

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: P583583

Luminaire Tested: **HC807D010-HM80520830-81RWWC**

Issue Date: 10/21/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P583583  
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: HC807D010-HM80520830-81RWWC  
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, SPECULAR TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 886.4 lumens  
Efficiency: N/A  
Efficacy: 110.8 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

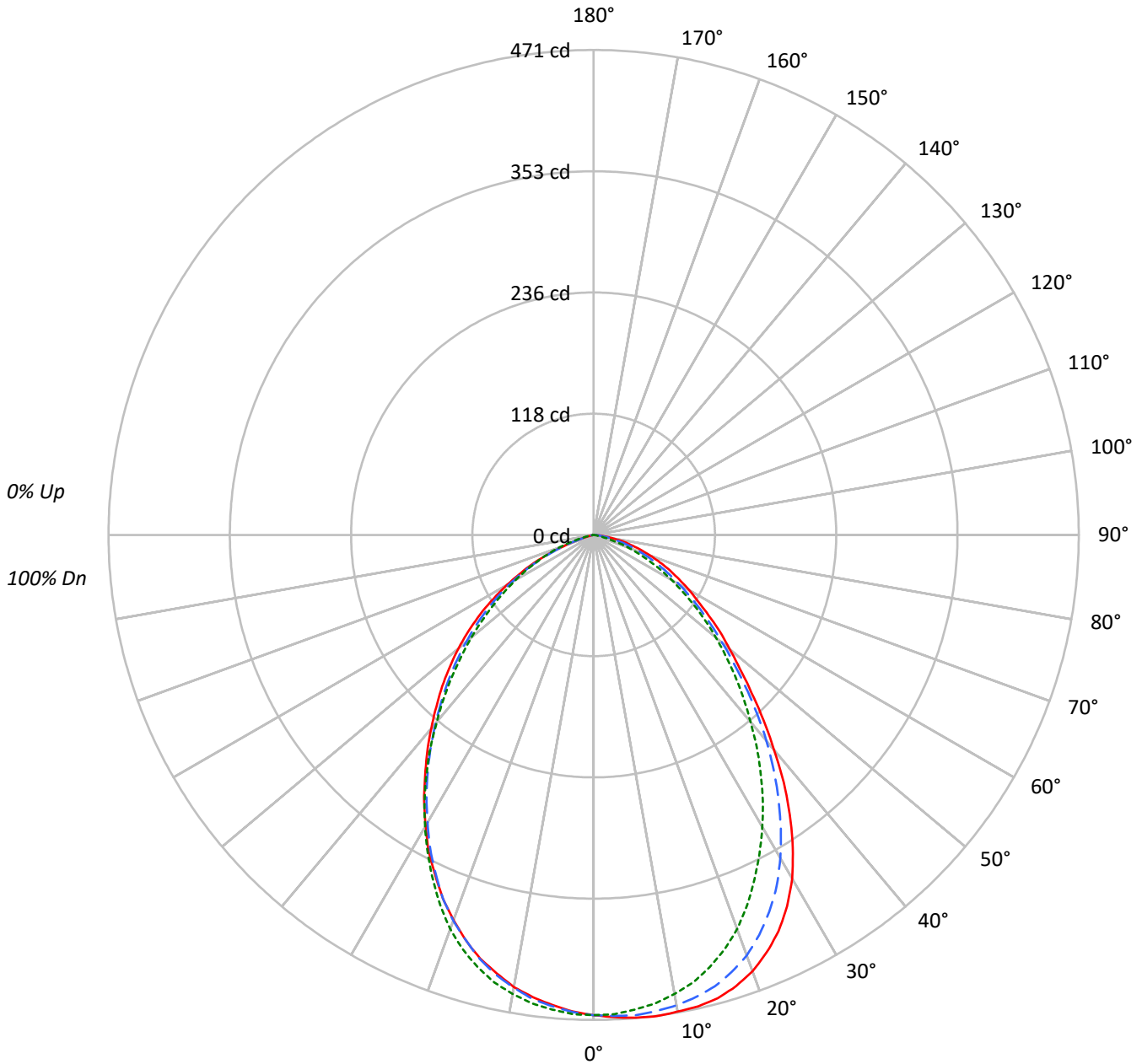
Input Watts (W): 8  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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

RF	20				20				20				20				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			100
1	111	107	104	101	108	105	102	99	101	98	96	97	95	93	93	92	90	88			88
2	103	96	90	85	100	94	89	84	91	86	82	87	84	81	85	82	79	77			77
3	95	86	79	73	93	84	78	73	82	76	72	79	74	70	76	73	69	67			67
4	88	77	70	64	86	76	69	64	74	68	63	72	66	62	69	65	61	59			59
5	81	70	62	56	80	69	62	56	67	61	56	65	59	55	63	58	54	52			52
6	76	64	56	50	74	63	55	50	61	55	50	60	54	49	58	53	49	47			47
7	71	59	51	45	69	58	50	45	56	50	45	55	49	44	54	48	44	42			42
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38			38
9	62	50	42	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35			35
10	58	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32			32

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

	0°	90°	180°
0°	14382	14382	14382
5°	14570	14322	14186
10°	14720	14175	13962
15°	14870	13874	13596
20°	14796	13366	13057
25°	14450	12565	12392
30°	13723	11661	11615
35°	12494	10642	10736
40°	10953	9524	9874
45°	9450	8473	9066
50°	8271	7436	8213
55°	7328	6392	7236
60°	6605	5378	5995
65°	5954	4320	4589
70°	5229	3147	2524
75°	4456	1632	667
80°	3445	444	107
85°	2194	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	44.0	5.0
10°-20°	123.7	14.0
20°-30°	175.6	19.8
30°-40°	184.8	20.9
40°-50°	157.2	17.7
50°-60°	113.6	12.8
60°-70°	64.6	7.3
70°-80°	20.4	2.3
80°-90°	2.5	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°	343.3	38.7
0°-40°	528.1	59.6
0°-60°	798.9	90.1
0°-90°	886.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	886.4	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	466	466	466	466	466	
5°	471	468	463	460	458	45
