

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: P583524

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

Issue Date: 10/21/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P583524  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2109-368-18)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 10/21/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC805D010-HM80520930-81WWWB  
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, BLACK BAFFLE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 604.0 lumens  
Efficiency: N/A  
Efficacy: 100.7 lumens/watt  
Spacing Criteria (0/90/45): 1.16 / 1.09 / 1.18  
Luminous Opening: Circular (Dia: 0.67' x H: 0')  
CIE Type: Direct

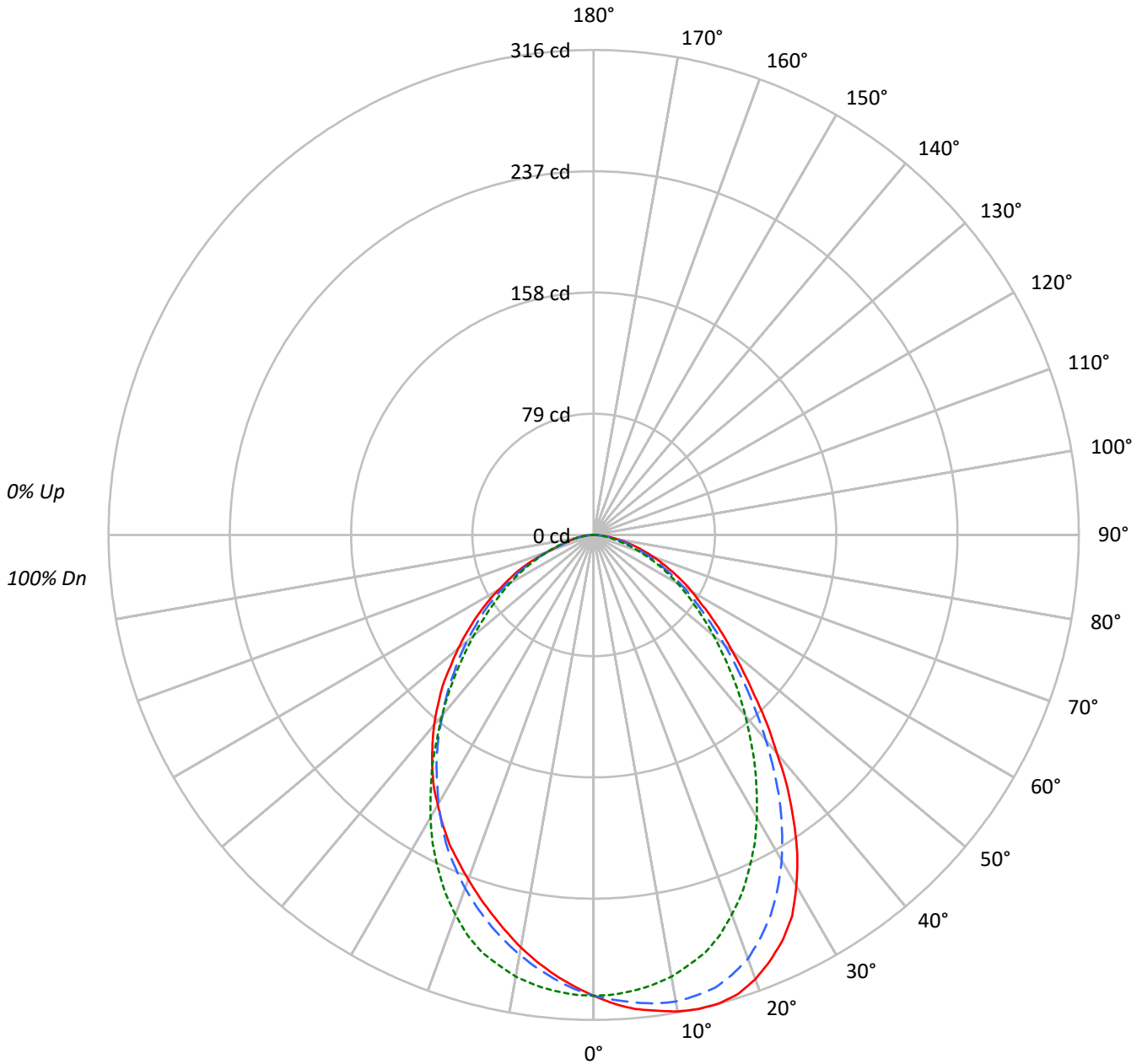
Input Watts (W): 6  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20				20				20				
RC	80				70				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	110	106	103	99	108	104	101	98	100	97	95	96	94	92	92	91	89	87			
2	102	94	88	83	99	93	87	82	89	85	81	86	82	79	83	80	77	75			
3	94	84	77	71	91	83	76	71	80	74	69	77	72	68	75	71	67	65			
4	87	76	68	62	84	75	67	61	72	66	61	70	64	60	68	63	59	57			
5	80	69	60	54	78	67	60	54	65	59	54	64	58	53	62	57	52	50			
6	75	62	54	48	73	61	54	48	60	53	48	58	52	47	57	51	47	45			
7	70	57	49	43	68	56	49	43	55	48	43	53	47	43	52	47	42	40			
8	65	52	45	39	64	52	44	39	51	44	39	49	43	39	48	43	38	37			
9	61	48	41	36	60	48	41	36	47	40	35	46	40	35	45	39	35	33			
10	57	45	38	33	56	44	37	33	44	37	32	43	37	32	42	36	32	30			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°
0°	9260	9260	9260
5°	9599	9231	8912
10°	9873	9149	8548
15°	10091	8987	8169
20°	10107	8637	7840
25°	9911	8159	7564
30°	9404	7566	7228
35°	8545	6889	6904
40°	7467	6183	6509
45°	6472	5508	6066
50°	5666	4893	5526
55°	5043	4339	5000
60°	4558	3892	4391
65°	4108	3422	3823
70°	3688	2885	2849
75°	3253	2288	2145
80°	2717	1900	2042
85°	2123	1663	1804



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	28.3	4.7
10°-20°	79.8	13.2
20°-30°	114.0	18.9
30°-40°	121.2	20.1
40°-50°	104.3	17.3
50°-60°	78.0	12.9
60°-70°	49.7	8.2
70°-80°	22.6	3.7
80°-90°	6.0	1.0
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°	222.2	36.8
0°-40°	343.3	56.8
0°-60°	525.7	87.0
0°-90°	604.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	604.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	300	300	300	300	300	
