

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: P709092

Luminaire Tested: **4APN-X-34L935-UNV**

Issue Date: 09/12/2023



Test Information

Test Method: LM-79-08
Report Number: P709092
Test Lab: INNOVATION CENTER(G2)
Issue Date: 09/12/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 4APN-X-34L935-UNV
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture EXAM Light
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

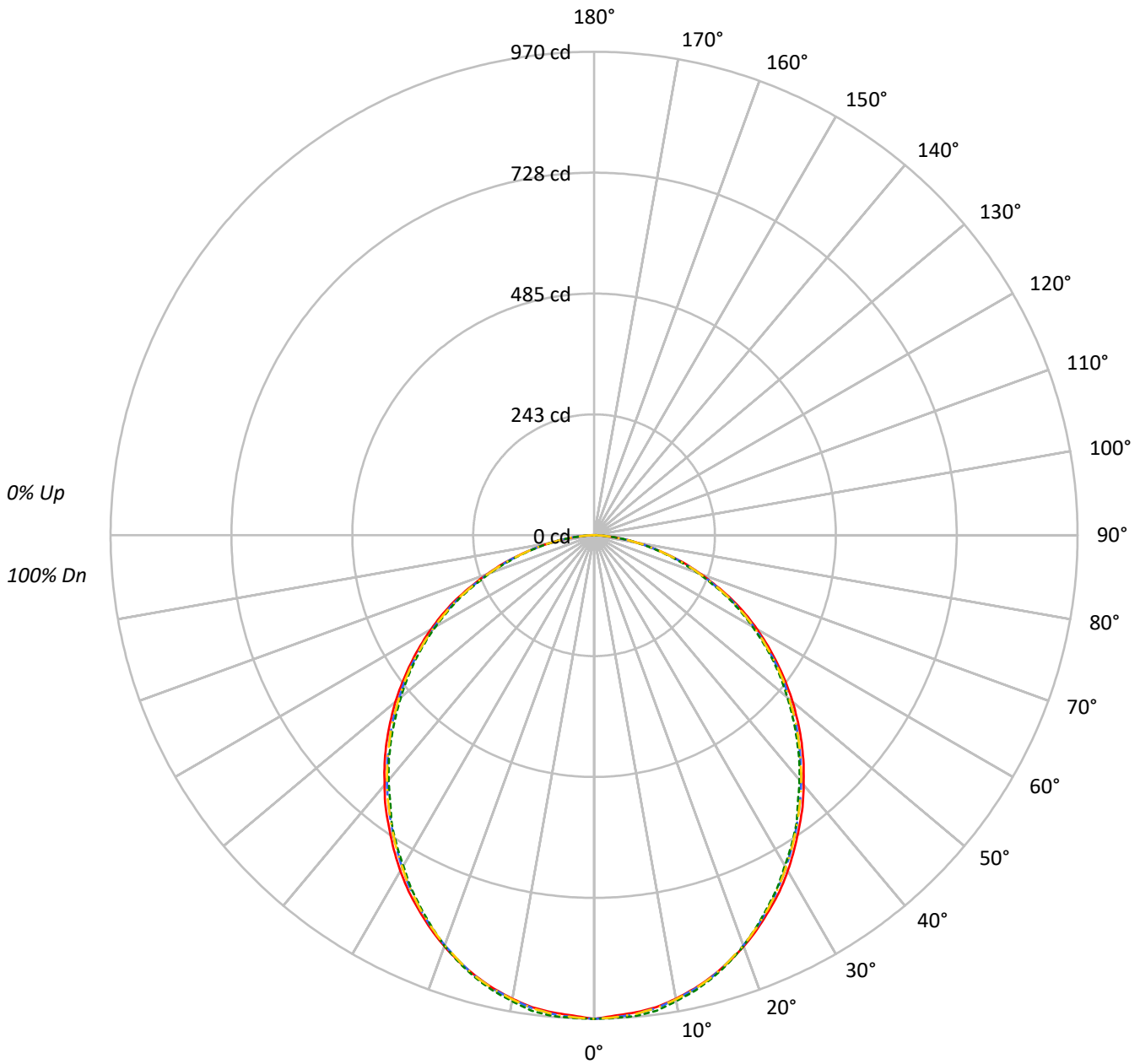
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2524.7 lumens
Efficiency: N/A
Efficacy: 68.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.18 / 1.3
Luminous Opening: Rectangular (W 0.29' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 36.8
Input Voltage (V): 120
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

