

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: P583685

Luminaire Tested: **HC807D010-HM80520940-81RWWC**

Issue Date: 10/21/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P583685  
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-HM80520940-81RWWC  
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, SPECULAR TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 871.4 lumens  
Efficiency: N/A  
Efficacy: 108.9 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

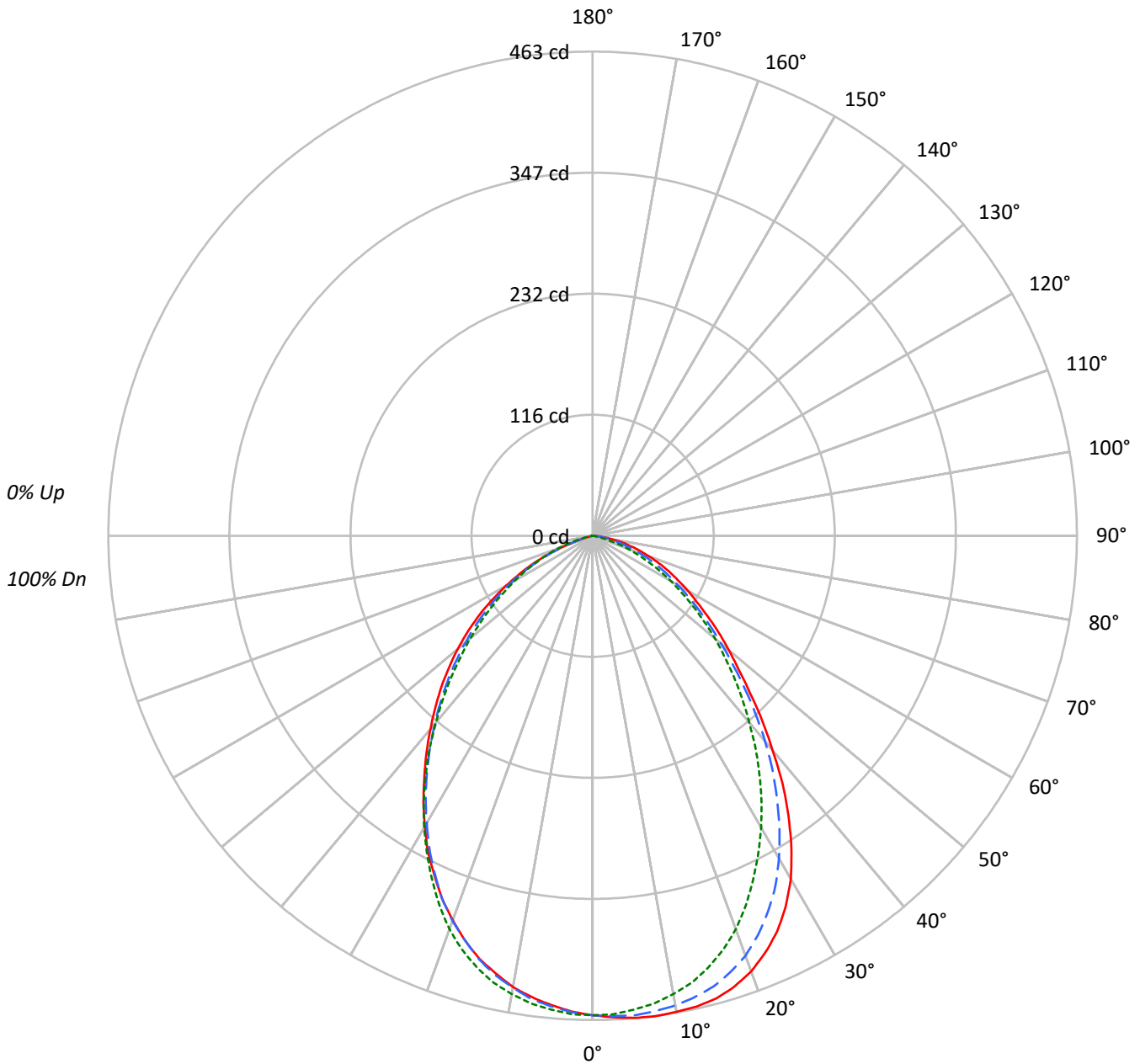
Input Watts (W): 8  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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			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	84	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°	14138	14138	14138
5°	14326	14078	13945
10°	14472	13934	13724
15°	14618	13641	13367
20°	14544	13136	12834
25°	14205	12351	12184
30°	13491	11469	11419
35°	12280	10465	10552
40°	10772	9367	9709
45°	9293	8329	8918
50°	8136	7316	8079
55°	7209	6285	7113
60°	6494	5285	5890
65°	5852	4247	4509
70°	5130	3092	2488
75°	4373	1608	655
80°	3374	426	107
85°	2158	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	43.3	5.0
10°-20°	121.6	14.0
20°-30°	172.6	19.8
30°-40°	181.7	20.8
40°-50°	154.6	17.7
50°-60°	111.7	12.8
60°-70°	63.5	7.3
70°-80°	20.0	2.3
80°-90°	2.4	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°	337.5	38.7
0°-40°	519.2	59.6
0°-60°	785.5	90.1
0°-90°	871.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	871.4	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	458	458	458	458	458	
5°	463	460	455	452	450	44
15°	458	446	427	419	419	129
25°	418	397	363	357	358	191
35°	326	307	278	276	280	203
45°	213	205	191	196	204	166
55°	134	124	117	124	132	121
65°	80	69	58	58	62	80
75°	37	28	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°	458.5	458.5	458.5	458.5	458.5	458.5	458.5	458.5	458.5	458.5	458.5
2.5°	460.9	461.6	460.3	460.3	461.6	460.3	460.9	460.9	460.3	460.3	459.7
5°	462.8	462.2	462.2	462.2	462.8	461.6	460.9	461.6	460.3	460.3	460.3
7.5°	463.4	463.4	462.8	462.2	462.2	462.2	461.6	460.9	460.3	459.1	458.5
