

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: P583607

Luminaire Tested: **HC807D010-HM80520835-81WWBB**

Issue Date: 10/21/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P583607  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2109-368-17)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 10/21/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC807D010-HM80520835-81WWBB  
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, WHITE BAFFLE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 806.9 lumens  
Efficiency: N/A  
Efficacy: 100.9 lumens/watt  
Spacing Criteria (0/90/45): 1.15 / 1.07 / 1.16  
Luminous Opening: Circular (Dia: 0.67' x H: 0')  
CIE Type: Direct

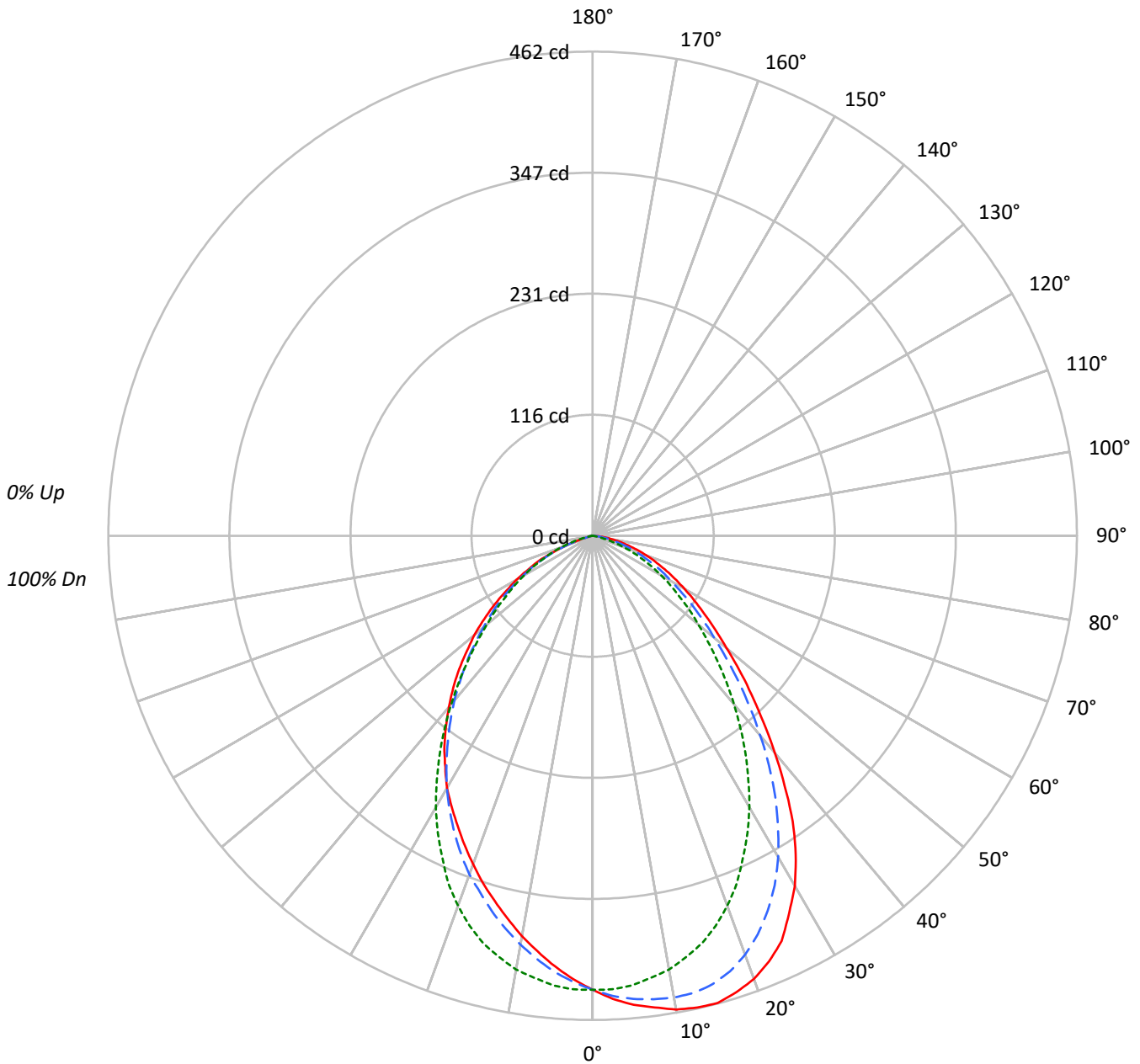
Input Watts (W): 8  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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

RF	20									20									20									20									
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	86	100	94	89	85	91	86	83	88	84	81	85	82	79	77																			
3	95	86	79	74	93	85	78	73	82	76	72	79	74	71	77	73	69	67																			
4	88	78	70	64	86	76	69	64	74	68	63	72	66	62	70	65	61	59																			
5	82	70	63	57	80	69	62	56	67	61	56	65	60	55	64	59	55	53																			
6	76	64	56	51	74	63	56	50	62	55	50	60	54	50	58	53	49	47																			
7	71	59	51	45	69	58	51	45	57	50	45	55	49	45	54	49	44	43																			
8	66	54	46	41	65	53	46	41	52	46	41	51	45	41	50	44	40	39																			
9	62	50	43	37	61	50	42	37	48	42	37	47	41	37	46	41	37	35																			
10	59	47	39	34	57	46	39	34	45	39	34	44	38	34	43	38	34	32																			

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

	0°	90°	180°
0°	13358	13358	13358
5°	13908	13329	12769
10°	14375	13160	12146
15°	14736	12856	11515
20°	14767	12325	10941
25°	14518	11544	10377
30°	13741	10650	9892
35°	12528	9577	9283
40°	10897	8445	8578
45°	9345	7313	7850
50°	7987	6308	7052
55°	6994	5430	6129
60°	6229	4638	5150
65°	5531	3772	4108
70°	4905	2804	2335
75°	4087	1465	703
80°	3232	462	107
85°	2300	212	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	40.8	5.1
10°-20°	114.4	14.2
20°-30°	161.9	20.1
30°-40°	169.4	21.0
40°-50°	141.3	17.5
50°-60°	100.2	12.4
60°-70°	57.7	7.2
70°-80°	18.6	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°	317.1	39.3
0°-40°	486.6	60.3
0°-60°	728.1	90.2
