

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: P583719

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

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P583719
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: HC810D010-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: 1102.9 lumens
Efficiency: N/A
Efficacy: 111.4 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

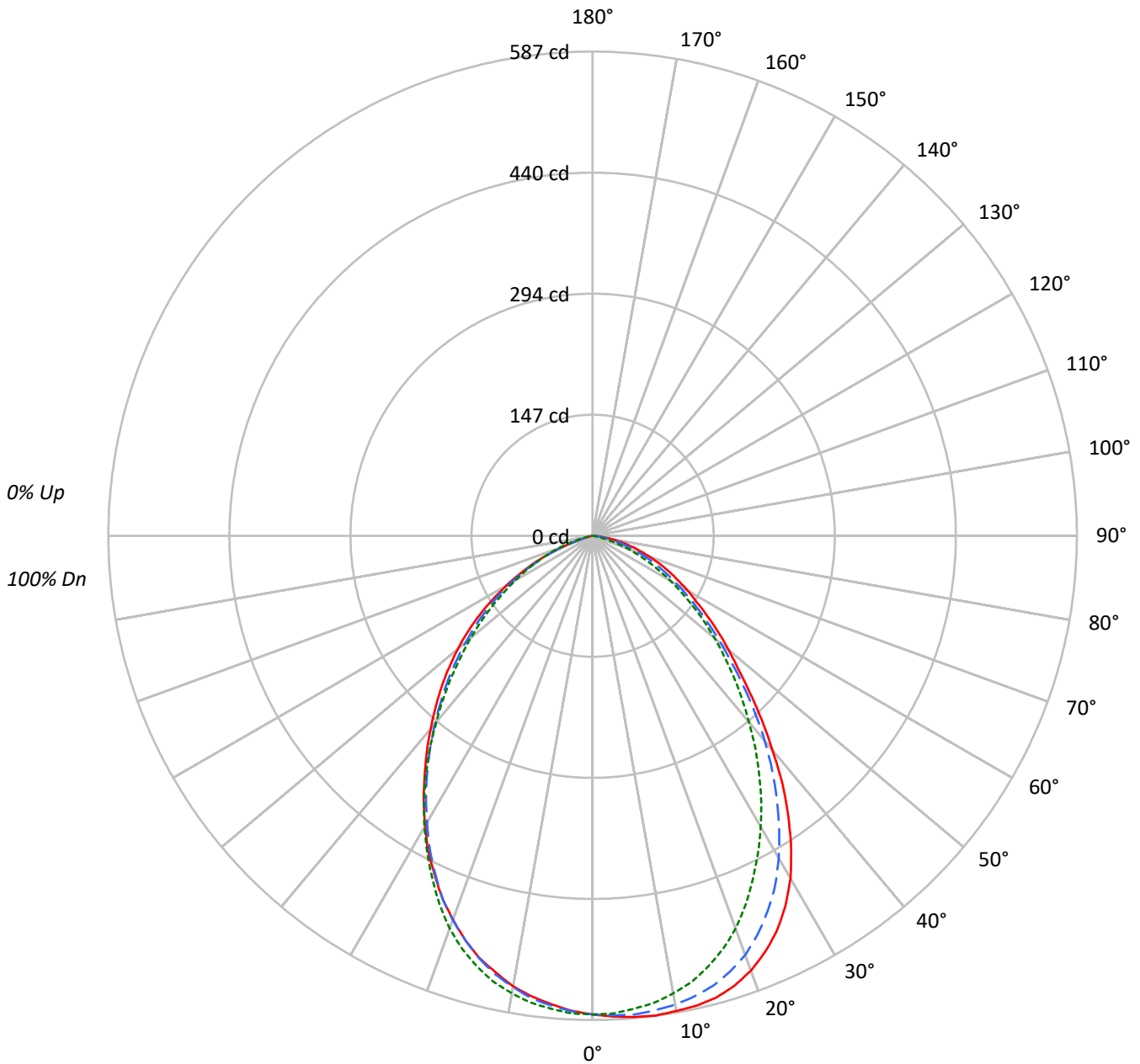
Input Watts (W): 9.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	17894	17894	17894
5°	18130	17817	17650
10°	18318	17638	17369
15°	18503	17265	16920
20°	18409	16631	16247
25°	17978	15631	15423
30°	17077	14513	14456
35°	15547	13239	13356
40°	13630	11851	12290
45°	11757	10540	11286
50°	10300	9254	10223
55°	9123	7957	8994
60°	8221	6685	7456
65°	7399	5370	5713
70°	6491	3913	3147
75°	5540	2037	834
80°	4262	550	124
85°	2724	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	54.8	5.0
10°-20°	153.9	14.0
20°-30°	218.5	19.8
30°-40°	230.0	20.9
40°-50°	195.6	17.7
50°-60°	141.4	12.8
60°-70°	80.4	7.3
70°-80°	25.3	2.3
80°-90°	3.1	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°	427.1	38.7
0°-40°	657.1	59.6
0°-60°	994.1	90.1
0°-90°	1102.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1102.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	580	580	580	580	580	
5°	586	583	576	572	570	56
15°	580	565	541	531	530	163
25°	528	502	459	452	453	242
35°	413	389	352	349	355	257
45°	270	260	242	248	259	210
55°	170	157	148	156	167	153
65°	101	88	74	73	78	101
75°	46	36	17	8	7	50
85°	8	5	0	0	0	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°	580.3	580.3	580.3	580.3	580.3	580.3	580.3	580.3	580.3	580.3	580.3
2.5°	583.5	584.2	582.6	582.6	584.2	582.6	583.5	583.5	582.6	582.6	581.9
5°	585.7	585.0	585.0	585.0	585.7	584.2	583.5	584.2	582.6	582.6	582.6
7.5°	586.6	586.6	585.7	585.0	585.0	585.0	584.2	583.5	582.6	581.0	580.3
10°	585.0	585.0	585.7	584.2	584.2	582.6	582.6	581.0	581.0	579.6	577.2
12.5°	583.5	582.6	582.6	581.0	581.0	579.6	579.6	577.2	576.5	574.1	571.8
15°	579.6	578.8	577.2	576.5	575.6	574.9	573.4	572.6	570.2	567.1	564.8