10°	462.2	462.2	462.8	461.6	461.6	460.3	460.3	459.1	459.1	457.9	456.0
12.5°	460.9	460.3	460.3	459.1	459.1	457.9	457.9	456.0	455.4	453.6	451.8
15°	457.9	457.3	456.0	455.4	454.8	454.2	453.0	452.4	450.5	448.1	446.2
17.5°	451.8	451.1	450.5	449.3	448.1	447.5	446.9	445.0	442.6	440.7	437.7
20°	443.2	442.6	442.6	440.7	440.1	438.3	437.7	435.2	433.4	429.7	427.3
22.5°	431.5	432.2	430.9	429.7	428.5	426.7	425.4	423.0	419.9	416.2	413.2
25°	417.5	418.1	416.9	415.6	413.8	412.6	411.3	407.7	404.6	400.3	396.7
27.5°	399.7	399.7	399.7	398.5	395.4	394.8	393.6	389.9	385.6	382.0	378.3
30°	378.9	378.3	378.3	376.4	375.2	372.8	370.9	367.9	364.8	360.5	356.2
32.5°	353.8	354.4	352.6	351.3	349.5	349.5	347.1	344.6	340.9	336.6	332.4
35°	326.2	327.0	325.6	325.0	322.1	321.3	320.7	317.8	315.2	312.3	307.4
37.5°	298.2	297.6	297.0	297.0	295.0	293.9	292.7	290.7	287.2	284.6	282.3
40°	267.6	267.6	267.6	266.8	266.2	265.1	264.5	263.3	260.7	258.4	256.4
42.5°	240.0	240.0	239.4	238.8	237.6	238.2	236.8	235.7	233.3	231.4	230.2
45°	213.1	213.1	213.1	213.7	212.5	210.6	210.6	209.4	208.2	206.9	205.1
47.5°	189.2	191.0	189.8	189.2	189.8	187.4	187.4	186.1	184.9	183.7	181.2
50°	169.6	169.6	169.6	168.4	167.8	167.8	165.9	164.7	164.1	162.9	160.4
52.5°	151.8	150.6	150.6	150.0	149.4	148.2	148.2	146.9	144.5	143.3	141.4
55°	134.1	134.1	133.5	132.9	132.3	131.6	131.0	129.2	128.0	126.1	124.3
57.5°	118.2	119.4	118.8	117.6	116.3	116.3	115.1	113.9	112.0	110.2	108.4
60°	105.3	104.7	104.7	104.1	102.9	102.2	101.6	99.8	98.0	96.1	94.3
62.5°	91.8	91.8	91.8	90.6	89.4	88.8	88.2	86.9	84.5	82.7	81.4
65°	80.2	79.6	79.0	78.4	77.8	76.5	75.9	74.7	72.9	71.0	69.2
67.5°	68.6	68.0	68.0	67.3	65.5	64.9	64.9	63.1	61.2	59.4	57.6
70°	56.9	56.9	56.9	55.7	55.1	54.5	53.9	52.7	50.8	49.0	47.1
72.5°	47.1	46.5	46.5	45.9	44.1	43.5	42.9	41.6	39.8	38.6	37.3
75°	36.7	36.7	36.1	35.5	34.9	34.3	33.7	32.5	30.6	28.8	28.2
77.5°	28.2	27.6	27.6	26.9	25.7	25.1	25.1	23.9	22.0	20.8	19.6
80°	19.0	19.6	19.0	18.4	17.8	17.1	16.5	15.9	14.7	13.5	12.2
82.5°	11.6	12.2	11.6	11.6	11.0	10.4	10.4	9.2	8.6	8.0	7.3
85°	6.1	6.1	6.1	6.1	5.5	5.5	5.5	4.9	4.3	3.7	3.7
