

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: P583726

Luminaire Tested: **HC810D010-HM80520830-81WWBB**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P583726
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: HC810D010-HM80520830-81WWBB
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, WHITE BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 965.0 lumens
Efficiency: N/A
Efficacy: 97.5 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

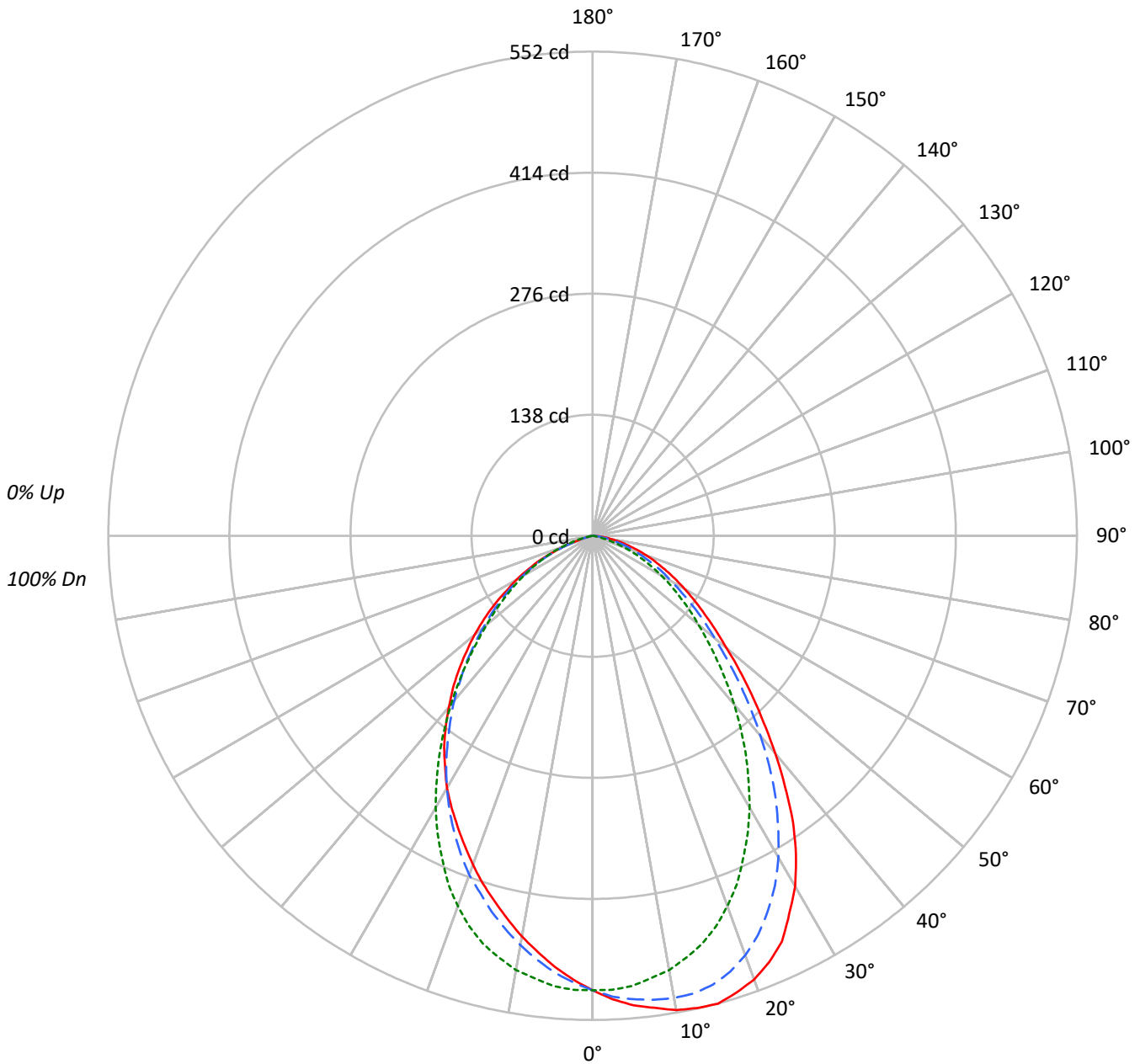
Input Watts (W): 9.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	15976	15976	15976
5°	16635	15944	15270
10°	17193	15741	14526
15°	17628	15381	13772
20°	17664	14741	13087
25°	17366	13807	12412
30°	16436	12740	11829
35°	14986	11455	11109
40°	13030	10104	10257
45°	11181	8748	9389
50°	9551	7541	8438
55°	8371	6494	7328
60°	7450	5538	6161
65°	6611	4517	4918
70°	5860	3345	2795
75°	4885	1751	834
80°	3836	550	124
85°	2724	248	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	48.8	5.1
10°-20°	136.8	14.2
20°-30°	193.7	20.1
30°-40°	202.6	21.0
40°-50°	169.0	17.5
50°-60°	119.8	12.4
60°-70°	69.0	7.2
70°-80°	22.2	2.3
80°-90°	3.0	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°	379.3	39.3
0°-40°	581.9	60.3
0°-60°	870.8	90.2
0°-90°	965.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	965.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	518	518	518	518	518	
5°	537	530	515	500	493	52
15°	552	530	482	444	431	155
25°	510	472	406	373	365	233
35°	398	363	304	288	295	247
45°	256	236	201	203	215	199
55°	156	139	121	127	136	141
65°	91	76	62	62	67	91
75°	41	30	15	7	7	44
85°	8	4	1	0	0	10
90°	0	0	0	0	0	



TEST NUMBER: P583726

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	518.1	518.1	518.1	518.1	518.1	518.1	518.1	518.1	518.1	518.1	518.1
2.5°	529.0	528.2	527.4	528.2	527.4	528.2	527.4	527.4	526.6	525.9	525.9
5°	537.4	536.7	536.7	536.7	536.0	535.1	535.1	534.4	532.8	532.0	530.4
7.5°	542.9	543.7	543.7	543.7	542.1	542.1	540.5	539.0	537.4	536.0	533.6
10°	549.1	549.1	548.4	547.5	545.9	545.2	544.4	542.9	540.5	537.4	535.1
12.5°	551.4	551.4	550.6	549.1	548.4	547.5	546.8	544.4	541.4	537.4	534.4
15°	552.2	550.6	549.9	549.1	547.5	545.2	545.2	542.1	538.3	533.6	529.7
