

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: P709086

Luminaire Tested: **4APN-X-34L930-UNV**

Issue Date: 09/12/2023



Test Information

Test Method: LM-79-08
Report Number: P709086
Test Lab: INNOVATION CENTER(G2)
Issue Date: 09/12/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 4APN-X-34L930-UNV
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture EXAM Light
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

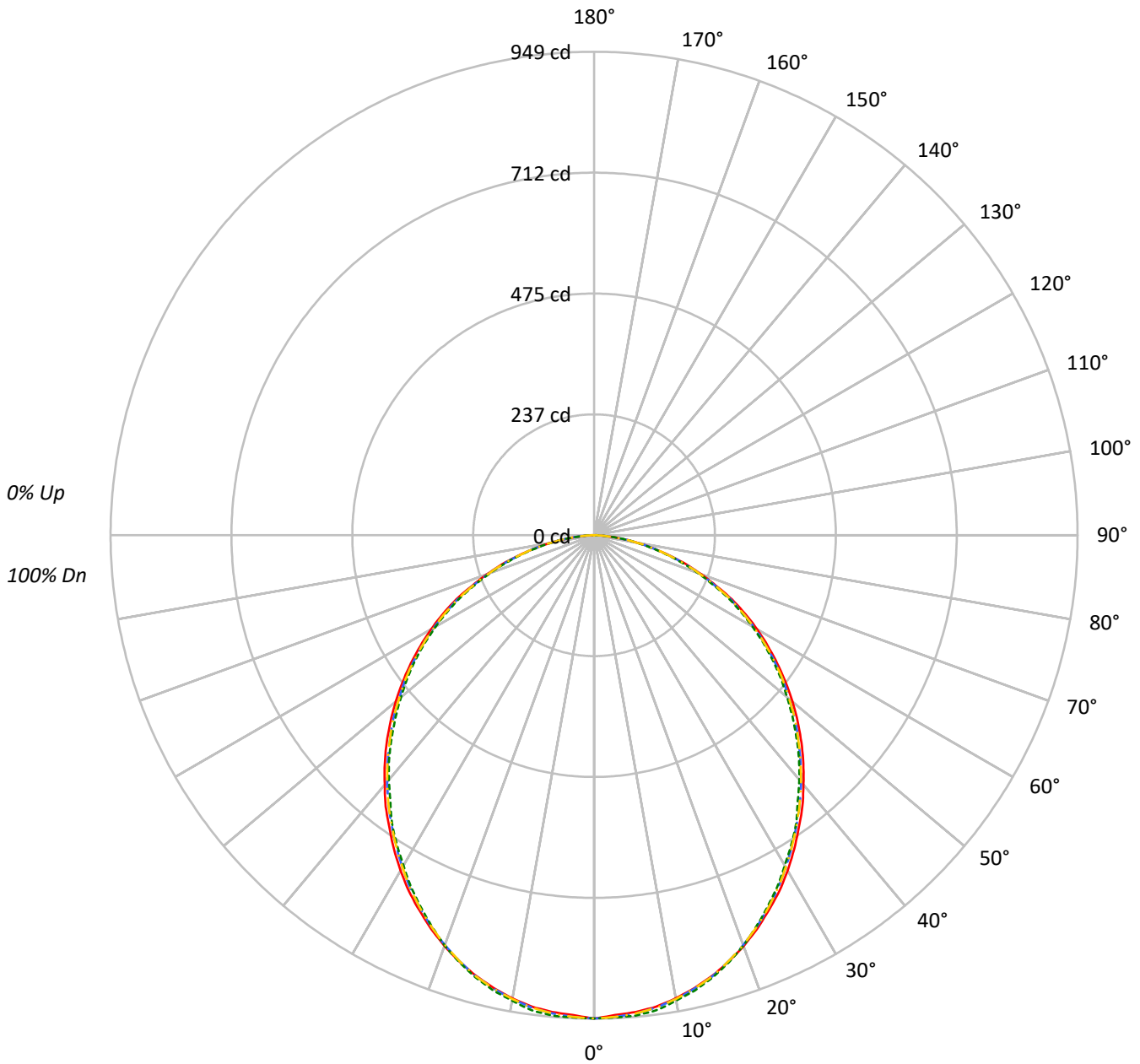
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2468.0 lumens
Efficiency: N/A
Efficacy: 67.1 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

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Luminous Intensity Polar Plot