87.5°	1.8	2.4	1.8	1.8	1.8	1.8	1.8	1.8	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°	458.5	458.5	458.5	458.5	458.5	458.5	458.5	458.5	458.5	458.5	458.5
2.5°	460.3	459.7	459.1	459.1	459.1	459.1	459.1	458.5	457.9	457.9	457.9
5°	459.1	459.1	459.1	458.5	457.9	457.9	456.7	456.0	455.4	454.8	454.2
7.5°	457.9	456.7	456.0	455.4	454.8	454.8	453.6	452.4	452.4	451.1	449.9
10°	454.2	453.6	452.4	451.1	450.5	449.9	448.7	446.9	446.2	445.0	443.8
12.5°	449.9	448.7	447.5	445.0	444.4	443.8	441.3	439.5	438.3	437.7	434.6
15°	444.4	442.0	440.1	437.1	436.4	435.2	433.4	431.5	429.1	427.3	426.0
17.5°	434.6	432.2	429.1	426.0	424.8	424.8	421.8	419.3	416.2	415.0	412.6
20°	423.0	419.9	417.5	413.8	412.0	410.1	408.3	404.6	402.2	400.3	397.3
22.5°	409.5	405.2	402.2	398.5	395.4	393.6	390.5	387.5	384.4	382.6	380.1
25°	392.4	388.7	383.8	380.1	378.3	375.8	372.2	369.1	366.0	363.0	361.8
27.5°	373.4	368.5	364.2	359.9	358.1	356.2	352.0	348.3	345.8	342.8	341.5
30°	352.6	347.7	342.8	339.1	337.3	334.2	331.7	327.5	324.4	322.1	318.9
32.5°	328.7	325.0	320.7	315.2	314.0	311.5	308.0	306.0	302.5	300.5	298.2
35°	303.1	300.5	296.2	292.1	290.1	289.0	285.8	282.3	279.7	278.0	276.6
37.5°	278.6	275.4	271.1	268.2	266.8	265.1	261.3	259.6	257.2	255.8	253.5
40°	252.3	249.2	246.1	244.3	242.5	241.2	238.8	236.8	234.5	232.7	231.9
42.5°	226.5	224.7	222.3	219.8	219.2	217.4	216.1	214.3	212.5	211.8	210.0
45°	203.3	201.4	199.0	196.5	195.9	194.7	194.1	192.3	191.0	191.0	191.0
47.5°	180.0	178.2	175.7	174.5	175.1	172.7	172.7	172.0	170.8	170.8	171.4
50°	159.2	156.7	156.1	154.9	153.7	152.5	153.1	151.2	151.2	152.5	151.8
52.5°	139.6	137.1	136.5	135.3	134.7	134.7	134.1	134.1	133.5	134.1	134.1
55°	121.8	120.0	118.8	117.6	116.9	116.9	116.9	116.3	115.7	116.9	117.6
57.5°	105.9	105.3	104.1	102.2	101.6	101.0	100.4	100.4	100.4	100.4	101.0
60°	91.8	90.6	89.4	87.6	87.6	86.9	86.3	85.7	85.7	85.7	85.7
62.5°	79.6	77.8	75.9	74.7	74.1	73.5	72.9	71.6	71.6	71.6	71.6
65°	67.3	65.5	64.3	63.1	61.8	61.8	60.6	60.0	58.8	58.2	56.9
67.5°	55.7	54.5	53.3	51.4	50.8	50.2	49.0	48.4	46.5	45.9	45.3
70°	45.3	43.5	42.2	41.0	40.4	39.2	38.0	36.7	35.5	34.3	33.1
72.5°	35.5	33.7	32.5	31.2	30.0	30.0	28.2	26.9	25.1	23.9	22.0