5°	310	306	298	290	288	30
15°	316	306	282	262	256	89
25°	291	273	240	225	222	133
35°	227	211	183	178	183	141
45°	148	140	126	130	139	115
55°	94	86	81	88	93	84
65°	56	50	47	49	52	56
75°	27	24	19	18	18	29
85°	6	5	5	5	5	7
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°	300.3	300.3	300.3	300.3	300.3	300.3	300.3	300.3	300.3	300.3	300.3
2.5°	305.8	305.0	305.5	305.0	305.5	305.5	304.5	304.5	304.5	304.5	303.3
5°	310.1	309.7	309.7	309.3	308.8	309.3	308.8	308.5	307.5	307.2	305.8
7.5°	312.7	312.7	312.7	312.7	312.3	311.8	311.3	310.5	309.7	308.8	308.0
10°	315.3	315.6	315.3	314.8	314.3	313.5	313.1	312.3	311.0	309.7	308.8
12.5°	316.5	316.5	316.1	316.1	315.3	314.8	313.5	312.3	311.0	309.7	307.5
15°	316.1	316.1	315.6	315.3	314.0	313.5	312.7	311.3	309.3	307.5	305.5
17.5°	313.5	313.1	312.3	312.3	310.5	310.1	309.3	307.5	305.5	302.8	300.3
20°	308.0	308.0	307.5	307.2	305.5	304.2	303.3	301.2	299.5	296.5	293.9
22.5°	300.3	301.2	300.3	299.5	297.3	296.9	295.7	293.0	290.5	287.0	284.0
25°	291.3	290.9	290.5	289.7	287.9	287.0	285.4	282.9	280.2	276.4	273.0
27.5°	279.9	278.1	278.1	276.4	275.2	273.9	273.0	270.4	267.1	264.1	259.7
30°	264.1	264.4	262.4	261.9	259.7	258.9	257.2	254.6	251.7	248.3	244.9
32.5°	246.9	245.7	245.7	243.9	242.3	241.0	240.6	237.6	235.1	231.6	228.3
35°	227.0	227.0	225.6	225.3	223.5	222.6	221.4	219.6	216.7	213.7	211.2
37.5°	207.3	206.5	206.0	205.2	203.8	202.7	202.7	199.7	199.2	195.8	192.4
40°	185.5	186.4	185.5	184.2	183.9	183.0	182.5	180.9	179.6	176.6	174.5
42.5°	167.2	166.4	166.4	165.9	164.2	164.2	163.4	162.6	160.4	159.6	156.9
45°	148.4	149.3	148.1	148.4	146.8	146.8	146.8	145.1	143.3	142.1	140.3
47.5°	132.3	132.6	132.6	131.4	131.0	131.0	130.1	129.3	128.0	126.3	125.0
50°	118.1	118.6	117.8	117.3	116.5	116.0	116.0	114.3	113.5	111.8	111.0
52.5°	105.3	105.3	105.0	105.0	103.7	103.7	102.8	101.5	100.7	99.8	97.7
55°	93.8	93.8	93.4	93.0	93.0	91.7	91.3	90.0	89.2	87.5	86.2
57.5°	82.7	83.2	82.7	82.4	81.9	81.5	80.7	79.4	78.5	77.2	76.4
60°	73.9	73.9	73.4	72.9	72.1	71.7	71.2	70.4	69.1	68.2	66.9
62.5°	65.2	64.9	64.4	64.0	63.1	63.1	62.2	61.4	60.1	59.3	58.4
65°	56.3	56.3	55.9	55.9	55.4	54.6	54.2	53.7	52.1	51.6	49.9
67.5°	48.2	48.6	47.8	47.8	46.9	46.9	46.4	45.2	44.8	43.9	43.1
70°	40.9	40.9	40.9	40.6	39.6	39.3	38.8	37.9	37.6	36.6	35.8
72.5°	33.8	33.8	33.3	33.3	32.8	32.4	32.0	31.1	31.1	30.3	29.4
75°	27.3	27.3	26.9	26.5	26.0	26.0	25.6	25.1	24.3	23.9	23.5