15°	466	454	435	426	426	131
25°	425	404	369	363	364	195
35°	332	313	283	281	285	207
45°	217	209	194	199	208	168
55°	136	126	119	126	135	123
65°	82	70	59	59	63	81
75°	37	29	14	6	6	40
85°	6	4	0	0	0	8
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°	466.4	466.4	466.4	466.4	466.4	466.4	466.4	466.4	466.4	466.4	466.4
2.5°	468.9	469.5	468.2	468.2	469.5	468.2	468.9	468.9	468.2	468.2	467.6
5°	470.7	470.1	470.1	470.1	470.7	469.5	468.9	469.5	468.2	468.2	468.2
7.5°	471.4	471.4	470.7	470.1	470.1	470.1	469.5	468.9	468.2	467.0	466.4
10°	470.1	470.1	470.7	469.5	469.5	468.2	468.2	467.0	467.0	465.8	463.9
12.5°	468.9	468.2	468.2	467.0	467.0	465.8	465.8	463.9	463.3	461.4	459.6
15°	465.8	465.1	463.9	463.3	462.7	462.0	460.8	460.2	458.3	455.8	454.0
17.5°	459.6	458.9	458.3	457.1	455.8	455.2	454.6	452.7	450.2	448.4	445.3
20°	450.9	450.2	450.2	448.4	447.8	445.9	445.3	442.7	440.8	437.1	434.6
22.5°	439.0	439.6	438.3	437.1	435.9	434.0	432.7	430.3	427.2	423.4	420.3
25°	424.7	425.3	424.0	422.8	420.9	419.7	418.5	414.7	411.6	407.3	403.6
27.5°	406.7	406.7	406.7	405.3	402.2	401.6	400.3	396.6	392.3	388.5	384.8
30°	385.4	384.8	384.8	383.0	381.7	379.2	377.4	374.3	371.2	366.7	362.4
32.5°	359.9	360.5	358.6	357.4	355.5	355.5	353.0	350.6	346.8	342.5	338.1
35°	331.9	332.6	331.3	330.7	327.5	327.0	326.2	323.1	320.7	317.5	312.6
37.5°	303.3	302.6	302.0	302.0	300.2	298.9	297.7	295.8	292.1	289.5	287.0
40°	272.1	272.1	272.1	271.5	270.9	269.6	269.0	267.8	265.3	262.8	260.9
42.5°	244.1	244.1	243.4	242.8	241.6	242.2	241.0	239.7	237.2	235.4	234.1
45°	216.7	216.7	216.7	217.4	216.1	214.1	214.1	212.9	211.8	210.4	208.6
47.5°	192.4	194.3	193.0	192.4	193.0	190.5	190.5	189.3	188.1	186.8	184.3
50°	172.4	172.4	172.4	171.2	170.6	170.6	168.7	167.5	166.8	165.6	163.1
52.5°	154.4	153.2	153.2	152.6	151.9	150.7	150.7	149.5	147.0	145.7	143.9
55°	136.3	136.3	135.8	135.2	134.6	133.8	133.2	131.3	130.1	128.2	126.4
57.5°	120.2	121.4	120.8	119.5	118.3	118.3	117.1	115.8	114.0	112.1	110.2
60°	107.1	106.5	106.5	105.9	104.6	104.0	103.4	101.5	99.7	97.8	95.8
62.5°	93.4	93.4	93.4	92.1	90.9	90.3	89.6	88.4	85.9	84.0	82.8
65°	81.6	80.9	80.3	79.7	79.1	77.8	77.2	76.0	74.1	72.2	70.4
67.5°	69.8	69.1	69.1	68.5	66.7	66.0	66.0	64.2	62.3	60.3	58.6
70°	58.0	58.0	58.0	56.6	56.0	55.4	54.9	53.5	51.6	49.8	47.9