75°	26.3	24.5	23.3	21.4	20.8	20.2	18.4	17.1	15.3	13.5	12.2
77.5°	17.8	16.5	15.3	13.5	12.2	12.2	10.4	9.2	8.0	6.1	5.5
80°	11.0	9.8	8.6	7.3	7.3	6.1	5.5	4.3	3.1	2.4	1.8
82.5°	6.1	5.5	4.9	3.7	3.7	3.1	2.4	1.8	1.2	0.6	0.6
85°	3.1	2.4	1.8	1.8	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°	458.5	458.5	458.5	458.5	458.5	458.5	458.5	458.5	458.5	458.5	458.5
2.5°	457.3	457.3	456.7	456.7	456.7	456.0	456.7	456.0	456.0	456.0	456.7
5°	454.8	453.6	453.6	453.0	453.0	452.4	453.0	452.4	451.8	451.1	451.8
7.5°	449.9	448.7	448.1	447.5	447.5	447.5	446.9	446.2	446.9	445.0	446.2
10°	443.2	442.6	441.3	440.7	440.1	440.7	440.1	438.9	438.9	438.9	438.3
12.5°	434.6	433.4	432.8	432.2	430.9	430.9	431.5	430.3	430.3	429.1	429.1
15°	424.2	423.0	421.8	421.8	420.5	420.5	419.9	419.9	419.3	418.7	418.7
17.5°	411.3	409.5	408.3	408.9	408.3	407.7	407.7	406.4	405.8	406.4	406.4
20°	396.0	394.8	393.6	394.2	393.0	392.4	393.0	391.1	391.8	391.8	391.8
22.5°	378.9	378.3	376.4	376.4	375.2	374.6	375.2	375.2	375.8	375.2	375.2
25°	359.9	358.7	357.5	357.5	356.9	356.2	356.9	357.5	356.9	357.5	357.5
27.5°	339.7	337.9	337.9	336.6	336.6	337.3	336.6	337.3	337.9	337.9	339.1
30°	317.8	317.2	316.4	315.8	315.8	316.4	316.4	316.4	317.2	318.3	318.3
32.5°	297.0	295.6	294.4	294.4	295.6	295.0	295.6	295.6	297.0	297.0	298.2
35°	274.3	274.3	273.1	273.7	273.7	273.7	273.7	274.8	276.0	276.6	278.0
37.5°	253.5	251.5	252.3	252.3	252.9	252.3	254.1	254.1	255.3	255.3	256.4
40°	230.8	230.8	231.4	230.8	231.4	231.4	232.7	233.9	234.5	235.7	236.3
42.5°	209.4	210.6	209.4	210.0	210.6	211.2	211.8	212.5	214.9	216.1	218.0
45°	189.8	190.4	191.0	191.6	191.0	192.3	192.9	194.1	195.9	196.5	197.2
47.5°	170.8	171.4	172.0	172.7	172.7	173.9	174.5	175.7	176.9	177.6	178.2
50°	152.5	153.7	154.3	154.3	154.9	156.1	157.4	157.4	158.6	160.4	161.0
52.5°	135.9	135.9	137.1	137.8	138.4	138.4	140.2	140.8	141.4	142.7	143.9
55°	117.6	119.4	120.0	120.0	121.2	122.5	123.1	123.7	123.7	126.1	126.1
57.5°	101.6	102.2	103.5	103.5	103.5	105.3	105.3	106.5	107.1	107.8	109.0
60°	85.7	86.9	86.9	87.6	86.9	88.2	88.8	90.0	90.6	91.2	91.8
62.5°	71.0	71.0	71.6	71.6	71.6	71.6	72.9	72.9	74.1	74.7	75.3
