

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P735582

Luminaire Tested: **4APN6-19-B2750-W2D-CP250-5000K**

Issue Date: 1/5/2024



Test Information

Test Method: LM-79-08
Report Number: P735582
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P709119)
Test Lab: INNOVATION CENTER(G2)
Issue Date: 1/5/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 4APN6-19-B2750-W2D-CP250-5000K
Description: 4FT 1900 AMBIENT LUMEN OUTPUT APN WITH BIO UP LEDS AT 5000K CCT, AND CP250 LENS

Light Source: -
Ballast/Driver: -

Summary

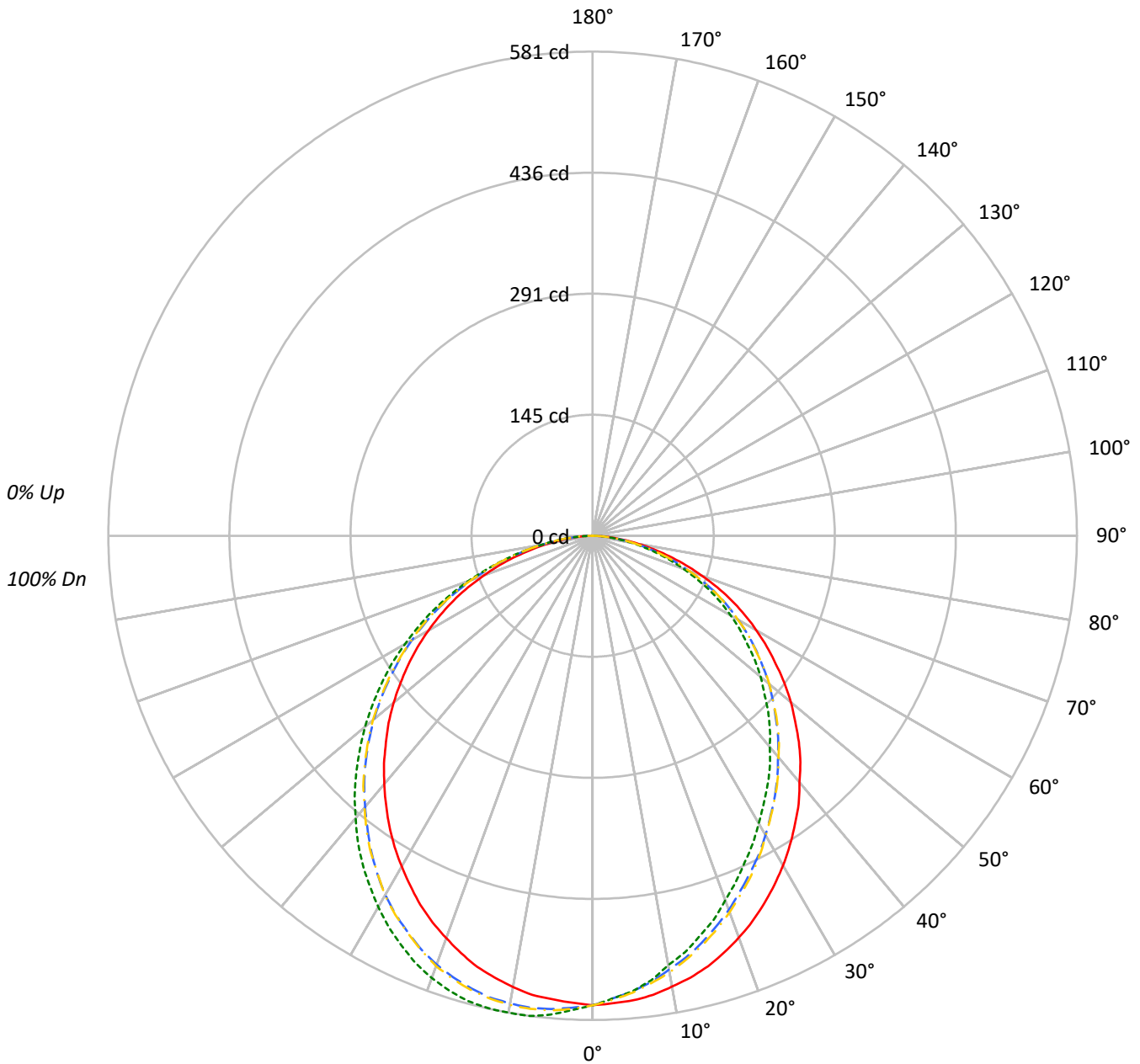
Lumens per Lamp: N/A
Luminaire Lumens: 1511.0 lumens
Efficiency: N/A
Efficacy: 79.5 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.21 / 1.33
Luminous Opening: Rectangular (W 0.29' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 19
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									
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	109	104	100	96	106	102	98	95	98	94	92	94	91	89	90	88	86	84																			
2	99	91	84	78	96	89	83	77	85	80	76	82	78	74	79	76	72	70																			
3	90	80	72	65	88	78	71	65	75	69	64	73	67	62	70	65	61	59																			
4	83	71	62	55	81	70	61	55	67	60	54	65	59	54	63	57	53	51																			
5	76	63	54	48	74	62	54	48	60	53	47	58	52	47	56	51	46	44																			
6	70	57	48	42	68	56	48	42	54	47	41	53	46	41	51	45	41	38																			
7	65	52	43	37	64	51	43	37	49	42	37	48	41	36	47	41	36	34																			
8	61	47	39	33	59	47	39	33	45	38	33	44	37	33	43	37	32	30																			
9	57	43	35	30	55	43	35	30	42	35	30	41	34	29	40	34	29	27																			
10	53	40	32	27	52	40	32	27	39	32	27	38	31	27	37	31	27	25																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	5198	5198	5198	5198
5°	5183	5082	5171	5342
10°	5146	4902	5153	5445
15°	5107	4748	5114	5521
20°	5038	4568	5044	5544
25°	4957	4399	4976	5522
30°	4868	4244	4881	5479
35°	4767	4120	4788	5420
40°	4651	3983	4683	5327
45°	4565	3884	4575	5231
50°	4455	3778	4473	5113
55°	4316	3640	4346	4972
60°	4187	3528	4200	4798
65°	4021	3382	4021	4591
70°	3747	3129	3731	4281
75°	3408	2841	3362	3839
80°	2949	2439	2848	3284
85°	2297	1821	2160	2699