72.5°	47.9	47.3	47.3	46.7	44.8	44.2	43.6	42.3	40.5	39.2	38.0
75°	37.4	37.4	36.7	36.1	35.5	34.9	34.3	33.0	31.2	29.3	28.7
77.5°	28.7	28.0	28.0	27.4	26.2	25.6	25.6	24.3	22.5	21.2	20.0
80°	19.4	20.0	19.4	18.6	18.0	17.4	16.8	16.1	14.9	13.7	12.4
82.5°	11.8	12.4	11.8	11.8	11.2	10.6	10.6	9.3	8.7	8.1	7.5
85°	6.2	6.2	6.2	6.2	5.6	5.6	5.6	5.0	4.3	3.7	3.7
87.5°	1.9	2.5	1.9	1.9	1.9	1.9	1.9	1.9	1.2	1.2	1.2
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°	466.4	466.4	466.4	466.4	466.4	466.4	466.4	466.4	466.4	466.4	466.4
2.5°	468.2	467.6	467.0	467.0	467.0	467.0	467.0	466.4	465.8	465.8	465.8
5°	467.0	467.0	467.0	466.4	465.8	465.8	464.5	463.9	463.3	462.7	462.0
7.5°	465.8	464.5	463.9	463.3	462.7	462.7	461.4	460.2	460.2	458.9	457.7
10°	462.0	461.4	460.2	458.9	458.3	457.7	456.4	454.6	454.0	452.7	451.5
12.5°	457.7	456.4	455.2	452.7	452.1	451.5	449.0	447.0	445.9	445.3	442.2
15°	452.1	449.6	447.8	444.5	443.9	442.7	440.8	439.0	436.5	434.6	433.4
17.5°	442.2	439.6	436.5	433.4	432.1	432.1	429.0	426.5	423.4	422.2	419.7
20°	430.3	427.2	424.7	420.9	419.1	417.2	415.4	411.6	409.0	407.3	404.1
22.5°	416.6	412.2	409.0	405.3	402.2	400.3	397.2	394.1	391.0	389.2	386.7
25°	399.1	395.4	390.4	386.7	384.8	382.3	378.6	375.5	372.4	369.3	368.1
27.5°	379.9	374.9	370.5	366.1	364.2	362.4	358.0	354.3	351.8	348.7	347.5
30°	358.6	353.7	348.7	345.0	343.1	340.0	337.5	333.2	330.1	327.5	324.4
32.5°	334.4	330.7	326.2	320.7	319.4	316.9	313.2	311.3	307.6	305.7	303.3
35°	308.2	305.7	301.4	297.1	295.2	293.9	290.7	287.0	284.5	282.7	281.4
37.5°	283.3	280.2	275.8	272.7	271.5	269.6	265.9	264.0	261.6	260.3	257.8
40°	256.6	253.5	250.4	248.4	246.5	245.3	242.8	241.0	238.5	236.6	236.0
42.5°	230.4	228.5	226.0	223.6	222.9	221.1	219.8	218.0	216.1	215.5	213.5
45°	206.7	204.8	202.3	199.9	199.2	198.0	197.4	195.5	194.3	194.3	194.3
47.5°	183.1	181.2	178.7	177.5	178.1	175.5	175.5	174.9	173.8	173.8	174.4
50°	161.9	159.4	158.8	157.5	156.3	155.0	155.7	153.8	153.8	155.0	154.4
52.5°	142.0	139.5	138.9	137.7	136.9	136.9	136.3	136.3	135.8	136.3	136.3
55°	123.9	122.0	120.8	119.5	118.9	118.9	118.9	118.3	117.7	118.9	119.5
57.5°	107.7	107.1	105.9	104.0	103.4	102.8	102.2	102.2	102.2	102.2	102.8
60°	93.4	92.1	90.9	89.0	89.0	88.4	87.8	87.2	87.2	87.2	87.2
62.5°	80.9	79.1	77.2	76.0	75.3	74.7	74.1	72.9	72.9	72.9	72.9
65°	68.5	66.7	65.4	64.2	62.9	62.9	61.7	61.1	59.8	59.2	58.0