65°	56.9	56.9	56.9	56.9	56.9	56.9	56.9	56.9	57.6	57.6	58.8
67.5°	44.1	43.5	42.2	42.9	42.2	42.2	41.6	41.6	42.2	42.2	43.5
70°	31.8	31.2	30.0	30.0	29.4	28.8	28.2	27.6	26.9	26.9	26.9
72.5°	20.8	19.6	17.8	17.1	17.1	15.9	14.7	14.1	14.1	14.1	14.1
75°	10.4	9.2	8.0	7.3	7.3	6.1	6.7	6.1	6.1	6.1	6.1
77.5°	4.3	3.1	2.4	2.4	2.4	1.8	1.8	1.8	1.8	1.8	1.8
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°	458.5	458.5	458.5	458.5	458.5	458.5	458.5	458.5
2.5°	456.0	456.0	454.8	455.4	455.4	455.4	455.4	455.4
5°	450.5	451.1	450.5	451.1	451.1	450.5	450.5	450.5
7.5°	445.0	445.6	445.0	445.6	445.6	445.6	445.0	445.0
10°	438.3	438.3	438.3	438.3	438.3	437.7	438.3	438.3
12.5°	429.1	429.1	429.1	429.7	429.7	429.1	429.1	428.5
15°	419.3	418.1	418.7	419.3	418.7	418.7	418.7	418.7
17.5°	405.8	406.4	405.8	405.8	405.8	405.8	406.4	405.8
20°	391.8	391.8	392.4	391.8	391.8	391.8	391.8	391.1
22.5°	375.8	375.2	375.2	375.8	375.8	375.2	375.8	375.8
25°	358.1	358.7	358.1	358.1	358.7	358.7	358.7	358.1
27.5°	339.1	339.7	340.3	339.7	339.7	339.7	340.3	340.9
30°	319.5	320.7	319.5	319.5	320.7	320.1	320.7	320.7
32.5°	298.8	300.5	299.3	300.5	300.5	301.1	300.5	301.1
35°	278.0	279.7	279.7	279.7	280.3	280.9	280.9	280.3
37.5°	258.4	259.0	259.0	260.2	260.7	261.3	261.3	260.7
40°	238.2	239.4	240.0	240.0	240.0	241.2	242.5	241.2
42.5°	218.6	219.2	219.8	219.8	221.0	221.6	222.3	222.3
45°	199.6	200.8	201.4	202.0	202.7	203.9	203.3	204.5
47.5°	180.0	181.8	182.5	183.1	184.3	184.9	185.5	186.1
50°	162.3	163.5	163.5	164.7	166.5	166.5	167.8	168.4
52.5°	144.5	145.1	145.7	146.3	147.6	148.8	148.8	150.0
55°	127.4	128.0	128.0	128.6	129.2	131.6	132.3	132.3
57.5°	109.6	109.6	110.8	111.4	112.0	113.3	113.3	113.3
60°	92.5	93.1	93.1	93.7	94.3	95.5	96.1	95.5
62.5°	75.3	75.9	75.9	76.5	77.8	78.4	77.8	77.8
65°	59.4	60.0	60.0	60.6	61.8	61.8	61.2	61.8
67.5°	43.5	43.5	43.5	43.5	43.5	43.5	43.5	43.5
70°	27.6	26.9	26.3	26.9	26.9	26.9	26.3	27.6
72.5°	13.5	14.1	14.1	14.1	14.1	14.1	14.1	13.5
75°	6.1	6.1	5.5	5.5	5.5	6.1	6.1	5.5
77.5°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
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)