0°-90°	806.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	806.9	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	433	433	433	433	433	
5°	449	444	431	418	412	43
15°	462	443	403	371	361	130
25°	427	395	339	312	305	195
35°	333	304	254	241	247	206
45°	214	197	168	170	180	166
55°	130	116	101	106	114	118
65°	76	64	52	52	56	76
75°	34	25	12	6	6	37
85°	6	3	1	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°	433.2	433.2	433.2	433.2	433.2	433.2	433.2	433.2	433.2	433.2	433.2
2.5°	442.3	441.6	441.0	441.6	441.0	441.6	441.0	441.0	440.4	439.6	439.6
5°	449.3	448.7	448.7	448.7	448.1	447.4	447.4	446.8	445.5	444.8	443.6
7.5°	453.9	454.6	454.6	454.6	453.3	453.3	451.9	450.6	449.3	448.1	446.1
10°	459.1	459.1	458.4	457.8	456.5	455.9	455.2	453.9	451.9	449.3	447.4
12.5°	461.0	461.0	460.3	459.1	458.4	457.8	457.1	455.2	452.5	449.3	446.8
15°	461.6	460.3	459.7	459.1	457.8	455.9	455.9	453.3	450.0	446.1	442.9
17.5°	456.5	457.1	455.9	454.6	452.5	451.4	449.3	447.4	443.6	439.0	435.8
20°	450.0	449.3	448.7	446.8	444.2	443.6	441.6	438.3	435.1	430.0	425.4
22.5°	439.6	439.0	437.7	436.4	433.8	432.6	430.6	426.7	422.2	416.9	411.8
25°	426.7	425.4	423.5	420.9	419.0	417.7	415.0	411.2	405.9	400.2	394.9
27.5°	405.9	408.0	406.7	402.7	400.8	398.2	397.6	392.4	387.9	382.0	376.2
30°	385.9	385.9	384.0	382.0	378.8	376.9	374.3	370.3	365.8	358.7	354.2
32.5°	360.7	360.1	357.4	356.8	354.2	350.3	349.7	344.5	340.0	334.7	329.0
35°	332.8	331.5	329.0	327.0	325.6	323.7	321.8	317.3	312.7	307.6	303.6
37.5°	301.1	301.1	300.4	297.2	295.9	294.6	292.7	288.1	285.6	280.3	276.5
40°	270.7	270.0	268.0	267.4	266.1	264.2	262.9	260.3	256.4	252.5	248.7
42.5°	240.9	241.5	238.9	239.6	237.0	235.7	235.1	231.1	229.2	225.4	222.2
45°	214.3	213.7	212.4	211.8	210.4	209.1	207.8	205.9	202.7	198.7	196.8
47.5°	189.8	187.7	187.7	187.1	186.5	183.9	183.2	181.3	179.4	175.4	172.9
50°	166.5	166.5	166.5	165.7	163.8	163.1	161.9	159.9	158.0	155.4	151.5
52.5°	147.6	147.6	147.6	147.0	144.4	143.8	143.0	140.5	137.9	136.0	133.4
55°	130.1	130.9	130.1	128.8	126.9	126.9	125.0	123.7	121.1	119.1	116.5
57.5°	115.2	115.2	114.0	113.3	112.0	111.4	110.1	108.7	105.5	103.6	100.4
60°	101.0	100.4	100.4	99.1	97.8	96.4	95.8	93.9	92.6	89.4	86.8
62.5°	88.1	88.1	86.8	86.8	84.1	84.1	83.5	81.6	79.6	76.4	75.2
65°	75.8	75.8	75.2	74.4	72.5	71.8	71.2	69.3	67.4	65.4	63.5
67.5°	64.8	64.8	63.5	62.9	61.5	60.8	59.5	58.3	56.3	54.4	52.5