TEST NUMBER: P709092
CATALOG NUMBER: 4APN-X-34L935-UNV

Luminous Intensity Polar Plot



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



TEST NUMBER: P709092
 CATALOG NUMBER: 4APN-X-34L935-UNV

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	102	102	102	100
1	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	86	86	86	84
2	99	91	84	79	97	89	83	78	86	80	76	82	78	74	79	76	73	73	73	73	70
3	91	80	72	66	88	79	71	65	76	69	64	73	67	63	70	66	62	62	62	62	60
4	83	71	62	56	81	70	62	55	67	60	55	65	59	54	63	58	53	53	53	53	51
5	76	64	55	48	74	63	54	48	60	53	47	59	52	47	57	51	46	46	46	46	44
6	71	57	49	42	69	57	48	42	55	47	42	53	46	41	51	46	41	41	41	41	39
7	66	52	43	37	64	51	43	37	50	42	37	48	42	37	47	41	36	36	36	36	34
8	61	48	39	33	60	47	39	33	46	38	33	44	38	33	43	37	33	33	33	33	31
9	57	44	36	30	56	43	35	30	42	35	30	41	34	30	40	34	30	30	30	30	28
10	54	40	33	27	52	40	32	27	39	32	27	38	32	27	37	31	27	27	27	27	25

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	8953	8953	8953	8953
5°	8899	8965	8899	8965
10°	8847	8892	8847	8892
15°	8748	8782	8748	8782
20°	8620	8609	8620	8609
25°	8455	8383	8455	8383
30°	8281	8154	8281	8154
35°	8073	7968	8073	7968
40°	7877	7720	7877	7720
45°	7684	7499	7684	7499
50°	7465	7261	7465	7261
55°	7224	7052	7224	7052
60°	6975	6778	6975	6778
65°	6674	6466	6674	6466
70°	6169	5978	6169	5978
75°	5575	5408	5575	5408
80°	4782	4660	4782	4660
85°	3642	3642	3642	3642



TEST NUMBER: P709092
 CATALOG NUMBER: 4APN-X-34L935-UNV

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	91.6	3.6
10°-20°	258.6	10.2
20°-30°	381.2	15.1
30°-40°	445.0	17.6
40°-50°	448.7	17.8
50°-60°	396.5	15.7
60°-70°	296.5	11.7
70°-80°	164.4	6.5
80°-90°	42.1	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°	731.4	29.0
0°-40°	1176.4	46.6
0°-60°	2021.6	80.1
0°-90°	2524.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2524.7	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	970	970	970	970	970	
5°	961	968	961	968	961	91
15°	916	919	916	919	916	258
25°	831	824	831	824	831	383
35°	717	707	717	707	717	449
45°	589	575	589	575	589	454
55°	449	438	449	438	449	402
65°	306	296	306	296	306	301
75°	156	152	156	152	156	166
85°	34	34	34	34	34	42
90°	0	0	0	0	0	