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	53.2	3.5
10°-20°	151.1	10.0
20°-30°	224.6	14.9
30°-40°	264.7	17.5
40°-50°	269.6	17.8
50°-60°	240.1	15.9
60°-70°	180.9	12.0
70°-80°	100.6	6.7
80°-90°	26.1	1.7
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°	428.9	28.4
0°-40°	693.7	45.9
0°-60°	1203.3	79.6
0°-90°	1511.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1511.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	563	563	563	563	563	
5°	560	549	558	577	560	53
15°	535	497	535	578	535	151
25°	487	432	489	542	487	224
35°	423	366	425	481	423	265
45°	350	298	351	401	350	270
55°	268	226	270	309	268	240
65°	184	155	184	210	184	182
75°	96	80	94	108	96	102
85°	22	17	20	26	22	26
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	100°
0°	563.4	563.4	563.4	563.4	563.4	563.4	563.4	563.4	563.4	563.4	563.4
2.5°	561.5	561.5	562.1	559.6	556.4	555.1	554.5	553.8	555.1	555.7	555.1
5°	559.6	558.3	557.0	553.8	550.0	547.5	546.2	545.6	546.8	548.7	546.8
7.5°	555.7	553.2	550.6	546.2	541.8	537.9	536.0	534.7	536.0	537.9	536.6
10°	549.3	546.2	542.4	537.3	530.9	526.4	524.5	522.6	523.2	523.2	523.2
12.5°	543.0	538.6	534.1	527.7	520.7	515.6	512.4	509.9	511.1	511.8	511.8
15°	534.7	529.0	522.6	515.6	508.6	502.8	499.0	496.5	497.1	497.1	497.8
17.5°	524.5	518.2	511.8	503.5	495.2	488.8	484.4	481.2	482.4	483.1	483.7
20°	513.1	506.0	499.0	490.1	481.2	474.2	469.7	465.9	465.3	465.3	465.9
22.5°	500.9	493.3	485.0	475.4	465.9	458.2	453.7	449.9	449.3	449.3	449.9
25°	486.9	478.6	470.4	460.8	450.6	443.0	437.2	433.4	432.7	432.1	433.4
27.5°	472.3	464.0	455.7	446.2	435.3	427.6	421.9	418.1	416.8	416.2	417.5
30°	456.9	447.4	438.5	428.2	418.7	411.1	405.3	400.9	399.6	398.4	399.6
32.5°	440.4	430.8	421.3	411.1	401.5	393.9	388.1	383.7	382.4	381.7	383.0
35°	423.2	413.6	404.7	394.5	384.9	377.3	371.6	367.8	366.5	365.8	366.5
37.5°	405.9	396.5	387.5	377.3	367.8	360.1	354.3	350.6	349.9	349.3	349.9
40°	386.2	377.9	369.0	359.4	349.9	342.3	337.8	333.3	332.0	330.7	332.7
42.5°	369.0	360.7	351.8	342.9	333.3	325.7	320.6	316.8	315.5	314.8	315.5
45°	349.9	341.0	332.0	323.8	314.8	307.8	302.7	298.9	298.3	297.7	298.3
47.5°	329.5	321.9	314.2	305.9	297.0	290.0	285.5	281.7	280.4	279.2	280.4
50°	310.4	302.7	295.1	287.4	279.2	272.8	268.3	264.5	263.8	263.2	263.8
52.5°	290.0	282.3	275.4	267.7	260.6	254.3	249.9	246.7	246.0	245.4	246.0
55°	268.3	261.9	255.6	249.2	242.2	236.4	232.6	228.8	227.6	226.3	227.6
57.5°	247.9	242.2	235.8	229.5	223.1	218.0	214.1	210.9	210.3	209.6	210.3
60°	226.9	221.8	216.0	210.3	204.0	198.9	195.7	193.1	191.8	191.2	191.8
62.5°	205.9	200.8	196.3	190.5	184.8	181.0	177.8	175.3	174.0	173.4	174.0
65°	184.2	179.8	175.3	170.2	165.7	161.8	158.7	156.2	155.5	154.9	154.9
67.5°	161.8	158.1	154.3	149.8	144.7	140.8	137.6	135.7	135.1	134.5	135.1
70°	138.9	135.7	131.9	128.1	124.3	121.1	119.2	117.3	116.6	116.0	116.0
72.5°	117.3	114.7	111.5	108.4	105.2	102.0	100.1	98.8	98.2	97.5	97.5
75°	95.6	93.0	91.1	88.6	85.4	83.5	81.6	80.3	79.7	79.7	79.7
77.5°	75.2	73.3	71.4	68.8	66.9	65.0	63.7	63.1	62.4	62.4	62.4
80°	55.5	54.2	52.9	51.6	49.7	47.8	47.2	46.5	45.9	45.9	45.9
82.5°	37.6	37.0	35.7	34.4	33.2	32.5	31.9	31.3	31.3	31.3	31.3
85°	21.7	21.0	20.4	19.7	19.1	19.1	18.5	17.8	17.2	17.2	17.2
87.5°	9.0	9.0	9.0	8.3	7.7	7.7	7.7	7.7	7.7	7.7	7.7
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):