77.5°	20.9	20.9	20.9	20.5	20.0	20.0	20.0	19.2	18.3	18.3	18.0
80°	15.3	15.3	15.0	15.0	14.5	14.5	14.5	14.1	13.6	13.2	12.8
82.5°	10.3	10.3	10.3	10.3	9.8	9.8	9.8	9.3	9.0	9.0	9.0
85°	6.0	6.0	6.0	6.0	5.5	5.5	5.5	5.5	5.5	5.1	5.1
87.5°	2.5	2.2	2.5	2.2	2.5	2.2	2.5	2.2	2.2	2.2	2.2
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°	300.3	300.3	300.3	300.3	300.3	300.3	300.3	300.3	300.3	300.3	300.3
2.5°	303.7	303.3	302.8	302.5	302.5	302.0	301.2	300.7	300.3	299.8	299.8
5°	305.5	305.0	304.2	303.3	302.8	302.0	301.2	300.3	299.5	298.2	297.7
7.5°	306.7	305.5	304.5	302.8	302.5	301.6	300.3	299.0	297.3	295.7	294.3
10°	306.7	305.0	303.7	301.6	300.7	299.8	298.2	296.0	293.9	292.2	290.0
12.5°	305.8	303.7	301.6	299.5	298.2	296.9	294.3	292.2	289.7	287.0	285.4
15°	302.8	300.3	297.7	295.2	293.9	292.2	289.7	286.7	284.0	281.5	278.5
17.5°	297.3	294.7	291.8	288.8	287.0	285.8	282.0	279.9	276.0	273.4	270.9
20°	290.0	287.0	283.2	280.2	278.1	276.9	273.9	270.0	267.1	263.2	260.6
22.5°	280.7	276.9	273.0	270.0	267.9	266.2	262.4	258.6	255.9	252.6	249.6
25°	269.6	265.7	261.9	257.6	255.6	253.8	250.4	246.9	243.6	239.8	237.1
27.5°	256.4	252.1	248.7	244.9	242.8	240.1	236.3	232.9	229.5	227.0	223.5
30°	241.9	237.1	233.8	229.9	227.8	225.6	221.8	218.5	215.5	212.5	210.7
32.5°	224.3	221.0	217.5	213.7	212.0	210.7	206.8	203.5	200.0	197.5	196.2
35°	207.7	203.8	200.9	197.5	195.4	194.0	190.7	187.7	186.0	183.0	181.3
37.5°	190.2	187.2	183.9	180.4	179.2	177.9	175.4	172.4	169.7	167.7	166.7
40°	171.9	169.4	166.4	164.2	162.9	161.7	159.6	157.4	155.7	153.6	152.7
42.5°	154.4	152.7	150.1	147.6	146.3	145.9	143.3	141.6	140.8	139.9	139.1
45°	138.6	136.1	134.4	132.6	131.4	130.5	129.3	128.0	127.1	126.3	125.4
47.5°	123.3	121.1	119.5	118.1	116.8	116.5	115.6	114.3	113.5	113.5	113.5
50°	109.2	107.5	105.8	105.0	104.5	103.7	102.8	102.3	102.0	102.0	102.0
52.5°	96.8	95.2	93.8	93.0	93.0	92.2	91.3	90.9	90.9	90.9	90.9
55°	85.3	84.0	83.2	82.4	81.5	81.0	81.0	81.0	80.7	80.7	81.0
57.5°	75.1	74.2	72.9	72.1	71.7	71.7	71.2	70.9	71.2	71.7	72.1
60°	65.7	64.9	64.4	63.1	63.1	63.1	62.7	62.7	62.7	63.1	63.6
62.5°	57.2	56.7	55.9	55.4	55.1	55.1	54.6	54.6	54.6	54.6	55.1
65°	49.4	48.6	47.8	47.8	47.8	47.4	47.4	46.4	46.9	46.9	46.4
67.5°	42.3	41.4	40.9	40.6	40.1	40.1	39.6	39.3	38.8	38.8	38.8
70°	35.4	34.6	34.6	33.8	33.8	33.3	32.8	32.8	32.4	32.0	31.6
72.5°	28.6	28.1	27.8	27.3	27.3	27.3	26.9	26.5	26.0	25.6	24.8