TEST NUMBER: P709092

CATALOG NUMBER: 4APN-X-34L935-UNV

CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	100°
0°	970.4	970.4	970.4	970.4	970.4	970.4	970.4	970.4	970.4	970.4	970.4
2.5°	964.5	969.2	973.9	972.8	969.2	966.8	968.0	968.0	969.2	969.2	969.2
5°	960.9	965.7	969.2	968.0	964.5	963.3	963.3	963.3	965.7	968.0	965.7
7.5°	955.0	958.5	962.1	960.9	957.4	956.2	956.2	957.4	959.7	962.1	959.7
10°	944.3	949.1	952.6	950.2	946.7	944.3	944.3	944.3	946.7	949.1	946.7
12.5°	931.3	934.8	938.4	937.2	933.7	931.3	931.3	931.3	933.7	936.0	933.7
15°	915.9	919.4	923.0	921.8	918.3	915.9	915.9	915.9	918.3	919.4	918.3
17.5°	898.1	901.7	905.2	902.9	898.1	895.7	895.7	895.7	898.1	899.3	898.1
20°	878.0	881.5	883.9	881.5	876.8	874.4	873.2	873.2	875.6	876.8	875.6
22.5°	855.5	857.8	860.2	857.8	853.1	850.7	849.5	848.4	849.5	850.7	849.5
25°	830.6	832.9	835.3	832.9	828.2	824.7	823.5	822.3	823.5	823.5	823.5
27.5°	805.7	806.9	809.3	805.7	801.0	797.4	796.2	795.0	796.2	796.2	796.2
30°	777.3	778.4	780.8	777.3	771.3	767.8	766.6	765.4	765.4	765.4	765.4
32.5°	747.6	750.0	752.4	747.6	741.7	738.2	737.0	735.8	737.0	737.0	737.0
35°	716.8	718.0	720.4	716.8	710.9	707.4	705.0	703.8	706.2	707.4	706.2
37.5°	687.2	688.4	689.6	686.0	680.1	676.5	674.2	673.0	671.8	671.8	671.8
40°	654.0	655.2	657.6	654.0	648.1	644.6	642.2	641.0	641.0	641.0	641.0
42.5°	622.0	623.2	624.4	620.9	614.9	611.4	609.0	607.8	609.0	609.0	609.0
45°	588.9	588.9	590.1	586.5	581.8	578.2	575.8	574.7	574.7	574.7	574.7
47.5°	554.5	555.7	556.9	553.3	548.6	545.0	542.7	540.3	540.3	540.3	540.3
50°	520.1	520.1	521.3	517.8	513.0	509.5	508.3	507.1	505.9	505.9	505.9
52.5°	484.6	485.8	487.0	483.4	479.9	476.3	473.9	472.8	472.8	472.8	472.8
55°	449.1	449.1	450.2	447.9	444.3	440.8	438.4	437.2	438.4	438.4	438.4
57.5°	413.5	414.7	415.9	412.3	408.8	405.2	404.0	402.8	402.8	402.8	402.8
60°	378.0	378.0	379.2	376.8	373.2	369.7	368.5	367.3	367.3	367.3	367.3
62.5°	342.4	342.4	343.6	341.2	337.7	334.1	332.9	331.8	331.8	331.8	331.8
65°	305.7	305.7	305.7	303.3	301.0	299.8	298.6	297.4	296.2	296.2	296.2
67.5°	265.4	265.4	266.6	264.2	261.9	260.7	259.5	258.3	257.1	257.1	257.1
70°	228.7	228.7	229.9	228.7	226.3	225.1	223.9	222.8	221.6	221.6	221.6
72.5°	193.1	193.1	193.1	191.9	190.8	189.6	188.4	187.2	186.0	186.0	186.0
75°	156.4	156.4	157.6	156.4	155.2	154.0	152.8	152.8	151.7	151.7	151.7
77.5°	122.0	123.2	124.4	123.2	122.0	120.9	119.7	119.7	118.5	118.5	118.5
80°	90.0	91.2	92.4	91.2	90.0	88.9	87.7	87.7	87.7	87.7	87.7
82.5°	60.4	61.6	62.8	61.6	60.4	60.4	59.2	59.2	59.2	59.2	59.2
85°	34.4	35.5	36.7	36.7	35.5	35.5	34.4	34.4	34.4	34.4	34.4
87.5°	13.0	14.2	15.4	15.4	14.2	14.2	14.2	14.2	14.2	14.2	14.2
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: P709092

CATALOG NUMBER: 4APN-X-34L935-UNV

CANDELA DISTRIBUTION (continued):