67.5°	56.6	55.4	54.1	52.3	51.6	51.0	49.8	49.2	47.3	46.7	46.1
70°	46.1	44.2	43.0	41.7	41.1	39.8	38.6	37.4	36.1	34.9	33.6
72.5°	36.1	34.3	33.0	31.8	30.5	30.5	28.7	27.4	25.6	24.3	22.5
75°	26.8	24.9	23.7	21.7	21.2	20.6	18.6	17.4	15.5	13.7	12.4
77.5°	18.0	16.8	15.5	13.7	12.4	12.4	10.6	9.3	8.1	6.2	5.6
80°	11.2	9.9	8.7	7.5	7.5	6.2	5.6	4.3	3.1	2.5	1.9
82.5°	6.2	5.6	5.0	3.7	3.7	3.1	2.5	1.9	1.2	0.6	0.6
85°	3.1	2.5	1.9	1.9	1.2	1.2	1.2	0.6	0.6	0.0	0.0
87.5°	1.2	0.6	0.6	0.6	0.6	0.6	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°	466.4	466.4	466.4	466.4	466.4	466.4	466.4	466.4	466.4	466.4	466.4
2.5°	465.1	465.1	464.5	464.5	464.5	463.9	464.5	463.9	463.9	463.9	464.5
5°	462.7	461.4	461.4	460.8	460.8	460.2	460.8	460.2	459.6	458.9	459.6
7.5°	457.7	456.4	455.8	455.2	455.2	455.2	454.6	454.0	454.6	452.7	454.0
10°	450.9	450.2	449.0	448.4	447.8	448.4	447.8	446.5	446.5	446.5	445.9
12.5°	442.2	440.8	440.2	439.6	438.3	438.3	439.0	437.7	437.7	436.5	436.5
15°	431.5	430.3	429.0	429.0	427.8	427.8	427.2	427.2	426.5	425.9	425.9
17.5°	418.5	416.6	415.4	416.0	415.4	414.7	414.7	413.5	412.9	413.5	413.5
20°	402.8	401.6	400.3	401.0	399.7	399.1	399.7	397.9	398.5	398.5	398.5
22.5°	385.4	384.8	383.0	383.0	381.7	381.1	381.7	381.7	382.3	381.7	381.7
25°	366.1	364.8	363.6	363.6	363.0	362.4	363.0	363.6	363.0	363.6	363.6
27.5°	345.6	343.7	343.7	342.5	342.5	343.1	342.5	343.1	343.7	343.7	345.0
30°	323.1	322.5	321.9	321.3	321.3	321.9	321.9	321.9	322.5	323.8	323.8
32.5°	302.0	300.8	299.5	299.5	300.8	300.2	300.8	300.8	302.0	302.0	303.3
35°	278.9	278.9	277.7	278.3	278.3	278.3	278.3	279.6	280.8	281.4	282.7
37.5°	257.8	256.0	256.6	256.6	257.2	256.6	258.4	258.4	259.7	259.7	260.9
40°	234.7	234.7	235.4	234.7	235.4	235.4	236.6	237.8	238.5	239.7	240.3
42.5°	212.9	214.1	212.9	213.5	214.1	214.9	215.5	216.1	218.6	219.8	221.7
45°	193.0	193.7	194.3	194.9	194.3	195.5	196.1	197.4	199.2	199.9	200.5
47.5°	173.8	174.4	174.9	175.5	175.5	176.9	177.5	178.7	180.0	180.6	181.2
50°	155.0	156.3	156.9	156.9	157.5	158.8	160.0	160.0	161.3	163.1	163.7
52.5°	138.3	138.3	139.5	140.1	140.8	140.8	142.6	143.2	143.9	145.1	146.4
55°	119.5	121.4	122.0	122.0	123.3	124.5	125.1	125.8	125.8	128.2	128.2
57.5°	103.4	104.0	105.3	105.3	105.3	107.1	107.1	108.4	109.0	109.6	110.9
60°	87.2	88.4	88.4	89.0	88.4	89.6	90.3	91.5	92.1	92.7	93.4