17.5°	571.8	571.1	570.2	568.7	567.1	566.4	565.7	563.3	560.1	557.8	554.0
20°	561.0	560.1	560.1	557.8	557.1	554.7	554.0	550.9	548.6	543.9	540.8
22.5°	546.2	547.0	545.5	543.9	542.3	540.1	538.5	535.4	531.5	526.8	523.0
25°	528.4	529.2	527.7	526.1	523.7	522.3	520.7	516.0	512.2	506.8	502.1
27.5°	505.9	505.9	505.9	504.4	500.5	499.8	498.2	493.5	488.1	483.4	478.9
30°	479.6	478.9	478.9	476.5	474.9	471.9	469.5	465.7	461.8	456.4	451.0
32.5°	447.9	448.6	446.3	444.7	442.5	442.5	439.3	436.2	431.5	426.1	420.7
35°	413.0	413.7	412.2	411.4	407.6	406.8	406.0	402.1	399.1	395.1	389.0
37.5°	377.3	376.6	375.7	375.7	373.5	371.9	370.3	368.1	363.4	360.2	357.2
40°	338.6	338.6	338.6	337.8	337.0	335.5	334.8	333.2	330.1	326.9	324.7
42.5°	303.7	303.7	302.9	302.2	300.6	301.3	299.9	298.3	295.2	292.9	291.4
45°	269.6	269.6	269.6	270.4	268.9	266.5	266.5	265.0	263.5	261.9	259.5
47.5°	239.4	241.7	240.2	239.4	240.2	237.0	237.0	235.6	234.0	232.5	229.3
50°	214.7	214.7	214.7	213.1	212.3	212.3	210.0	208.4	207.7	206.1	203.0
52.5°	192.2	190.6	190.6	189.8	189.1	187.5	187.5	185.9	182.8	181.3	179.0
55°	169.7	169.7	168.9	168.2	167.3	166.6	165.8	163.5	161.9	159.6	157.3
57.5°	149.5	151.1	150.4	148.8	147.2	147.2	145.7	144.1	141.8	139.4	137.1
60°	133.3	132.5	132.5	131.7	130.2	129.3	128.6	126.3	123.9	121.6	119.4
62.5°	116.2	116.2	116.2	114.7	113.1	112.4	111.5	110.0	107.0	104.6	103.0
65°	101.4	100.7	100.0	99.2	98.4	96.9	96.0	94.5	92.2	89.9	87.5
67.5°	86.8	85.9	85.9	85.2	82.9	82.1	82.1	79.8	77.5	75.1	72.8
70°	72.0	72.0	72.0	70.6	69.7	69.0	68.2	66.6	64.3	62.0	59.6
72.5°	59.6	58.9	58.9	58.1	55.8	55.1	54.2	52.6	50.4	48.8	47.2
75°	46.5	46.5	45.7	45.0	44.1	43.4	42.7	41.1	38.7	36.4	35.7
77.5°	35.7	34.9	34.9	34.1	32.6	31.7	31.7	30.2	27.9	26.3	24.8
80°	24.0	24.8	24.0	23.2	22.5	21.6	20.9	20.2	18.6	17.1	15.5
82.5°	14.7	15.5	14.7	14.7	13.9	13.2	13.2	11.7	10.8	10.1	9.3
85°	7.7	7.7	7.7	7.7	7.0	7.0	7.0	6.3	5.4	4.7	4.7
87.5°	2.3	3.1	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°	580.3	580.3	580.3	580.3	580.3	580.3	580.3	580.3	580.3	580.3	580.3
2.5°	582.6	581.9	581.0	581.0	581.0	581.0	581.0	580.3	579.6	579.6	579.6
5°	581.0	581.0	581.0	580.3	579.6	579.6	578.0	577.2	576.5	575.6	574.9