	110°	120°	130°	140°	150°	160°	170°	180°	190°	200°	210°
0°	970.4	970.4	970.4	970.4	970.4	970.4	970.4	970.4	970.4	970.4	970.4
2.5°	968.0	968.0	966.8	969.2	972.8	973.9	969.2	964.5	969.2	973.9	972.8
5°	963.3	963.3	963.3	964.5	968.0	969.2	965.7	960.9	965.7	969.2	968.0
7.5°	957.4	956.2	956.2	957.4	960.9	962.1	958.5	955.0	958.5	962.1	960.9
10°	944.3	944.3	944.3	946.7	950.2	952.6	949.1	944.3	949.1	952.6	950.2
12.5°	931.3	931.3	931.3	933.7	937.2	938.4	934.8	931.3	934.8	938.4	937.2
15°	915.9	915.9	915.9	918.3	921.8	923.0	919.4	915.9	919.4	923.0	921.8
17.5°	895.7	895.7	895.7	898.1	902.9	905.2	901.7	898.1	901.7	905.2	902.9
20°	873.2	873.2	874.4	876.8	881.5	883.9	881.5	878.0	881.5	883.9	881.5
22.5°	848.4	849.5	850.7	853.1	857.8	860.2	857.8	855.5	857.8	860.2	857.8
25°	822.3	823.5	824.7	828.2	832.9	835.3	832.9	830.6	832.9	835.3	832.9
27.5°	795.0	796.2	797.4	801.0	805.7	809.3	806.9	805.7	806.9	809.3	805.7
30°	765.4	766.6	767.8	771.3	777.3	780.8	778.4	777.3	778.4	780.8	777.3
32.5°	735.8	737.0	738.2	741.7	747.6	752.4	750.0	747.6	750.0	752.4	747.6
35°	703.8	705.0	707.4	710.9	716.8	720.4	718.0	716.8	718.0	720.4	716.8
37.5°	673.0	674.2	676.5	680.1	686.0	689.6	688.4	687.2	688.4	689.6	686.0
40°	641.0	642.2	644.6	648.1	654.0	657.6	655.2	654.0	655.2	657.6	654.0
42.5°	607.8	609.0	611.4	614.9	620.9	624.4	623.2	622.0	623.2	624.4	620.9
45°	574.7	575.8	578.2	581.8	586.5	590.1	588.9	588.9	588.9	590.1	586.5
47.5°	540.3	542.7	545.0	548.6	553.3	556.9	555.7	554.5	555.7	556.9	553.3
50°	507.1	508.3	509.5	513.0	517.8	521.3	520.1	520.1	520.1	521.3	517.8
52.5°	472.8	473.9	476.3	479.9	483.4	487.0	485.8	484.6	485.8	487.0	483.4
55°	437.2	438.4	440.8	444.3	447.9	450.2	449.1	449.1	449.1	450.2	447.9
57.5°	402.8	404.0	405.2	408.8	412.3	415.9	414.7	413.5	414.7	415.9	412.3
60°	367.3	368.5	369.7	373.2	376.8	379.2	378.0	378.0	378.0	379.2	376.8
62.5°	331.8	332.9	334.1	337.7	341.2	343.6	342.4	342.4	342.4	343.6	341.2
65°	297.4	298.6	299.8	301.0	303.3	305.7	305.7	305.7	305.7	305.7	303.3
67.5°	258.3	259.5	260.7	261.9	264.2	266.6	265.4	265.4	265.4	266.6	264.2
70°	222.8	223.9	225.1	226.3	228.7	229.9	228.7	228.7	228.7	229.9	228.7
72.5°	187.2	188.4	189.6	190.8	191.9	193.1	193.1	193.1	193.1	193.1	191.9
75°	152.8	152.8	154.0	155.2	156.4	157.6	156.4	156.4	156.4	157.6	156.4
77.5°	119.7	119.7	120.9	122.0	123.2	124.4	123.2	122.0	123.2	124.4	123.2
80°	87.7	87.7	88.9	90.0	91.2	92.4	91.2	90.0	91.2	92.4	91.2
82.5°	59.2	59.2	60.4	60.4	61.6	62.8	61.6	60.4	61.6	62.8	61.6
85°	34.4	34.4	35.5	35.5	36.7	36.7	35.5	34.4	35.5	36.7	36.7
87.5°	14.2	14.2	14.2	14.2	15.4	15.4	14.2	13.0	14.2	15.4	15.4
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: P709092

CATALOG NUMBER: 4APN-X-34L935-UNV

CANDELA DISTRIBUTION (continued):

