

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: P583693

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

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P583693
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2109-368-16)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 10/21/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HC807D010-HM80520940-81WWW
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, WHITE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 832.3 lumens
Efficiency: N/A
Efficacy: 104.0 lumens/watt
Spacing Criteria (0/90/45): 1.09 / 1.04 / 1.13
Luminous Opening: Circular (Dia: 0.67' x H: 0')
CIE Type: Direct

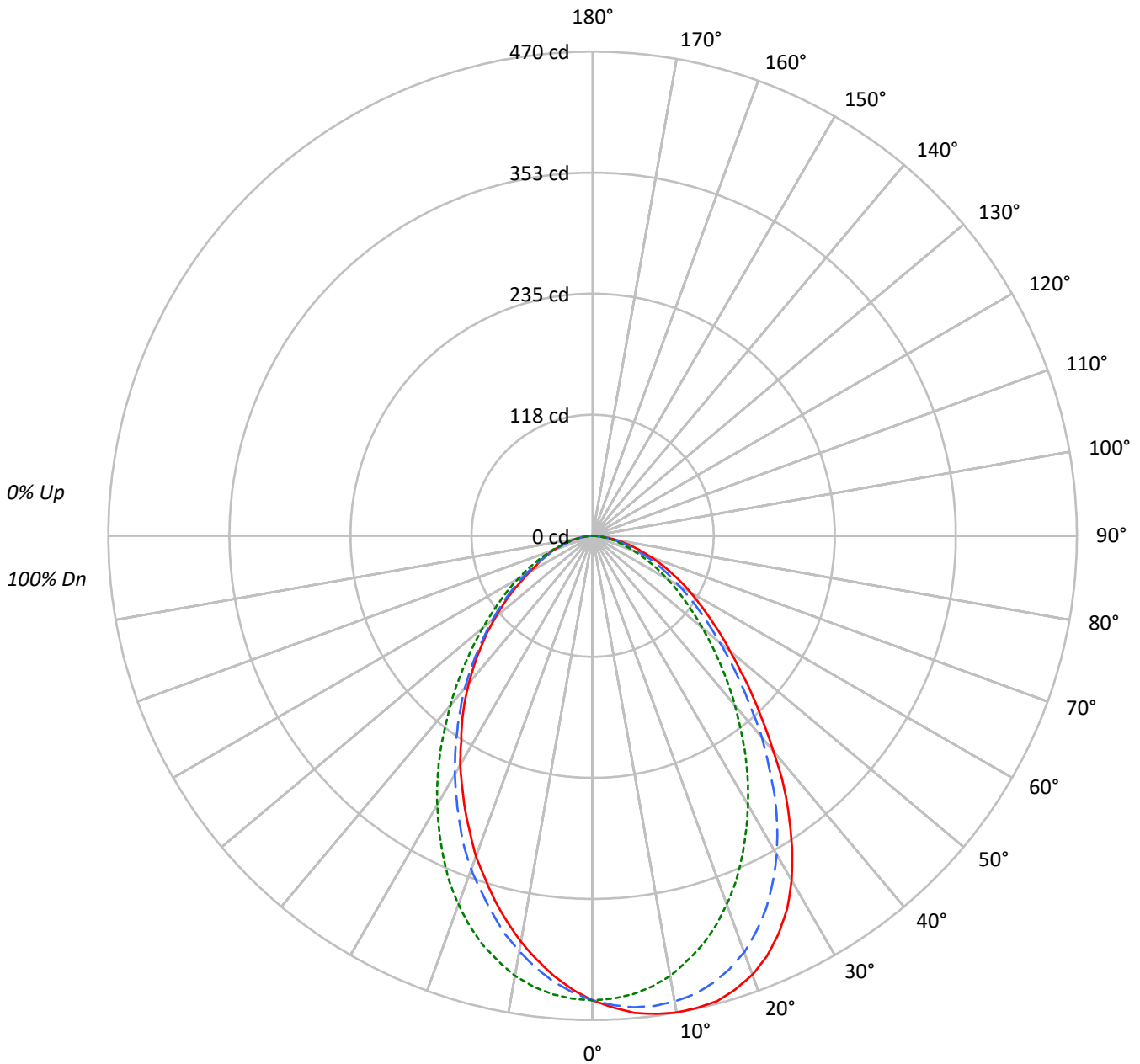
Input Watts (W): 8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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								
1	110	106	103	99	108	104	101	98	100	97	95	96	94	92	93	91	89	87								
2	102	95	89	84	99	93	88	83	90	85	81	86	83	79	83	80	78	76								
3	94	85	78	72	92	83	77	71	81	75	70	78	73	69	75	71	68	66								
4	87	76	69	63	85	75	68	62	73	67	62	71	65	61	68	64	60	58								
5	81	69	61	55	79	68	61	55	66	60	54	64	59	54	63	57	53	51								
6	75	63	55	49	73	62	55	49	61	54	49	59	53	48	57	52	48	46								
7	70	58	50	44	69	57	50	44	56	49	44	54	48	44	53	48	43	41								
8	66	53	46	40	64	53	45	40	51	45	40	50	44	40	49	44	39	38								
9	62	49	42	37	60	49	42	37	48	41	36	47	41	36	46	40	36	34								
10	58	46	39	34	57	45	38	34	44	38	33	44	38	33	43	37	33	32								

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	13907	13907	13907
5°	14394	13827	13276
10°	14714	13583	12531
15°	14925	13127	11700
20°	14878	12490	10862
25°	14511	11680	9972
30°	13748	10739	9151
35°	12505	9720	8312
40°	10985	8643	7515
45°	9577	7605	6698
50°	8338	6663	5901
55°	7435	5855	5134
60°	6759	5131	4379
65°	6071	4465	3977
70°	5410	3805	3588
75°	4742	3205	3062
80°	4013	2610	2717
85°	3043	1946	2158



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	42.2	5.1
10°-20°	116.4	14.0
20°-30°	161.5	19.4
30°-40°	167.0	20.1
40°-50°	139.9	16.8
50°-60°	101.5	12.2
60°-70°	64.1	7.7
70°-80°	31.7	3.8
80°-90°	7.9	0.9
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°	320.2	38.5
0°-40°	487.2	58.5
0°-60°	728.6	87.5
0°-90°	832.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	832.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	451	451	451	451	451	
5°	465	460	447	434	429	44