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



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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				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°	8752	8752	8752	8752
5°	8699	8764	8699	8764
10°	8648	8691	8648	8691
15°	8552	8585	8552	8585
20°	8427	8415	8427	8415
25°	8265	8195	8265	8195
30°	8095	7971	8095	7971
35°	7892	7788	7892	7788
40°	7700	7547	7700	7547
45°	7510	7329	7510	7329
50°	7299	7099	7299	7099
55°	7061	6893	7061	6893
60°	6818	6626	6818	6626
65°	6523	6322	6523	6322
70°	6029	5843	6029	5843
75°	5450	5286	5450	5286
80°	4676	4553	4676	4553
85°	3557	3557	3557	3557



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.5	3.6
10°-20°	252.8	10.2
20°-30°	372.6	15.1
30°-40°	435.0	17.6
40°-50°	438.6	17.8
50°-60°	387.6	15.7
60°-70°	289.9	11.7
70°-80°	160.7	6.5
80°-90°	41.2	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°	715.0	29.0
0°-40°	1150.0	46.6
0°-60°	1976.2	80.1
0°-90°	2468.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2468.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	949	949	949	949	949	
5°	939	946	939	946	939	89
15°	895	899	895	899	895	252
25°	812	805	812	805	812	374
35°	701	692	701	692	701	439
45°	576	562	576	562	576	444
55°	439	428	439	428	439	393
65°	299	290	299	290	299	294
75°	153	148	153	148	153	163
85°	34	34	34	34	34	41
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°	948.6	948.6	948.6	948.6	948.6	948.6	948.6	948.6	948.6	948.6	948.6
2.5°	942.8	947.4	952.1	950.9	947.4	945.1	946.3	946.3	947.4	947.4	947.4
5°	939.3	944.0	947.4	946.3	942.8	941.6	941.6	941.6	944.0	946.3	944.0
7.5°	933.5	937.0	940.5	939.3	935.9	934.7	934.7	935.9	938.2	940.5	938.2
10°	923.1	927.7	931.2	928.9	925.4	923.1	923.1	923.1	925.4	927.7	925.4
12.5°	910.4	913.8	917.3	916.2	912.7	910.4	910.4	910.4	912.7	915.0	912.7
15°	895.3	898.8	902.3	901.1	897.6	895.3	895.3	895.3	897.6	898.8	897.6
17.5°	877.9	881.4	884.9	882.6	877.9	875.6	875.6	875.6	877.9	879.1	877.9
20°	858.3	861.7	864.0	861.7	857.1	854.8	853.6	853.6	855.9	857.1	855.9
22.5°	836.2	838.6	840.9	838.6	833.9	831.6	830.5	829.3	830.5	831.6	830.5
25°	811.9	814.2	816.6	814.2	809.6	806.1	805.0	803.8	805.0	805.0	805.0
27.5°	787.6	788.8	791.1	787.6	783.0	779.5	778.3	777.2	778.3	778.3	778.3
30°	759.8	761.0	763.3	759.8	754.0	750.5	749.4	748.2	748.2	748.2	748.2
32.5°	730.8	733.2	735.5	730.8	725.1	721.6	720.4	719.3	720.4	720.4	720.4
35°	700.7	701.9	704.2	700.7	694.9	691.5	689.1	688.0	690.3	691.5	690.3
37.5°	671.8	672.9	674.1	670.6	664.8	661.4	659.0	657.9	656.7	656.7	656.7
40°	639.3	640.5	642.8	639.3	633.6	630.1	627.8	626.6	626.6	626.6	626.6
42.5°	608.1	609.2	610.4	606.9	601.1	597.6	595.3	594.2	595.3	595.3	595.3
45°	575.6	575.6	576.8	573.3	568.7	565.2	562.9	561.7	561.7	561.7	561.7
47.5°	542.1	543.2	544.4	540.9	536.3	532.8	530.5	528.2	528.2	528.2	528.2
50°	508.5	508.5	509.6	506.1	501.5	498.0	496.9	495.7	494.6	494.6	494.6
52.5°	473.7	474.9	476.0	472.6	469.1	465.6	463.3	462.1	462.1	462.1	462.1
55°	439.0	439.0	440.1	437.8	434.3	430.9	428.5	427.4	428.5	428.5	428.5
57.5°	404.2	405.4	406.5	403.1	399.6	396.1	395.0	393.8	393.8	393.8	393.8