	220°	230°	240°	250°	260°	270°	280°	290°	300°	310°	320°
0°	970.4	970.4	970.4	970.4	970.4	970.4	970.4	970.4	970.4	970.4	970.4
2.5°	969.2	966.8	968.0	968.0	969.2	969.2	969.2	968.0	968.0	966.8	969.2
5°	964.5	963.3	963.3	963.3	965.7	968.0	965.7	963.3	963.3	963.3	964.5
7.5°	957.4	956.2	956.2	957.4	959.7	962.1	959.7	957.4	956.2	956.2	957.4
10°	946.7	944.3	944.3	944.3	946.7	949.1	946.7	944.3	944.3	944.3	946.7
12.5°	933.7	931.3	931.3	931.3	933.7	936.0	933.7	931.3	931.3	931.3	933.7
15°	918.3	915.9	915.9	915.9	918.3	919.4	918.3	915.9	915.9	915.9	918.3
17.5°	898.1	895.7	895.7	895.7	898.1	899.3	898.1	895.7	895.7	895.7	898.1
20°	876.8	874.4	873.2	873.2	875.6	876.8	875.6	873.2	873.2	874.4	876.8
22.5°	853.1	850.7	849.5	848.4	849.5	850.7	849.5	848.4	849.5	850.7	853.1
25°	828.2	824.7	823.5	822.3	823.5	823.5	823.5	822.3	823.5	824.7	828.2
27.5°	801.0	797.4	796.2	795.0	796.2	796.2	796.2	795.0	796.2	797.4	801.0
30°	771.3	767.8	766.6	765.4	765.4	765.4	765.4	765.4	766.6	767.8	771.3
32.5°	741.7	738.2	737.0	735.8	737.0	737.0	737.0	735.8	737.0	738.2	741.7
35°	710.9	707.4	705.0	703.8	706.2	707.4	706.2	703.8	705.0	707.4	710.9
37.5°	680.1	676.5	674.2	673.0	671.8	671.8	671.8	673.0	674.2	676.5	680.1
40°	648.1	644.6	642.2	641.0	641.0	641.0	641.0	641.0	642.2	644.6	648.1
42.5°	614.9	611.4	609.0	607.8	609.0	609.0	609.0	607.8	609.0	611.4	614.9
45°	581.8	578.2	575.8	574.7	574.7	574.7	574.7	574.7	575.8	578.2	581.8
47.5°	548.6	545.0	542.7	540.3	540.3	540.3	540.3	540.3	542.7	545.0	548.6
50°	513.0	509.5	508.3	507.1	505.9	505.9	505.9	507.1	508.3	509.5	513.0
52.5°	479.9	476.3	473.9	472.8	472.8	472.8	472.8	472.8	473.9	476.3	479.9
55°	444.3	440.8	438.4	437.2	438.4	438.4	438.4	437.2	438.4	440.8	444.3
57.5°	408.8	405.2	404.0	402.8	402.8	402.8	402.8	402.8	404.0	405.2	408.8
60°	373.2	369.7	368.5	367.3	367.3	367.3	367.3	367.3	368.5	369.7	373.2
62.5°	337.7	334.1	332.9	331.8	331.8	331.8	331.8	331.8	332.9	334.1	337.7
65°	301.0	299.8	298.6	297.4	296.2	296.2	296.2	297.4	298.6	299.8	301.0
67.5°	261.9	260.7	259.5	258.3	257.1	257.1	257.1	258.3	259.5	260.7	261.9
70°	226.3	225.1	223.9	222.8	221.6	221.6	221.6	222.8	223.9	225.1	226.3
72.5°	190.8	189.6	188.4	187.2	186.0	186.0	186.0	187.2	188.4	189.6	190.8
75°	155.2	154.0	152.8	152.8	151.7	151.7	151.7	152.8	152.8	154.0	155.2
77.5°	122.0	120.9	119.7	119.7	118.5	118.5	118.5	119.7	119.7	120.9	122.0
80°	90.0	88.9	87.7	87.7	87.7	87.7	87.7	87.7	87.7	88.9	90.0
82.5°	60.4	60.4	59.2	59.2	59.2	59.2	59.2	59.2	59.2	60.4	60.4
85°	35.5	35.5	34.4	34.4	34.4	34.4	34.4	34.4	34.4	35.5	35.5
87.5°	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2
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: P709092

CATALOG NUMBER: 4APN-X-34L935-UNV

CANDELA DISTRIBUTION (continued):

	330°	340°	350°	360°
0°	970.4	970.4	970.4	970.4
2.5°	972.8	973.9	969.2	964.5
5°	968.0	969.2	965.7	960.9
7.5°	960.9	962.1	958.5	955.0
10°	950.2	952.6	949.1	944.3
12.5°	937.2	938.4	934.8	931.3
15°	921.8	923.0	919.4	915.9
17.5°	902.9	905.2	901.7	898.1
20°	881.5	883.9	881.5	878.0
22.5°	857.8	860.2	857.8	855.5
25°	832.9	835.3	832.9	830.6
27.5°	805.7	809.3	806.9	805.7
30°	777.3	780.8	778.4	777.3
32.5°	747.6	752.4	750.0	747.6
35°	716.8	720.4	718.0	716.8
37.5°	686.0	689.6	688.4	687.2
40°	654.0	657.6	655.2	654.0
42.5°	620.9	624.4	623.2	622.0
45°	586.5	590.1	588.9	588.9
47.5°	553.3	556.9	555.7	554.5
50°	517.8	521.3	520.1	520.1
52.5°	483.4	487.0	485.8	484.6
55°	447.9	450.2	449.1	449.1
57.5°	412.3	415.9	414.7	413.5
60°	376.8	379.2	378.0	378.0
62.5°	341.2	343.6	342.4	342.4
65°	303.3	305.7	305.7	305.7
67.5°	264.2	266.6	265.4	265.4
70°	228.7	229.9	228.7	228.7
72.5°	191.9	193.1	193.1	193.1
75°	156.4	157.6	156.4	156.4
77.5°	123.2	124.4	123.2	122.0
80°	91.2	92.4	91.2	90.0
82.5°	61.6	62.8	61.6	60.4
85°	36.7	36.7	35.5	34.4
87.5°	15.4	15.4	14.2	13.0
90°	0.0	0.0	0.0	0.0

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