17.5°	545.9	546.8	545.2	543.7	541.4	539.8	537.4	535.1	530.4	525.0	521.2
20°	538.3	537.4	536.7	534.4	531.3	530.4	528.2	524.3	520.5	514.2	508.8
22.5°	525.9	525.0	523.5	522.0	518.9	517.3	515.1	510.4	505.0	498.7	492.6
25°	510.4	508.8	506.5	503.4	501.1	499.6	496.4	491.7	485.6	478.6	472.4
27.5°	485.6	487.9	486.3	481.8	479.4	476.2	475.5	469.3	463.9	456.9	449.9
30°	461.6	461.6	459.3	456.9	453.0	450.8	447.6	442.9	437.5	429.0	423.6
32.5°	431.4	430.6	427.6	426.7	423.6	419.0	418.2	412.0	406.6	400.4	393.4
35°	398.1	396.5	393.4	391.1	389.6	387.3	384.9	379.5	374.1	367.8	363.2
37.5°	360.1	360.1	359.4	355.4	353.9	352.4	350.0	344.6	341.5	335.4	330.7
40°	323.7	323.0	320.6	319.9	318.3	316.0	314.4	311.3	306.6	302.1	297.4
42.5°	288.1	288.8	285.7	286.6	283.4	281.9	281.1	276.5	274.2	269.5	265.6
45°	256.4	255.5	254.0	253.3	251.7	250.1	248.6	246.3	242.4	237.8	235.5
47.5°	226.9	224.5	224.5	223.8	223.1	220.0	219.1	216.8	214.6	209.9	206.7
50°	199.1	199.1	199.1	198.2	195.9	195.2	193.6	191.2	189.0	185.8	181.3
52.5°	176.6	176.6	176.6	175.9	172.7	171.9	171.2	168.0	164.9	162.6	159.5
55°	155.7	156.4	155.7	154.1	151.8	151.8	149.5	148.0	144.8	142.6	139.4
57.5°	137.9	137.9	136.3	135.6	134.0	133.2	131.6	130.1	126.2	123.9	120.1
60°	120.8	120.1	120.1	118.5	117.0	115.4	114.7	112.3	110.7	106.9	103.7
62.5°	105.3	105.3	103.7	103.7	100.7	100.7	99.9	97.6	95.2	91.4	89.8
65°	90.6	90.6	89.8	89.1	86.8	85.9	85.2	82.8	80.5	78.3	75.8
67.5°	77.4	77.4	75.8	75.1	73.6	72.8	71.3	69.7	67.4	65.0	62.7
70°	65.0	64.3	63.5	62.7	61.2	60.5	58.9	57.3	54.9	53.5	51.1
72.5°	52.6	52.6	51.9	50.4	49.5	48.8	48.0	46.5	44.1	41.8	40.3
75°	41.0	41.0	41.0	39.5	38.0	37.1	37.1	35.6	34.0	31.7	30.2
77.5°	31.7	31.0	30.2	30.2	28.6	27.9	27.2	26.3	24.0	23.2	21.6
80°	21.6	22.5	21.6	20.9	20.2	19.4	19.4	17.8	17.1	15.5	13.9
82.5°	14.7	13.9	13.9	13.2	13.2	12.4	12.4	10.8	10.1	9.3	8.5
85°	7.7	7.7	7.0	7.0	7.0	6.3	6.3	5.4	5.4	4.7	3.8
87.5°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	1.6	1.6	1.6
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°	518.1	518.1	518.1	518.1	518.1	518.1	518.1	518.1	518.1	518.1	518.1
2.5°	525.0	523.5	522.7	522.7	522.0	521.2	520.5	519.6	518.1	518.1	516.5