7.5°	579.6	578.0	577.2	576.5	575.6	575.6	574.1	572.6	572.6	571.1	569.5
10°	574.9	574.1	572.6	571.1	570.2	569.5	567.9	565.7	564.8	563.3	561.7
12.5°	569.5	567.9	566.4	563.3	562.5	561.7	558.7	556.3	554.7	554.0	550.2
15°	562.5	559.4	557.1	553.2	552.4	550.9	548.6	546.2	543.2	540.8	539.2
17.5°	550.2	547.0	543.2	539.2	537.7	537.7	533.8	530.7	526.8	525.3	522.3
20°	535.4	531.5	528.4	523.7	521.4	519.1	516.7	512.2	509.0	506.8	502.8
22.5°	518.3	512.9	509.0	504.4	500.5	498.2	494.3	490.4	486.6	484.3	481.2
25°	496.7	492.0	485.8	481.2	478.9	475.8	471.1	467.2	463.4	459.4	458.0
27.5°	472.6	466.4	461.0	455.6	453.3	451.0	445.5	440.9	437.8	433.9	432.4
30°	446.3	440.1	433.9	429.2	427.0	423.0	420.0	414.6	410.6	407.6	403.6
32.5°	416.0	411.4	406.0	399.1	397.5	394.4	389.7	387.4	382.7	380.4	377.3
35°	383.6	380.4	375.0	369.6	367.2	365.6	361.8	357.2	354.1	351.7	350.3
37.5°	352.5	348.7	343.3	339.3	337.8	335.5	330.8	328.5	325.4	323.8	320.8
40°	319.3	315.3	311.4	309.2	306.9	305.3	302.2	299.9	296.8	294.4	293.6
42.5°	286.7	284.4	281.3	278.1	277.4	275.0	273.5	271.2	268.9	268.0	265.8
45°	257.2	254.9	251.8	248.7	248.0	246.4	245.6	243.3	241.7	241.7	241.7
47.5°	227.8	225.5	222.4	220.8	221.6	218.5	218.5	217.7	216.1	216.1	217.0
50°	201.5	198.3	197.6	196.0	194.5	192.9	193.6	191.4	191.4	192.9	192.2
52.5°	176.7	173.6	172.7	171.3	170.4	170.4	169.7	169.7	168.9	169.7	169.7
55°	154.2	151.8	150.4	148.8	148.0	148.0	148.0	147.2	146.4	148.0	148.8
57.5°	134.0	133.3	131.7	129.3	128.6	127.9	127.1	127.1	127.1	127.1	127.9
60°	116.2	114.7	113.1	110.8	110.8	110.0	109.3	108.4	108.4	108.4	108.4
62.5°	100.7	98.4	96.0	94.5	93.8	93.0	92.2	90.6	90.6	90.6	90.6
65°	85.2	82.9	81.4	79.8	78.3	78.3	76.7	76.0	74.4	73.6	72.0
67.5°	70.6	69.0	67.4	65.0	64.3	63.6	62.0	61.2	58.9	58.1	57.3
70°	57.3	55.1	53.5	51.9	51.1	49.6	48.1	46.5	45.0	43.4	41.8
72.5°	45.0	42.7	41.1	39.5	38.0	38.0	35.7	34.1	31.7	30.2	27.9
75°	33.3	31.0	29.4	27.2	26.3	25.6	23.2	21.6	19.4	17.1	15.5
77.5°	22.5	20.9	19.4	17.1	15.5	15.5	13.2	11.7	10.1	7.7	7.0
80°	13.9	12.4	10.8	9.3	9.3	7.7	7.0	5.4	3.8	3.1	2.3
82.5°	7.7	7.0	6.3	4.7	4.7	3.8	3.1	2.3	1.6	0.7	0.7
85°	3.8	3.1	2.3	2.3	1.6	1.6	1.6	0.7	0.7	0.0	0.0