62.5°	72.2	72.2	72.9	72.9	72.9	72.9	74.1	74.1	75.3	76.0	76.6
65°	58.0	58.0	58.0	58.0	58.0	58.0	58.0	58.0	58.6	58.6	59.8
67.5°	44.8	44.2	43.0	43.6	43.0	43.0	42.3	42.3	43.0	43.0	44.2
70°	32.4	31.8	30.5	30.5	29.9	29.3	28.7	28.0	27.4	27.4	27.4
72.5°	21.2	20.0	18.0	17.4	17.4	16.1	14.9	14.3	14.3	14.3	14.3
75°	10.6	9.3	8.1	7.5	7.5	6.2	6.8	6.2	6.2	6.2	6.2
77.5°	4.3	3.1	2.5	2.5	2.5	1.9	1.9	1.9	1.9	1.9	1.9
80°	1.2	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
82.5°	0.6	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°	466.4	466.4	466.4	466.4	466.4	466.4	466.4	466.4
2.5°	463.9	463.9	462.7	463.3	463.3	463.3	463.3	463.3
5°	458.3	458.9	458.3	458.9	458.9	458.3	458.3	458.3
7.5°	452.7	453.3	452.7	453.3	453.3	453.3	452.7	452.7
10°	445.9	445.9	445.9	445.9	445.9	445.3	445.9	445.9
12.5°	436.5	436.5	436.5	437.1	437.1	436.5	436.5	435.9
15°	426.5	425.3	425.9	426.5	425.9	425.9	425.9	425.9
17.5°	412.9	413.5	412.9	412.9	412.9	412.9	413.5	412.9
20°	398.5	398.5	399.1	398.5	398.5	398.5	398.5	397.9
22.5°	382.3	381.7	381.7	382.3	382.3	381.7	382.3	382.3
25°	364.2	364.8	364.2	364.2	364.8	364.8	364.8	364.2
27.5°	345.0	345.6	346.2	345.6	345.6	345.6	346.2	346.8
30°	325.0	326.2	325.0	325.0	326.2	325.6	326.2	326.2
32.5°	303.9	305.7	304.5	305.7	305.7	306.4	305.7	306.4
35°	282.7	284.5	284.5	284.5	285.2	285.8	285.8	285.2
37.5°	262.8	263.4	263.4	264.7	265.3	265.9	265.9	265.3
40°	242.2	243.4	244.1	244.1	244.1	245.3	246.5	245.3
42.5°	222.3	222.9	223.6	223.6	224.8	225.4	226.0	226.0
45°	203.0	204.2	204.8	205.5	206.1	207.3	206.7	207.9
47.5°	183.1	185.0	185.6	186.2	187.4	188.1	188.7	189.3
50°	165.0	166.2	166.2	167.5	169.3	169.3	170.6	171.2
52.5°	147.0	147.6	148.2	148.8	150.1	151.3	151.3	152.6
55°	129.5	130.1	130.1	130.7	131.3	133.8	134.6	134.6
57.5°	111.5	111.5	112.7	113.3	114.0	115.2	115.2	115.2
60°	94.0	94.6	94.6	95.2	95.8	97.2	97.8	97.2
62.5°	76.6	77.2	77.2	77.8	79.1	79.7	79.1	79.1
65°	60.3	61.1	61.1	61.7	62.9	62.9	62.3	62.9
67.5°	44.2	44.2	44.2	44.2	44.2	44.2	44.2	44.2
70°	28.0	27.4	26.8	27.4	27.4	27.4	26.8	28.0
72.5°	13.7	14.3	14.3	14.3	14.3	14.3	14.3	13.7
75°	6.2	6.2	5.6	5.6	5.6	6.2	6.2	5.6
77.5°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
80°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
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)