5°	529.0	527.4	526.6	524.3	522.7	522.7	519.6	518.9	516.5	515.1	513.5
7.5°	532.0	529.0	526.6	524.3	522.7	521.2	518.1	515.1	511.9	508.8	507.2
10°	532.0	529.0	525.0	521.2	519.6	518.1	514.2	509.6	505.7	502.7	498.7
12.5°	530.4	525.9	521.2	518.1	515.1	512.7	508.1	503.4	498.7	492.6	489.5
15°	525.9	519.6	515.1	509.6	507.2	503.4	499.6	492.6	487.2	481.8	477.8
17.5°	516.5	508.8	503.4	498.0	494.1	491.7	485.6	479.4	473.2	467.0	462.3
20°	502.7	495.7	489.5	482.5	479.4	476.2	468.5	462.3	456.2	449.2	444.5
22.5°	485.6	478.6	470.1	464.7	460.0	456.2	449.2	442.2	436.0	429.8	423.6
25°	464.7	457.7	449.9	441.5	438.4	434.5	426.7	419.7	412.8	405.8	400.4
27.5°	442.2	433.0	426.7	417.5	414.3	410.5	401.9	394.3	388.0	382.6	376.3
30°	415.1	408.1	399.7	391.1	388.0	384.2	377.2	370.2	364.0	357.8	351.6
32.5°	385.7	378.8	370.2	364.0	359.4	356.3	349.3	343.1	336.9	330.7	325.3
35°	354.7	346.9	340.8	334.5	330.7	326.8	319.9	314.4	309.8	304.3	298.9
37.5°	323.0	317.6	311.3	304.3	300.5	297.4	292.0	285.7	281.9	277.3	273.3
40°	292.0	285.7	280.3	274.2	271.1	268.8	263.4	258.7	254.8	251.0	248.6
42.5°	260.2	254.8	249.4	245.4	243.2	240.9	237.0	231.5	229.2	225.4	223.1
45°	230.8	226.1	222.2	216.8	215.3	213.7	209.1	205.2	202.9	200.6	199.1
47.5°	202.9	199.8	195.2	192.1	189.8	188.2	185.1	182.0	179.7	178.1	176.6
50°	178.9	175.0	171.9	168.9	167.3	164.9	161.9	160.3	158.8	157.2	157.2
52.5°	156.4	152.5	149.5	147.1	145.6	144.0	141.7	141.0	139.4	139.4	138.6
55°	135.6	133.2	130.1	127.1	126.2	125.5	123.9	122.4	121.6	120.8	121.6
57.5°	117.7	115.4	112.3	110.0	109.1	108.4	107.7	106.1	105.3	105.3	105.3
60°	101.4	99.2	96.8	94.5	94.5	92.9	92.2	91.4	90.6	89.8	89.8
62.5°	86.8	84.4	82.1	80.5	79.8	79.0	77.4	76.7	75.8	75.8	75.1
65°	73.6	70.4	69.7	67.4	66.6	65.9	65.0	63.5	62.7	61.9	61.2
67.5°	60.5	58.9	56.5	54.9	54.2	53.5	52.6	51.1	50.4	49.5	48.0
70°	48.8	47.2	45.7	44.1	43.4	42.6	41.0	39.5	38.7	37.1	34.9
72.5°	38.0	36.4	34.9	33.3	32.6	31.7	30.2	28.6	27.2	25.6	24.0
75°	28.6	27.2	24.8	23.2	22.5	22.5	20.2	18.6	17.1	14.7	13.2
77.5°	20.2	17.8	17.1	15.5	14.7	13.2	11.7	10.1	8.5	7.7	6.3
80°	13.2	11.7	10.1	9.3	8.5	7.7	7.0	5.4	3.8	3.1	2.3
82.5°	7.7	7.0	6.3	5.4	4.7	3.8	3.1	3.1	2.3	1.6	0.7
85°	3.8	3.1	2.3	2.3	1.6	1.6	1.6	0.7	0.7	0.7	0.7