	110°	120°	130°	140°	150°	160°	170°	180°	190°	200°	210°
0°	563.4	563.4	563.4	563.4	563.4	563.4	563.4	563.4	563.4	563.4	563.4
2.5°	553.8	555.1	556.4	558.3	560.2	562.1	561.5	560.9	563.4	566.6	567.3
5°	545.6	546.8	548.7	551.9	555.1	557.7	558.3	558.3	563.4	567.9	569.2
7.5°	535.4	537.3	539.8	543.0	547.5	551.3	553.2	555.7	560.9	566.6	569.2
10°	522.6	525.8	529.6	534.1	538.6	543.0	546.8	550.0	556.4	562.8	566.6
12.5°	511.1	514.3	518.2	523.2	529.0	534.7	538.6	543.0	550.6	558.3	562.8
15°	498.4	501.5	506.0	511.1	517.5	523.9	529.6	535.4	543.0	551.3	556.4
17.5°	484.4	487.6	492.0	498.4	505.4	512.4	518.8	525.1	534.1	543.0	548.7
20°	467.2	471.6	477.3	483.7	492.0	500.3	506.7	513.7	523.2	532.8	539.2
22.5°	450.6	455.0	461.4	469.1	478.0	486.9	494.6	502.2	512.4	522.0	529.0
25°	434.6	439.8	446.2	453.7	462.1	471.0	479.9	488.8	499.0	509.2	516.3
27.5°	418.7	423.2	429.5	437.2	446.8	455.7	464.6	473.5	484.4	495.2	502.8
30°	400.9	405.9	411.7	419.4	429.5	439.8	448.7	458.2	469.1	479.9	487.6
32.5°	384.3	388.8	394.5	402.1	412.3	422.6	432.1	442.3	452.5	463.3	471.0
35°	367.8	372.2	377.9	385.6	395.8	405.9	415.5	425.1	435.3	445.5	453.1
37.5°	351.2	355.6	361.4	369.0	378.5	388.8	397.7	407.2	417.5	427.6	434.6
40°	333.9	338.4	342.9	350.6	360.1	370.3	379.2	388.8	399.0	409.1	416.2
42.5°	316.8	321.2	327.0	334.6	343.5	352.4	361.4	370.3	379.8	389.4	396.5
45°	299.6	303.4	309.1	316.1	325.1	333.3	342.3	350.6	360.1	369.0	376.0
47.5°	281.7	285.5	290.0	297.0	305.9	314.8	323.8	332.0	340.3	349.3	355.6
50°	264.5	268.3	273.4	279.8	288.1	296.4	304.0	311.6	320.0	328.2	333.9
52.5°	246.7	250.5	254.9	261.3	268.3	276.0	282.9	290.6	298.3	305.9	311.6
55°	228.8	231.3	235.1	240.9	248.6	256.2	263.2	270.2	277.3	283.6	289.3
57.5°	210.9	214.1	218.6	223.7	230.1	236.4	242.8	249.2	255.6	261.9	267.0
60°	193.1	195.7	198.9	203.3	209.6	215.4	221.8	227.6	233.2	239.0	243.5
62.5°	174.6	177.2	180.4	184.8	189.9	195.0	200.8	205.9	210.9	216.0	220.5
65°	155.5	158.1	161.2	165.0	169.5	174.0	179.1	184.2	188.0	191.8	196.3
67.5°	135.7	138.3	141.5	144.7	148.5	153.0	157.4	161.8	165.7	169.5	172.7
70°	116.6	118.5	121.7	124.3	127.5	130.7	134.5	138.3	140.8	144.0	147.9
72.5°	98.2	100.1	102.6	105.2	107.1	109.6	113.4	116.6	119.8	123.7	125.6
75°	80.3	81.6	83.5	85.4	87.3	89.2	91.8	94.3	96.9	98.8	101.4
77.5°	62.4	63.7	65.6	66.9	68.2	69.5	71.4	73.3	75.2	76.5	79.1
80°	45.9	47.2	48.4	49.7	51.0	52.3	52.9	53.6	56.1	58.0	59.3
82.5°	31.3	31.9	32.5	33.8	34.4	35.1	35.7	35.7	37.0	38.2	40.1
85°	17.8	18.5	19.1	19.1	19.1	19.1	19.7	20.4	21.0	22.3	23.6
87.5°	7.0	7.0	7.7	7.7	7.7	7.7	7.7	7.7	8.3	9.6	10.2
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):