75°	22.6	22.6	21.8	21.3	21.3	20.9	20.5	20.0	19.6	19.2	18.8
77.5°	17.5	17.1	16.2	15.8	15.8	15.8	15.3	15.0	14.5	14.1	13.6
80°	12.8	12.3	12.0	11.5	11.5	11.5	11.1	11.1	10.7	10.7	10.7
82.5°	8.5	8.5	8.1	8.1	8.1	8.1	7.7	7.7	7.7	7.7	7.7
85°	5.1	5.1	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7
87.5°	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
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°	300.3	300.3	300.3	300.3	300.3	300.3	300.3	300.3	300.3	300.3	300.3
2.5°	299.0	299.0	298.2	297.7	297.3	297.7	296.9	296.5	296.0	296.0	295.7
5°	296.5	296.0	294.3	293.9	293.5	293.0	292.2	291.3	290.5	290.0	289.7
7.5°	293.0	291.8	290.0	289.7	289.2	287.9	286.7	285.8	284.5	284.0	283.2
10°	288.4	286.7	285.4	284.0	283.2	282.0	280.7	279.4	277.7	277.2	276.0
12.5°	282.9	280.7	278.1	277.7	276.4	274.7	273.0	271.7	270.4	269.6	268.4
15°	276.0	273.9	271.2	270.0	268.7	267.4	265.4	263.6	262.4	261.1	259.7
17.5°	267.9	265.4	263.2	261.9	261.1	258.9	257.2	255.1	253.8	252.6	251.3
20°	258.1	255.9	252.9	251.7	251.3	249.6	247.4	246.6	244.9	243.6	242.8
22.5°	246.9	244.9	242.3	241.4	239.8	238.9	236.8	235.9	235.1	233.8	233.3
25°	234.6	232.5	230.3	229.9	228.6	227.8	226.5	225.3	225.3	224.0	224.0
27.5°	221.8	219.6	218.0	217.1	216.7	215.8	214.6	214.1	213.7	213.3	213.3
30°	208.2	205.6	204.8	204.3	203.8	203.0	202.7	201.8	202.2	202.7	202.2
32.5°	193.7	192.8	191.2	190.2	190.7	190.2	189.4	190.2	189.8	190.7	191.2
35°	179.6	178.7	177.9	177.9	177.0	177.0	177.0	177.4	178.4	178.7	179.6
37.5°	165.9	164.7	164.2	163.7	164.2	164.2	164.2	165.1	165.9	166.7	168.1
40°	151.4	150.6	150.6	150.6	150.6	151.9	151.4	152.3	153.1	154.4	155.7
42.5°	137.8	137.8	138.3	138.3	138.3	138.3	139.1	140.3	141.6	142.9	144.2
45°	125.0	125.0	125.0	125.8	125.8	126.3	128.0	128.8	129.6	131.0	132.3
47.5°	113.0	113.0	113.5	113.8	114.3	115.2	116.0	117.3	118.6	119.5	120.8
50°	102.0	102.3	103.2	104.1	104.1	104.5	105.8	106.7	107.5	108.8	109.2
52.5°	91.3	92.2	93.0	93.4	93.8	94.7	95.2	96.4	96.8	98.2	98.5
55°	81.5	81.9	83.2	83.6	83.6	84.5	85.3	86.2	87.5	87.5	88.3
57.5°	72.5	72.9	73.9	74.2	73.9	75.1	75.5	76.4	76.7	77.7	78.0
60°	63.6	64.4	64.9	64.9	65.2	65.7	66.6	66.6	67.4	68.2	68.2
62.5°	55.1	55.4	55.9	56.3	56.7	56.3	57.6	57.6	58.4	58.9	59.7
65°	46.9	47.4	47.4	47.8	47.8	48.2	48.2	48.6	49.1	49.9	50.4
67.5°	38.8	38.8	38.8	39.3	38.8	39.3	39.3	39.6	39.6	40.6	40.9
70°	31.6	31.1	30.8	30.8	30.8	30.8	30.3	30.8	30.8	31.1	31.1