87.5°	1.6	0.7	0.7	0.7	0.7	0.7	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°	580.3	580.3	580.3	580.3	580.3	580.3	580.3	580.3	580.3	580.3	580.3
2.5°	578.8	578.8	578.0	578.0	578.0	577.2	578.0	577.2	577.2	577.2	578.0
5°	575.6	574.1	574.1	573.4	573.4	572.6	573.4	572.6	571.8	571.1	571.8
7.5°	569.5	567.9	567.1	566.4	566.4	566.4	565.7	564.8	565.7	563.3	564.8
10°	561.0	560.1	558.7	557.8	557.1	557.8	557.1	555.6	555.6	555.6	554.7
12.5°	550.2	548.6	547.8	547.0	545.5	545.5	546.2	544.6	544.6	543.2	543.2
15°	536.9	535.4	533.8	533.8	532.2	532.2	531.5	531.5	530.7	530.0	530.0
17.5°	520.7	518.3	516.7	517.6	516.7	516.0	516.0	514.5	513.7	514.5	514.5
20°	501.4	499.8	498.2	499.0	497.4	496.7	497.4	495.1	495.8	495.8	495.8
22.5°	479.6	478.9	476.5	476.5	474.9	474.2	474.9	474.9	475.8	474.9	474.9
25°	455.6	454.0	452.4	452.4	451.7	451.0	451.7	452.4	451.7	452.4	452.4
27.5°	430.0	427.7	427.7	426.1	426.1	427.0	426.1	427.0	427.7	427.7	429.2
30°	402.1	401.3	400.6	399.8	399.8	400.6	400.6	400.6	401.3	402.9	402.9
32.5°	375.7	374.2	372.6	372.6	374.2	373.5	374.2	374.2	375.7	375.7	377.3
35°	347.1	347.1	345.6	346.3	346.3	346.3	346.3	347.9	349.4	350.3	351.7
37.5°	320.8	318.4	319.3	319.3	320.0	319.3	321.5	321.5	323.1	323.1	324.7
40°	292.1	292.1	292.9	292.1	292.9	292.9	294.4	295.9	296.8	298.3	299.1
42.5°	265.0	266.5	265.0	265.8	266.5	267.3	268.0	268.9	272.0	273.5	275.9
45°	240.2	241.0	241.7	242.6	241.7	243.3	244.0	245.6	248.0	248.7	249.5
47.5°	216.1	217.0	217.7	218.5	218.5	220.1	220.8	222.4	223.9	224.7	225.5
50°	192.9	194.5	195.2	195.2	196.0	197.6	199.2	199.2	200.6	203.0	203.7
52.5°	172.0	172.0	173.6	174.3	175.1	175.1	177.4	178.3	179.0	180.5	182.1
55°	148.8	151.1	151.8	151.8	153.4	154.9	155.8	156.5	156.5	159.6	159.6
57.5°	128.6	129.3	130.9	130.9	130.9	133.3	133.3	134.9	135.6	136.3	137.9
60°	108.4	110.0	110.0	110.8	110.0	111.5	112.4	113.9	114.7	115.4	116.2
62.5°	89.9	89.9	90.6	90.6	90.6	90.6	92.2	92.2	93.8	94.5	95.3
65°	72.0	72.0	72.0	72.0	72.0	72.0	72.0	72.0	72.8	72.8	74.4
67.5°	55.8	55.1	53.5	54.2	53.5	53.5	52.6	52.6	53.5	53.5	55.1
70°	40.3	39.5	38.0	38.0	37.1	36.4	35.7	34.9	34.1	34.1	34.1