87.5°	1.6	0.7	0.7	0.7	0.7	0.7	0.7	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°	518.1	518.1	518.1	518.1	518.1	518.1	518.1	518.1	518.1	518.1	518.1
2.5°	515.8	515.1	514.2	513.5	513.5	511.9	511.9	511.1	509.6	508.8	508.8
5°	511.1	508.8	507.2	506.5	505.7	503.4	502.7	501.1	499.6	498.0	497.1
7.5°	504.1	500.3	498.7	498.0	495.7	493.3	491.7	489.5	487.2	484.8	484.0
10°	495.7	491.7	487.9	486.3	484.0	482.5	479.4	476.2	473.9	471.7	469.3
12.5°	484.8	480.2	476.2	474.8	472.4	469.3	464.7	463.1	459.3	457.7	454.6
15°	472.4	467.0	463.1	460.8	458.4	453.9	450.8	447.6	443.8	442.2	439.1
17.5°	456.9	450.8	446.9	444.5	442.9	439.1	434.5	430.6	426.7	425.1	422.9
20°	438.4	434.5	429.0	426.7	425.1	420.6	415.9	414.3	411.2	408.1	405.8
22.5°	417.5	413.6	408.1	405.8	405.1	401.1	397.3	395.0	392.7	390.3	388.0
25°	395.7	391.1	386.4	384.9	383.3	380.3	377.2	375.6	373.3	371.8	370.2
27.5°	372.5	367.8	364.0	361.7	360.1	357.8	356.3	354.7	353.1	351.6	350.9
30°	347.7	343.1	339.9	338.5	336.9	336.1	333.8	333.1	332.2	330.7	331.5
32.5°	323.0	319.1	316.0	313.6	313.6	312.2	311.3	311.3	310.6	310.6	310.6
35°	295.8	293.5	291.2	290.4	289.7	288.8	288.1	288.8	288.1	288.8	289.7
37.5°	271.1	268.8	267.2	266.4	265.6	266.4	265.6	265.6	266.4	267.9	268.8
40°	245.4	244.0	242.4	243.2	242.4	242.4	242.4	244.7	245.4	246.3	247.0
42.5°	221.5	220.0	219.1	219.1	220.0	219.1	220.7	221.5	223.1	225.4	226.9
45°	198.2	197.5	197.5	198.2	197.5	199.1	199.1	200.6	202.9	204.5	206.0
47.5°	176.6	176.6	176.6	177.3	177.3	178.1	179.7	180.4	182.0	183.5	185.1
50°	156.4	157.2	157.9	157.9	157.9	159.5	161.1	161.9	162.6	163.4	165.8
52.5°	138.6	139.4	139.4	140.2	141.0	141.7	142.6	144.0	144.8	146.4	147.1
55°	121.6	121.6	123.1	123.9	123.9	123.9	125.5	125.5	127.1	127.8	129.3
57.5°	105.3	106.1	106.1	106.9	106.9	107.7	108.4	109.1	110.0	110.7	111.5
60°	89.8	89.8	89.8	90.6	91.4	92.2	91.4	92.9	92.9	94.5	95.2
62.5°	75.1	75.8	75.8	75.8	75.8	75.8	75.8	76.7	77.4	78.3	79.0
65°	61.2	61.2	61.2	60.5	61.2	60.5	61.2	61.9	61.9	62.7	63.5
67.5°	47.2	47.2	45.7	45.7	46.5	46.5	46.5	46.5	45.7	47.2	47.2
70°	34.0	33.3	32.6	31.7	31.7	31.0	31.0	30.2	30.2	30.2	30.2
72.5°	22.5	20.9	19.4	18.6	17.8	17.8	16.2	15.5	16.2	16.2	16.2
75°	11.7	10.1	9.3	8.5	7.7	7.7	7.0	7.0	7.0	7.0	7.0