70°	54.4	53.8	53.1	52.5	51.1	50.5	49.2	47.9	46.0	44.7	42.8
72.5°	44.0	44.0	43.4	42.1	41.5	40.7	40.2	38.8	36.9	35.0	33.7
75°	34.3	34.3	34.3	33.0	31.8	31.1	31.1	29.8	28.4	26.5	25.2
77.5°	26.5	25.9	25.2	25.2	23.9	23.3	22.7	22.0	20.1	19.5	18.2
80°	18.2	18.8	18.2	17.4	16.8	16.1	16.1	14.9	14.2	12.9	11.7
82.5°	12.3	11.7	11.7	11.0	11.0	10.4	10.4	9.1	8.4	7.8	7.2
85°	6.5	6.5	5.9	5.9	5.9	5.1	5.1	4.5	4.5	3.9	3.2
87.5°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.3	1.3	1.3
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°	433.2	433.2	433.2	433.2	433.2	433.2	433.2	433.2	433.2	433.2	433.2
2.5°	439.0	437.7	437.0	437.0	436.4	435.8	435.1	434.5	433.2	433.2	431.9
5°	442.3	441.0	440.4	438.3	437.0	437.0	434.5	433.8	431.9	430.6	429.2
7.5°	444.8	442.3	440.4	438.3	437.0	435.8	433.2	430.6	428.0	425.4	424.1
10°	444.8	442.3	439.0	435.8	434.5	433.2	430.0	426.0	422.8	420.3	416.9
12.5°	443.6	439.6	435.8	433.2	430.6	428.6	424.7	420.9	416.9	411.8	409.2
15°	439.6	434.5	430.6	426.0	424.1	420.9	417.7	411.8	407.3	402.7	399.5
17.5°	431.9	425.4	420.9	416.3	413.1	411.2	405.9	400.8	395.7	390.4	386.6
20°	420.3	414.4	409.2	403.4	400.8	398.2	391.7	386.6	381.3	375.6	371.6
22.5°	405.9	400.2	393.0	388.5	384.7	381.3	375.6	369.7	364.6	359.3	354.2
25°	388.5	382.6	376.2	369.1	366.5	363.3	356.8	351.0	345.1	339.3	334.7
27.5°	369.7	362.0	356.8	349.1	346.4	343.2	336.0	329.6	324.4	319.9	314.6
30°	347.0	341.3	334.1	327.0	324.4	321.2	315.4	309.5	304.4	299.1	294.0
32.5°	322.4	316.7	309.5	304.4	300.4	297.8	292.1	286.8	281.7	276.5	272.0
35°	296.6	290.0	284.9	279.7	276.5	273.3	267.4	262.9	259.0	254.4	250.0
37.5°	270.0	265.5	260.3	254.4	251.2	248.7	244.1	238.9	235.7	231.8	228.6
40°	244.1	238.9	234.3	229.2	226.6	224.7	220.1	216.3	213.1	209.8	207.8
42.5°	217.6	213.1	208.5	205.3	203.3	201.4	198.1	193.6	191.7	188.5	186.5
45°	193.0	189.0	185.8	181.3	180.0	178.7	174.8	171.6	169.7	167.7	166.5
47.5°	169.7	167.1	163.1	160.6	158.7	157.4	154.8	152.1	150.2	148.9	147.6
50°	149.6	146.4	143.8	141.1	139.8	137.9	135.3	134.1	132.8	131.5	131.5
52.5°	130.9	127.5	125.0	123.1	121.8	120.5	118.5	117.8	116.5	116.5	115.9
55°	113.3	111.4	108.7	106.2	105.5	104.9	103.6	102.3	101.7	101.0	101.7
57.5°	98.5	96.4	93.9	91.9	91.3	90.7	90.0	88.7	88.1	88.1	88.1
60°	84.8	82.9	80.9	79.0	79.0	77.7	77.1	76.4	75.8	75.2	75.2
62.5°	72.5	70.6	68.6	67.4	66.7	66.1	64.8	64.1	63.5	63.5	62.9