72.5°	26.3	24.8	22.5	21.6	21.6	20.2	18.6	17.8	17.8	17.8	17.8
75°	13.2	11.7	10.1	9.3	9.3	7.7	8.5	7.7	7.7	7.7	7.7
77.5°	5.4	3.8	3.1	3.1	3.1	2.3	2.3	2.3	2.3	2.3	2.3
80°	1.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
82.5°	0.7	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



TEST NUMBER: P583719

CATALOG NUMBER: HC810D010-HM80520830-81RWWC

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	580.3	580.3	580.3	580.3	580.3	580.3	580.3	580.3
2.5°	577.2	577.2	575.6	576.5	576.5	576.5	576.5	576.5
5°	570.2	571.1	570.2	571.1	571.1	570.2	570.2	570.2
7.5°	563.3	564.1	563.3	564.1	564.1	564.1	563.3	563.3
10°	554.7	554.7	554.7	554.7	554.7	554.0	554.7	554.7
12.5°	543.2	543.2	543.2	543.9	543.9	543.2	543.2	542.3
15°	530.7	529.2	530.0	530.7	530.0	530.0	530.0	530.0
17.5°	513.7	514.5	513.7	513.7	513.7	513.7	514.5	513.7
20°	495.8	495.8	496.7	495.8	495.8	495.8	495.8	495.1
22.5°	475.8	474.9	474.9	475.8	475.8	474.9	475.8	475.8
25°	453.3	454.0	453.3	453.3	454.0	454.0	454.0	453.3
27.5°	429.2	430.0	430.8	430.0	430.0	430.0	430.8	431.5
30°	404.5	406.0	404.5	404.5	406.0	405.2	406.0	406.0
32.5°	378.1	380.4	378.9	380.4	380.4	381.2	380.4	381.2
35°	351.7	354.1	354.1	354.1	354.8	355.7	355.7	354.8
37.5°	326.9	327.8	327.8	329.3	330.1	330.8	330.8	330.1
40°	301.3	302.9	303.7	303.7	303.7	305.3	306.9	305.3
42.5°	276.6	277.4	278.1	278.1	279.7	280.4	281.3	281.3
45°	252.5	254.1	254.9	255.7	256.5	257.9	257.2	258.8
47.5°	227.8	230.1	230.9	231.6	233.2	234.0	234.8	235.6
50°	205.3	206.9	206.9	208.4	210.7	210.7	212.3	213.1
52.5°	182.8	183.7	184.4	185.2	186.7	188.2	188.2	189.8
55°	161.2	161.9	161.9	162.8	163.5	166.6	167.3	167.3
57.5°	138.7	138.7	140.3	141.0	141.8	143.3	143.3	143.3
60°	117.0	117.8	117.8	118.5	119.4	120.9	121.6	120.9
62.5°	95.3	96.0	96.0	96.9	98.4	99.2	98.4	98.4
65°	75.1	76.0	76.0	76.7	78.3	78.3	77.5	78.3
67.5°	55.1	55.1	55.1	55.1	55.1	55.1	55.1	55.1
70°	34.9	34.1	33.3	34.1	34.1	34.1	33.3	34.9
72.5°	17.1	17.8	17.8	17.8	17.8	17.8	17.8	17.1
75°	7.7	7.7	7.0	7.0	7.0	7.7	7.7	7.0
77.5°	2.3	2.3	2.3	2.3	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°	0.0	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)