5	109.5	110.4
55°	93.7	94.2	94.2	94.7	95.0	96.8	97.3	97.3
57.5°	80.7	80.7	81.5	82.0	82.5	83.3	83.3	83.3
60°	68.0	68.5	68.5	68.9	69.4	70.3	70.7	70.3
62.5°	55.4	55.9	55.9	56.4	57.2	57.7	57.2	57.2
65°	43.7	44.2	44.2	44.6	45.5	45.5	45.0	45.5
67.5°	32.0	32.0	32.0	32.0	32.0	32.0	32.0	32.0
70°	20.2	19.9	19.4	19.9	19.9	19.9	19.4	20.2
72.5°	9.9	10.4	10.4	10.4	10.4	10.4	10.4	9.9
75°	4.5	4.5	4.1	4.1	4.1	4.5	4.5	4.1
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)