15°	468	450	411	378	366	132
25°	426	399	343	306	293	195
35°	332	308	258	229	221	207
45°	220	204	174	157	154	170
55°	138	126	109	100	96	125
65°	83	73	61	54	54	83
75°	40	33	27	26	26	43
85°	9	7	6	6	6	10
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°	451.0	451.0	451.0	451.0	451.0	451.0	451.0	451.0	451.0	451.0	451.0
2.5°	458.3	458.3	458.9	458.3	458.3	458.3	457.7	457.7	457.1	457.1	455.9
5°	465.0	463.8	465.0	463.8	463.8	463.8	463.2	462.0	461.4	460.2	459.5
7.5°	468.1	467.5	467.5	466.9	466.9	466.3	465.7	465.0	462.6	462.0	460.2
10°	469.9	469.3	469.3	468.7	467.5	467.5	466.3	465.7	462.6	461.4	458.9
12.5°	469.3	469.3	469.3	468.7	466.9	466.3	465.0	463.2	460.8	458.3	455.9
15°	467.5	467.5	466.3	465.7	463.8	462.6	462.0	458.9	456.5	453.4	449.7
17.5°	461.4	461.4	460.8	459.5	457.7	456.5	455.3	452.2	449.7	444.8	441.2
20°	453.4	452.8	452.2	450.4	448.5	447.9	446.1	441.8	438.7	435.1	430.2
22.5°	441.8	441.2	440.6	439.3	436.3	435.1	433.8	430.8	425.3	421.6	415.5
25°	426.5	426.5	425.3	423.4	420.4	419.1	417.3	414.2	409.4	403.8	398.9
27.5°	408.7	408.1	406.3	405.1	402.6	400.8	397.7	394.1	389.2	384.9	378.8
30°	386.1	386.1	384.9	383.0	380.0	378.8	376.3	372.0	367.1	361.6	357.3
32.5°	360.4	360.4	358.6	357.3	355.5	352.4	351.8	346.9	342.6	338.4	333.5
35°	332.2	332.8	331.6	329.2	326.1	326.1	324.9	320.6	315.7	311.4	307.8
37.5°	304.1	302.2	301.6	300.4	298.6	296.1	294.9	293.1	288.8	285.7	280.2
40°	272.9	273.5	272.3	271.0	270.4	268.6	268.0	264.9	261.9	258.2	255.7
42.5°	244.7	244.7	244.7	243.5	242.3	240.4	239.8	238.0	234.3	231.9	228.2
45°	219.6	217.8	217.8	217.3	216.7	215.3	213.5	212.4	209.8	208.0	203.7
47.5°	195.1	195.9	195.1	194.5	192.8	192.2	191.6	189.0	186.7	184.7	181.8
50°	173.8	174.9	173.8	173.8	172.6	172.0	170.8	168.9	167.1	164.0	161.0
52.5°	156.1	156.1	155.5	154.8	153.0	151.8	151.2	150.6	147.5	145.1	142.6
55°	138.3	138.9	138.9	137.1	136.5	135.3	134.6	132.8	131.6	127.9	126.1
57.5°	123.0	122.4	123.0	121.8	120.6	119.3	118.7	117.5	115.7	113.2	110.8
60°	109.6	108.3	108.3	107.7	106.5	105.9	104.7	102.8	101.0	98.5	96.7
62.5°	96.1	95.5	94.9	94.3	93.0	92.4	91.8	90.0	88.1	86.3	84.5
65°	83.2	83.2	82.6	81.4	80.8	80.2	79.6	78.3	75.9	74.7	72.8
67.5°	71.6	71.0	71.0	69.8	68.5	67.9	67.9	66.7	64.9	63.0	61.8
70°	60.0	60.6	60.0	59.4	58.1	58.1	56.9	56.3	53.9	53.2	51.4
72.5°	49.6	49.6	49.0	49.0	47.7	47.1	47.1	45.9	44.7	43.5	42.2
75°	39.8	39.8	39.8	39.2	38.6	37.3	37.3	36.7	35.5	34.3	33.0