77.5°	4.7	3.8	3.1	3.1	2.3	2.3	2.3	2.3	2.3	2.3	2.3
80°	1.6	1.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
82.5°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
85°	0.7	0.0	0.0	0.7	0.0	0.7	0.7	0.7	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



TEST NUMBER: P583726

CATALOG NUMBER: HC810D010-HM80520830-81WWBB

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	518.1	518.1	518.1	518.1	518.1	518.1	518.1	518.1
2.5°	508.1	508.1	507.2	508.1	506.5	507.2	506.5	506.5
5°	496.4	494.9	494.9	494.9	494.1	494.1	493.3	493.3
7.5°	482.5	481.8	480.9	480.2	479.4	478.6	478.6	478.6
10°	468.5	467.0	467.0	466.3	464.7	463.9	463.9	463.9
12.5°	452.3	451.5	450.8	450.8	447.6	448.5	447.6	447.6
15°	436.8	436.0	436.0	433.7	432.1	432.1	432.1	431.4
17.5°	420.6	419.7	419.0	417.5	415.9	415.9	415.1	415.9
20°	403.5	402.7	401.1	401.1	400.4	399.7	398.1	398.8
22.5°	386.4	384.9	384.2	384.2	383.3	383.3	381.8	381.8
25°	368.7	367.8	367.1	367.8	366.4	366.4	364.8	364.8
27.5°	350.0	349.3	349.3	349.3	348.5	349.3	348.5	348.5
30°	331.5	331.5	330.7	330.7	331.5	330.7	331.5	332.2
32.5°	311.3	311.3	312.2	312.2	312.9	312.9	312.9	312.9
35°	290.4	292.0	292.0	292.7	293.5	294.2	294.2	295.1
37.5°	271.1	271.9	272.6	273.3	274.9	274.9	274.9	274.9
40°	250.1	251.0	252.4	251.7	254.8	255.5	254.8	254.8
42.5°	228.5	230.1	230.8	232.3	233.1	234.6	235.5	235.5
45°	208.3	209.1	210.7	212.2	213.0	215.3	215.3	215.3
47.5°	187.4	189.0	189.8	191.2	192.1	194.4	195.2	194.4
50°	167.3	168.9	170.3	170.3	172.7	173.4	175.0	175.9
52.5°	148.0	148.7	150.2	151.0	152.5	154.1	154.9	155.7
55°	129.3	130.1	131.6	131.6	134.0	134.7	136.3	136.3
57.5°	112.3	113.1	114.7	113.8	115.4	117.0	117.0	116.1
60°	96.0	96.0	96.0	97.6	98.3	99.2	99.9	99.9
62.5°	79.0	80.5	81.4	81.4	82.1	82.8	82.8	82.1
65°	63.5	65.0	65.9	65.9	66.6	66.6	66.6	67.4
67.5°	48.0	48.0	48.0	48.8	48.0	48.0	48.0	48.0
70°	30.2	30.2	30.2	30.2	29.4	30.2	30.2	31.0
72.5°	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2
75°	7.0	7.0	7.0	7.7	7.0	7.0	7.0	7.0
77.5°	3.1	2.3	3.1	3.1	2.3	2.3	2.3	2.3
80°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
82.5°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
85°	0.0	0.7	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)