	220°	230°	240°	250°	260°	270°	280°	290°	300°	310°	320°
0°	563.4	563.4	563.4	563.4	563.4	563.4	563.4	563.4	563.4	563.4	563.4
2.5°	566.6	567.3	568.5	569.2	569.8	569.8	570.4	571.0	569.8	568.5	567.9
5°	569.8	570.4	572.3	574.2	575.5	576.8	576.1	575.5	574.2	572.3	571.0
7.5°	570.4	572.3	574.2	576.8	578.7	581.2	580.0	578.7	576.1	573.6	571.7
10°	568.5	571.0	574.2	577.4	579.3	581.2	580.0	578.7	576.1	572.9	570.4
12.5°	566.0	569.2	572.9	576.1	578.0	580.6	578.7	576.8	573.6	570.4	567.3
15°	560.2	564.1	568.5	572.3	575.5	578.0	576.1	574.8	571.0	566.6	562.1
17.5°	553.2	558.3	562.8	567.3	569.8	572.3	571.0	569.8	565.3	560.2	555.1
20°	544.9	550.0	554.5	558.9	562.1	564.7	562.8	560.9	556.4	551.9	546.8
22.5°	534.7	539.8	544.9	549.3	552.5	555.1	552.5	549.3	544.9	540.5	535.4
25°	522.0	527.7	533.4	537.9	539.8	542.4	539.8	537.3	532.8	528.3	522.6
27.5°	509.2	515.0	520.7	525.1	527.0	529.6	527.0	524.5	520.1	515.6	509.9
30°	494.6	500.3	506.0	510.5	512.4	514.3	511.8	509.2	505.4	500.9	495.2
32.5°	478.0	483.7	488.2	492.7	495.2	497.8	495.2	493.3	488.8	483.1	477.3
35°	460.1	465.9	471.6	476.1	478.6	481.2	478.0	474.8	471.0	466.5	461.4
37.5°	440.4	446.8	453.1	458.2	460.1	462.7	460.1	456.9	453.1	448.7	443.0
40°	421.9	427.6	433.4	438.5	440.4	442.3	439.8	437.2	432.7	428.2	422.6
42.5°	402.8	408.5	413.6	418.1	420.0	422.6	420.0	416.8	413.6	409.8	404.7
45°	382.4	388.1	392.6	397.1	399.0	400.9	398.4	395.2	392.0	388.8	383.7
47.5°	361.4	366.5	371.0	375.4	376.7	378.5	376.0	374.1	371.0	367.8	363.3
50°	339.7	344.8	349.3	353.1	354.3	356.2	353.7	351.2	348.7	346.1	342.3
52.5°	317.4	321.9	326.3	330.1	331.4	332.7	330.1	327.6	325.1	322.5	318.7
55°	294.5	298.9	303.4	306.5	307.8	309.1	306.5	304.6	302.1	300.2	296.4
57.5°	271.5	276.0	279.8	282.9	284.2	285.5	282.9	280.4	278.5	276.6	273.4
60°	247.9	252.4	255.6	258.1	259.4	260.0	257.4	255.6	254.3	253.0	249.9
62.5°	225.0	228.2	231.3	233.2	234.5	235.1	233.2	232.0	230.7	229.5	226.9
65°	200.8	204.6	207.1	209.0	209.6	210.3	208.4	207.1	205.9	204.6	202.7
67.5°	176.6	179.8	181.6	183.5	184.2	184.2	184.2	183.5	182.3	180.4	178.5
70°	152.3	154.9	156.8	158.1	158.7	158.7	157.4	156.2	156.2	155.5	154.3
72.5°	127.5	129.4	130.7	131.9	131.9	131.9	131.9	132.6	131.9	130.7	128.8
75°	103.9	105.8	107.1	107.7	107.7	107.7	107.7	108.4	107.7	107.1	105.8
77.5°	81.6	82.9	83.5	84.1	84.1	84.1	84.8	85.4	84.8	84.1	83.5
80°	60.5	61.2	61.8	62.4	61.8	61.8	62.4	63.7	63.1	62.4	61.8
82.5°	41.4	42.0	42.7	42.7	43.3	44.0	44.0	44.0	44.0	43.3	42.7
85°	24.9	25.5	25.5	25.5	25.5	25.5	26.1	26.8	26.8	26.1	26.1
87.5°	11.5	12.1	11.5	10.9	10.2	10.2	11.5	12.7	12.7	12.1	12.1
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):