65°	61.5	58.9	58.3	56.3	55.7	55.1	54.4	53.1	52.5	51.7	51.1
67.5°	50.5	49.2	47.3	46.0	45.3	44.7	44.0	42.8	42.1	41.5	40.2
70°	40.7	39.6	38.2	36.9	36.2	35.6	34.3	33.0	32.4	31.1	29.2
72.5°	31.8	30.5	29.2	27.8	27.2	26.5	25.2	23.9	22.7	21.4	20.1
75°	23.9	22.7	20.7	19.5	18.8	18.8	16.8	15.5	14.2	12.3	11.0
77.5°	16.8	14.9	14.2	12.9	12.3	11.0	9.7	8.4	7.2	6.5	5.1
80°	11.0	9.7	8.4	7.8	7.2	6.5	5.9	4.5	3.2	2.6	1.9
82.5°	6.5	5.9	5.1	4.5	3.9	3.2	2.6	2.6	1.9	1.3	0.6
85°	3.2	2.6	1.9	1.9	1.3	1.3	1.3	0.6	0.6	0.6	0.6
87.5°	1.3	0.6	0.6	0.6	0.6	0.6	0.6	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°	433.2	433.2	433.2	433.2	433.2	433.2	433.2	433.2	433.2	433.2	433.2
2.5°	431.3	430.6	430.0	429.2	429.2	428.0	428.0	427.3	426.0	425.4	425.4
5°	427.3	425.4	424.1	423.5	422.8	420.9	420.3	419.0	417.7	416.3	415.7
7.5°	421.5	418.2	416.9	416.3	414.4	412.5	411.2	409.2	407.3	405.3	404.7
10°	414.4	411.2	408.0	406.7	404.7	403.4	400.8	398.2	396.3	394.4	392.4
12.5°	405.3	401.4	398.2	396.9	394.9	392.4	388.5	387.2	384.0	382.6	380.1
15°	394.9	390.4	387.2	385.3	383.4	379.4	376.9	374.3	371.0	369.7	367.1
17.5°	382.0	376.9	373.6	371.6	370.3	367.1	363.3	360.1	356.8	355.5	353.5
20°	366.5	363.3	358.7	356.8	355.5	351.6	347.7	346.4	343.8	341.3	339.3
22.5°	349.1	345.7	341.3	339.3	338.7	335.4	332.2	330.2	328.3	326.4	324.4
25°	330.9	327.0	323.1	321.8	320.5	317.9	315.4	314.0	312.1	310.8	309.5
27.5°	311.4	307.6	304.4	302.3	301.1	299.1	297.8	296.6	295.3	294.0	293.4
30°	290.7	286.8	284.3	283.0	281.7	281.1	279.0	278.4	277.8	276.5	277.1
32.5°	270.0	266.7	264.2	262.2	262.2	261.0	260.3	260.3	259.7	259.7	259.7
35°	247.4	245.5	243.4	242.8	242.1	241.5	240.9	241.5	240.9	241.5	242.1
37.5°	226.6	224.7	223.3	222.7	222.2	222.7	222.2	222.2	222.7	224.1	224.7
40°	205.3	204.0	202.7	203.3	202.7	202.7	202.7	204.6	205.3	205.9	206.5
42.5°	185.2	183.9	183.2	183.2	183.9	183.2	184.5	185.2	186.5	188.5	189.8
45°	165.7	165.1	165.1	165.7	165.1	166.5	166.5	167.7	169.7	170.9	172.2
47.5°	147.6	147.6	147.6	148.3	148.3	148.9	150.2	150.8	152.1	153.4	154.8
50°	130.9	131.5	132.0	132.0	132.0	133.4	134.7	135.3	136.0	136.6	138.6
52.5°	115.9	116.5	116.5	117.2	117.8	118.5	119.1	120.5	121.1	122.4	123.1
55°	101.7	101.7	103.0	103.6	103.6	103.6	104.9	104.9	106.2	106.8	108.1
57.5°	88.1	88.7	88.7	89.4	89.4	90.0	90.7	91.3	91.9	92.6	93.2
60°	75.2	75.2	75.2	75.8	76.4	77.1	76.4	77.7	77.7	79.0	79.6