77.5°	31.2	30.6	30.6	30.0	29.4	28.8	28.8	28.2	26.9	26.3	25.1
80°	22.6	22.0	22.0	22.0	20.8	21.4	20.8	20.2	19.6	19.0	18.4
82.5°	14.7	15.3	15.3	14.7	14.1	14.1	14.1	13.5	13.5	12.9	12.2
85°	8.6	8.6	8.6	8.6	8.0	8.0	8.0	7.3	7.3	7.3	6.7
87.5°	3.7	3.7	3.7	3.7	3.7	3.7	3.1	3.1	3.1	3.1	3.1
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°	451.0	451.0	451.0	451.0	451.0	451.0	451.0	451.0	451.0	451.0	451.0
2.5°	455.9	454.6	454.0	453.4	453.4	452.8	452.2	451.0	451.0	449.7	449.1
5°	458.3	456.5	455.3	454.0	453.4	452.2	451.0	449.1	448.5	446.7	444.8
7.5°	458.9	455.9	454.6	452.2	451.0	449.7	447.3	445.5	443.0	441.2	438.7
10°	456.5	454.0	451.0	447.9	447.3	445.5	441.8	439.3	436.3	433.8	430.2
12.5°	452.8	449.1	446.1	442.4	440.6	438.7	435.1	431.4	427.1	422.8	419.1
15°	446.7	442.4	438.1	433.8	431.4	429.5	425.3	421.0	416.7	411.2	407.5
17.5°	437.5	432.6	428.3	422.8	420.4	418.5	413.0	408.1	402.6	397.1	393.4
20°	425.9	419.8	414.9	408.7	406.9	403.8	398.3	392.8	386.7	380.6	376.3
22.5°	410.6	404.5	398.9	392.8	389.8	386.7	381.2	374.5	368.3	363.4	359.2
25°	392.8	387.3	380.6	375.1	371.4	367.7	361.6	356.1	350.6	343.3	339.0
27.5°	373.2	366.5	361.6	354.3	350.6	348.1	341.4	334.1	329.2	322.4	317.5
30°	351.2	345.1	339.6	332.2	328.6	326.1	320.0	313.3	308.4	301.6	296.7
32.5°	328.0	321.2	314.5	309.6	305.3	302.9	296.1	291.8	285.7	280.2	274.7
35°	302.9	296.1	291.2	284.5	282.0	279.6	274.1	268.6	263.1	258.2	253.9
37.5°	275.9	271.0	265.5	260.6	258.8	256.3	249.6	244.7	240.4	235.5	231.9
40°	249.6	245.3	241.7	236.8	233.7	231.9	227.0	222.7	217.8	214.7	211.2
42.5°	225.7	220.8	217.3	213.5	210.4	208.6	204.3	201.4	197.7	194.5	190.2
45°	200.6	198.3	193.9	191.0	189.0	186.7	183.6	179.8	176.9	174.4	171.4
47.5°	178.7	176.3	173.2	169.5	168.3	166.5	163.4	161.0	158.5	156.1	153.0
50°	158.5	155.5	153.0	150.6	149.3	147.5	144.4	143.2	141.4	138.9	137.1
52.5°	140.2	137.7	135.3	132.2	131.6	130.4	128.5	126.1	124.2	123.0	121.8
55°	123.6	121.2	119.3	116.9	116.3	115.1	112.6	111.4	110.2	108.9	107.7
57.5°	108.9	106.5	104.0	102.8	101.6	100.4	99.8	97.9	96.7	96.1	94.9
60°	95.5	93.0	91.2	89.4	88.7	88.1	86.9	85.7	84.5	83.2	82.6
62.5°	82.6	80.2	79.0	77.7	76.5	76.5	75.3	74.1	72.8	72.2	71.0
65°	71.0	69.8	67.9	66.1	65.5	65.5	63.7	63.0	62.4	61.2	60.0
67.5°	60.0	58.8	56.9	56.3	55.7	55.1	54.5	53.2	52.0	51.4	50.2
70°	50.2	49.0	47.7	47.1	46.5	45.9	44.7	44.1	42.8	42.2	41.6
72.5°	40.4	39.8	38.6	37.9	37.3	36.7	36.1	35.5	34.3	33.7	33.0