	330°	340°	350°	360°
0°	563.4	563.4	563.4	563.4
2.5°	568.5	567.9	564.7	561.5
5°	570.4	568.5	564.1	559.6
7.5°	570.4	567.9	561.5	555.7
10°	567.3	563.4	556.4	549.3
12.5°	563.4	558.9	550.6	543.0
15°	557.7	552.5	543.7	534.7
17.5°	549.3	543.0	534.1	524.5
20°	541.1	534.1	523.2	513.1
22.5°	529.6	523.2	511.8	500.9
25°	516.9	509.9	498.4	486.9
27.5°	503.5	495.2	483.7	472.3
30°	488.2	479.9	468.5	456.9
32.5°	471.6	464.0	452.5	440.4
35°	455.0	446.8	435.3	423.2
37.5°	436.6	428.9	417.5	405.9
40°	416.8	409.1	397.7	386.2
42.5°	398.4	391.3	379.8	369.0
45°	377.9	371.0	360.1	349.9
47.5°	356.9	349.9	339.7	329.5
50°	336.5	329.5	320.0	310.4
52.5°	313.6	307.8	298.9	290.0
55°	291.3	285.5	276.6	268.3
57.5°	269.0	263.8	255.6	247.9
60°	245.4	240.3	233.9	226.9
62.5°	223.1	218.6	212.2	205.9
65°	199.5	195.7	189.9	184.2
67.5°	175.3	172.1	167.0	161.8
70°	151.1	147.2	143.4	138.9
72.5°	126.9	124.9	121.1	117.3
75°	103.9	102.0	98.8	95.6
77.5°	82.3	80.3	77.8	75.2
80°	60.5	59.3	57.4	55.5
82.5°	42.0	40.8	39.5	37.6
85°	25.5	24.2	22.9	21.7
87.5°	11.5	10.9	9.6	9.0
90°	0.0	0.0	0.0	0.0



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— 0°-180° - - 45°-225° - - - 90°-270° - · - 135°-315°













(END OF REPORT)