62.5°	62.9	63.5	63.5	63.5	63.5	63.5	63.5	64.1	64.8	65.4	66.1
65°	51.1	51.1	51.1	50.5	51.1	50.5	51.1	51.7	51.7	52.5	53.1
67.5°	39.6	39.6	38.2	38.2	38.8	38.8	38.8	38.8	38.2	39.6	39.6
70°	28.4	27.8	27.2	26.5	26.5	25.9	25.9	25.2	25.2	25.2	25.2
72.5°	18.8	17.4	16.1	15.5	14.9	14.9	13.6	12.9	13.6	13.6	13.6
75°	9.7	8.4	7.8	7.2	6.5	6.5	5.9	5.9	5.9	5.9	5.9
77.5°	3.9	3.2	2.6	2.6	1.9	1.9	1.9	1.9	1.9	1.9	1.9
80°	1.3	1.3	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
82.5°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
85°	0.6	0.0	0.0	0.6	0.0	0.6	0.6	0.6	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°	433.2	433.2	433.2	433.2	433.2	433.2	433.2	433.2
2.5°	424.7	424.7	424.1	424.7	423.5	424.1	423.5	423.5
5°	415.0	413.7	413.7	413.7	413.1	413.1	412.5	412.5
7.5°	403.4	402.7	402.1	401.4	400.8	400.2	400.2	400.2
10°	391.7	390.4	390.4	389.8	388.5	387.9	387.9	387.9
12.5°	378.1	377.5	376.9	376.9	374.3	374.9	374.3	374.3
15°	365.2	364.6	364.6	362.6	361.2	361.2	361.2	360.7
17.5°	351.6	351.0	350.3	349.1	347.7	347.7	347.0	347.7
20°	337.3	336.8	335.4	335.4	334.7	334.1	332.8	333.4
22.5°	323.1	321.8	321.2	321.2	320.5	320.5	319.2	319.2
25°	308.2	307.6	306.9	307.6	306.3	306.3	305.0	305.0
27.5°	292.7	292.1	292.1	292.1	291.3	292.1	291.3	291.3
30°	277.1	277.1	276.5	276.5	277.1	276.5	277.1	277.8
32.5°	260.3	260.3	261.0	261.0	261.6	261.6	261.6	261.6
35°	242.8	244.1	244.1	244.7	245.5	246.1	246.1	246.6
37.5°	226.6	227.3	227.9	228.6	229.9	229.9	229.9	229.9
40°	209.1	209.8	211.0	210.4	213.1	213.7	213.1	213.1
42.5°	191.0	192.3	193.0	194.3	194.9	196.2	196.8	196.8
45°	174.2	174.8	176.1	177.5	178.1	180.0	180.0	180.0
47.5°	156.7	158.0	158.7	159.9	160.6	162.5	163.1	162.5
50°	139.8	141.1	142.4	142.4	144.4	145.1	146.4	147.0
52.5°	123.7	124.3	125.6	126.3	127.5	128.8	129.5	130.1
55°	108.1	108.7	110.1	110.1	112.0	112.7	114.0	114.0
57.5°	93.9	94.5	95.8	95.2	96.4	97.8	97.8	97.2
60°	80.3	80.3	80.3	81.6	82.2	82.9	83.5	83.5
62.5°	66.1	67.4	68.0	68.0	68.6	69.3	69.3	68.6
65°	53.1	54.4	55.1	55.1	55.7	55.7	55.7	56.3
67.5°	40.2	40.2	40.2	40.7	40.2	40.2	40.2	40.2
70°	25.2	25.2	25.2	25.2	24.6	25.2	25.2	25.9
72.5°	13.6	13.6	13.6	13.6	13.6	13.6	13.6	13.6
75°	5.9	5.9	5.9	6.5	5.9	5.9	5.9	5.9
77.5°	2.6	1.9	2.6	2.6	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°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
85°	0.0	0.6	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)