75°	32.4	31.8	30.6	30.0	29.4	29.4	28.8	27.5	26.9	26.9	26.3
77.5°	24.5	23.9	23.3	22.6	22.0	22.0	21.4	20.8	20.2	20.2	19.6
80°	17.7	17.1	16.5	16.5	16.5	15.9	15.3	15.3	14.7	14.7	14.1
82.5°	11.6	11.6	11.0	11.0	11.0	10.4	10.4	9.8	9.8	9.8	9.8
85°	6.7	6.7	6.7	6.1	6.1	6.1	6.1	6.1	6.1	5.5	6.1
87.5°	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	2.4	2.4	2.4
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°	451.0	451.0	451.0	451.0	451.0	451.0	451.0	451.0	451.0	451.0	451.0
2.5°	448.5	447.9	446.7	446.7	445.5	445.5	444.8	444.2	443.6	443.0	442.4
5°	444.2	441.8	440.6	440.0	438.7	438.1	436.3	435.1	434.4	433.2	432.0
7.5°	436.3	433.8	431.4	430.8	430.2	427.7	425.9	424.0	422.8	421.6	420.4
10°	427.1	424.7	421.6	420.4	419.1	416.1	413.6	411.8	409.4	406.9	406.3
12.5°	416.1	412.4	408.7	407.5	405.7	402.6	400.2	397.1	395.3	392.2	391.6
15°	403.2	398.9	395.9	392.8	391.6	388.5	384.3	381.8	378.1	376.9	373.9
17.5°	387.9	383.6	379.4	378.1	376.3	372.0	367.7	364.7	361.0	359.2	357.3
20°	372.0	366.5	362.2	361.0	358.6	354.9	350.6	347.5	344.5	340.8	339.0
22.5°	353.7	347.5	343.9	340.8	340.2	335.9	331.0	328.6	326.1	323.1	320.6
25°	333.5	328.0	323.7	321.2	320.0	316.3	312.7	309.6	305.9	304.1	301.0
27.5°	312.7	309.0	303.5	301.0	299.2	296.1	291.8	290.0	286.3	283.9	282.0
30°	292.5	286.9	283.9	280.8	279.0	275.9	272.3	270.4	267.4	264.9	263.1
32.5°	270.4	266.7	262.5	261.2	258.8	255.7	253.3	250.2	247.8	245.3	244.7
35°	250.2	245.3	241.0	239.8	238.0	234.9	233.7	231.9	228.8	228.2	225.7
37.5°	228.2	225.7	220.8	219.0	218.4	215.9	213.5	212.4	210.4	208.6	208.0
40°	207.5	204.3	202.0	200.0	198.8	197.1	194.5	193.9	192.8	190.2	189.6
42.5°	187.9	184.7	182.4	181.8	179.8	178.1	176.9	174.9	174.4	173.8	172.6
45°	168.9	167.1	164.6	164.0	163.4	161.0	159.7	158.5	157.3	156.7	155.5
47.5°	151.8	149.9	148.1	147.5	146.3	145.7	143.8	143.2	141.4	140.8	140.2
50°	135.3	134.0	132.8	132.2	131.0	130.4	129.1	127.9	126.7	126.1	125.5
52.5°	120.6	119.3	118.1	117.5	116.9	115.7	114.5	113.2	112.6	112.0	111.4
55°	106.5	105.3	104.7	104.0	103.4	102.8	101.0	100.4	99.8	99.1	97.9
57.5°	93.6	92.4	91.2	91.2	90.6	90.0	88.7	87.5	87.5	86.3	85.1
60°	82.0	80.8	79.6	79.0	78.3	77.1	76.5	75.9	75.3	74.7	73.4
62.5°	69.8	69.2	67.9	67.9	66.7	66.1	65.5	64.9	64.3	63.0	62.4
65°	59.4	58.8	57.5	56.9	56.9	56.3	55.1	54.5	53.9	53.9	53.2
67.5°	49.6	49.0	47.7	47.1	47.1	46.5	45.9	45.9	45.3	44.7	45.3
70°	41.0	39.8	39.8	39.2	39.2	38.6	37.9	37.9	37.9	38.6	38.6