72.5°	24.3	23.9	23.5	23.0	23.0	22.6	22.1	22.6	22.6	23.0	23.0
75°	18.3	17.5	17.5	17.5	17.1	17.1	17.1	17.5	17.5	17.5	18.0
77.5°	13.6	13.6	13.2	13.2	13.2	13.6	13.6	14.1	14.1	14.1	14.1
80°	10.3	10.7	10.7	10.7	10.7	11.1	11.1	11.1	11.1	11.5	11.5
82.5°	7.7	7.7	7.7	7.7	8.1	8.1	8.1	8.1	8.1	8.1	8.1
85°	4.7	5.1	5.1	4.7	5.1	5.1	5.1	5.1	5.1	5.1	5.1
87.5°	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
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°	300.3	300.3	300.3	300.3	300.3	300.3	300.3	300.3
2.5°	295.2	295.2	295.2	295.2	294.7	294.7	294.7	294.3
5°	288.8	288.8	288.8	287.9	288.4	288.4	287.5	287.9
7.5°	282.4	282.0	281.5	281.5	281.1	280.7	280.2	280.7
10°	275.2	273.9	273.9	273.4	273.4	272.6	272.6	273.0
12.5°	267.1	266.2	266.2	265.7	265.4	264.9	264.4	264.4
15°	258.9	258.1	257.6	257.2	256.8	255.9	256.4	255.9
17.5°	250.8	249.6	249.6	249.1	248.7	247.8	247.8	247.4
20°	241.4	241.0	240.1	240.6	240.1	239.3	238.9	238.9
22.5°	232.1	232.1	231.6	231.6	231.1	230.8	230.3	230.3
25°	223.1	222.6	223.1	223.1	221.8	221.8	221.8	222.3
27.5°	212.8	213.3	212.8	212.8	212.8	212.8	213.3	212.8
30°	202.7	202.7	202.7	203.0	203.8	203.5	203.5	203.0
32.5°	191.5	192.0	192.0	192.4	192.8	193.7	193.7	194.0
35°	180.4	181.3	181.7	181.3	182.5	182.5	183.4	183.4
37.5°	168.9	169.4	170.2	170.6	171.5	171.9	172.4	172.4
40°	156.6	158.2	158.7	159.1	160.4	160.4	160.8	161.7
42.5°	145.1	146.8	147.1	147.6	148.4	149.7	149.3	150.1
45°	133.9	135.3	135.6	136.1	137.3	137.8	137.8	139.1
47.5°	122.0	122.8	123.3	124.1	125.0	125.8	126.6	126.3
50°	110.0	111.3	112.2	112.6	113.8	114.3	114.8	115.2
52.5°	99.4	100.2	100.7	101.1	102.3	102.8	103.2	104.1
55°	89.2	89.5	90.4	90.0	91.3	91.7	92.2	93.0
57.5°	78.9	79.4	79.7	79.7	80.7	81.5	81.9	82.4
60°	69.1	69.9	70.4	70.4	70.4	71.2	71.2	71.2
62.5°	60.1	60.1	60.6	60.6	61.4	61.4	61.4	61.4
65°	50.8	51.2	51.6	51.6	52.4	52.1	52.9	52.4
67.5°	40.9	40.9	41.8	41.8	41.4	41.8	41.8	41.8
70°	31.1	31.1	31.6	31.6	31.6	31.6	31.6	31.6
72.5°	23.0	23.0	23.0	23.5	23.0	23.0	23.5	23.0
75°	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
77.5°	14.1	14.1	14.5	14.5	14.5	14.5	14.5	14.5
80°	11.5	11.5	11.5	11.5	12.0	11.5	11.5	11.5
82.5°	8.5	8.1	8.5	8.1	8.5	8.5	8.5	8.5
85°	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
87.5°	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
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)