72.5°	32.4	31.8	31.2	31.2	31.2	31.2	30.6	30.6	31.2	31.8	31.8
75°	25.7	25.1	25.1	25.1	24.5	24.5	25.1	25.1	25.7	25.7	25.7
77.5°	19.0	19.0	19.0	19.0	19.0	19.0	19.6	19.6	20.2	20.2	20.2
80°	14.1	14.1	14.1	14.1	14.1	14.7	14.7	14.7	14.7	14.7	15.3
82.5°	9.8	9.8	9.8	9.8	9.8	9.8	9.8	10.4	10.4	10.4	10.4
85°	5.5	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1
87.5°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
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°	451.0	451.0	451.0	451.0	451.0	451.0	451.0	451.0
2.5°	441.8	441.8	441.8	442.4	441.2	441.2	441.2	441.2
5°	431.4	430.8	430.2	430.8	429.5	429.5	428.9	428.9
7.5°	418.5	417.9	417.3	417.3	416.1	416.1	415.5	414.9
10°	404.5	403.2	403.8	402.6	402.0	401.4	400.8	400.2
12.5°	389.2	387.9	387.3	386.1	384.9	384.3	384.9	383.6
15°	372.6	370.8	370.2	369.0	367.7	367.1	367.1	366.5
17.5°	354.3	353.0	352.4	351.2	350.6	349.4	348.8	348.1
20°	337.1	334.1	334.7	333.5	332.8	330.4	330.4	331.0
22.5°	318.2	316.3	315.1	313.9	313.3	312.0	312.0	311.4
25°	299.2	297.3	296.7	295.5	294.9	293.7	293.1	293.1
27.5°	280.8	278.4	278.4	277.2	275.9	275.3	274.7	274.1
30°	261.2	259.4	258.8	258.8	258.2	258.2	256.3	257.0
32.5°	242.9	241.7	241.0	239.8	239.8	239.2	239.2	237.4
35°	224.5	222.7	223.3	222.2	221.6	220.8	221.6	220.8
37.5°	206.9	205.5	205.5	204.3	204.3	203.7	203.2	204.3
40°	189.0	188.5	187.9	187.3	187.9	187.3	186.1	186.7
42.5°	171.4	171.4	170.8	170.8	170.0	170.0	170.0	170.0
45°	155.5	154.8	154.8	154.2	154.2	154.2	154.2	153.6
47.5°	139.5	138.9	138.9	138.9	138.3	138.3	137.7	138.3
50°	124.2	124.2	123.6	123.6	124.2	123.6	123.0	123.0
52.5°	110.2	110.2	109.6	109.6	108.9	108.3	108.9	108.9
55°	97.3	96.7	96.1	96.1	95.5	94.9	94.9	95.5
57.5°	85.1	84.5	83.8	83.8	82.6	82.0	82.0	82.0
60°	73.4	72.2	72.2	71.6	71.6	71.0	71.0	71.0
62.5°	62.4	61.8	61.8	61.8	61.8	61.2	61.2	61.2
65°	53.2	53.2	53.2	53.9	53.9	54.5	54.5	54.5
67.5°	45.9	46.5	46.5	46.5	47.1	47.1	47.1	46.5
70°	39.2	39.2	39.2	39.8	39.8	39.8	39.8	39.8
72.5°	32.4	32.4	32.4	32.4	32.4	32.4	32.4	32.4
75°	25.7	26.3	26.3	26.3	25.7	26.3	26.3	25.7
77.5°	20.2	20.2	20.2	20.2	20.2	20.2	20.2	20.2
80°	15.3	15.3	15.3	15.3	15.3	15.3	15.3	15.3
82.5°	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4
85°	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1
87.5°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
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)