60°	369.5	369.5	370.6	368.3	364.8	361.4	360.2	359.1	359.1	359.1	359.1
62.5°	334.7	334.7	335.9	333.6	330.1	326.6	325.5	324.3	324.3	324.3	324.3
65°	298.8	298.8	298.8	296.5	294.2	293.0	291.9	290.7	289.6	289.6	289.6
67.5°	259.4	259.4	260.6	258.3	256.0	254.8	253.7	252.5	251.3	251.3	251.3
70°	223.5	223.5	224.7	223.5	221.2	220.1	218.9	217.7	216.6	216.6	216.6
72.5°	188.8	188.8	188.8	187.6	186.5	185.3	184.2	183.0	181.8	181.8	181.8
75°	152.9	152.9	154.0	152.9	151.7	150.6	149.4	149.4	148.3	148.3	148.3
77.5°	119.3	120.5	121.6	120.5	119.3	118.1	117.0	117.0	115.8	115.8	115.8
80°	88.0	89.2	90.3	89.2	88.0	86.9	85.7	85.7	85.7	85.7	85.7
82.5°	59.1	60.2	61.4	60.2	59.1	59.1	57.9	57.9	57.9	57.9	57.9
85°	33.6	34.7	35.9	35.9	34.7	34.7	33.6	33.6	33.6	33.6	33.6
87.5°	12.7	13.9	15.1	15.1	13.9	13.9	13.9	13.9	13.9	13.9	13.9
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°	948.6	948.6	948.6	948.6	948.6	948.6	948.6	948.6	948.6	948.6	948.6
2.5°	946.3	946.3	945.1	947.4	950.9	952.1	947.4	942.8	947.4	952.1	950.9
5°	941.6	941.6	941.6	942.8	946.3	947.4	944.0	939.3	944.0	947.4	946.3
7.5°	935.9	934.7	934.7	935.9	939.3	940.5	937.0	933.5	937.0	940.5	939.3
10°	923.1	923.1	923.1	925.4	928.9	931.2	927.7	923.1	927.7	931.2	928.9
12.5°	910.4	910.4	910.4	912.7	916.2	917.3	913.8	910.4	913.8	917.3	916.2
15°	895.3	895.3	895.3	897.6	901.1	902.3	898.8	895.3	898.8	902.3	901.1
17.5°	875.6	875.6	875.6	877.9	882.6	884.9	881.4	877.9	881.4	884.9	882.6
20°	853.6	853.6	854.8	857.1	861.7	864.0	861.7	858.3	861.7	864.0	861.7
22.5°	829.3	830.5	831.6	833.9	838.6	840.9	838.6	836.2	838.6	840.9	838.6
25°	803.8	805.0	806.1	809.6	814.2	816.6	814.2	811.9	814.2	816.6	814.2
27.5°	777.2	778.3	779.5	783.0	787.6	791.1	788.8	787.6	788.8	791.1	787.6
30°	748.2	749.4	750.5	754.0	759.8	763.3	761.0	759.8	761.0	763.3	759.8
32.5°	719.3	720.4	721.6	725.1	730.8	735.5	733.2	730.8	733.2	735.5	730.8
35°	688.0	689.1	691.5	694.9	700.7	704.2	701.9	700.7	701.9	704.2	700.7
37.5°	657.9	659.0	661.4	664.8	670.6	674.1	672.9	671.8	672.9	674.1	670.6
40°	626.6	627.8	630.1	633.6	639.3	642.8	640.5	639.3	640.5	642.8	639.3
42.5°	594.2	595.3	597.6	601.1	606.9	610.4	609.2	608.1	609.2	610.4	606.9
45°	561.7	562.9	565.2	568.7	573.3	576.8	575.6	575.6	575.6	576.8	573.3
47.5°	528.2	530.5	532.8	536.3	540.9	544.4	543.2	542.1	543.2	544.4	540.9
50°	495.7	496.9	498.0	501.5	506.1	509.6	508.5	508.5	508.5	509.6	506.1
52.5°	462.1	463.3	465.6	469.1	472.6	476.0	474.9	473.7	474.9	476.0	472.6
55°	427.4	428.5	430.9	434.3	437.8	440.1	439.0	439.0	439.0	440.1	437.8
57.5°	393.8	395.0	396.1	399.6	403.1	406.5	405.4	404.2	405.4	406.5	403.1
60°	359.1	360.2	361.4	364.8	368.3	370.6	369.5	369.5	369.5	370.6	368.3
62.5°	324.3	325.5	326.6	330.1	333.6	335.9	334.7	334.7	334.7	335.9	333.6
65°	290.7	291.9	293.0	294.2	296.5	298.8	298.8	298.8	298.8	298.8	296.5
67.5°	252.5	253.7	254.8	256.0	258.3	260.6	259.4	259.4	259.4	260.6	258.3
70°	217.7	218.9	220.1	221.2	223.5	224.7	223.5	223.5	223.5	224.7	223.5
72.5°	183.0	184.2	185.3	186.5	187.6	188.8	188.8	188.8	188.8	188.8	187.6
75°	149.4	149.4	150.6	151.7	152.9	154.0	152.9	152.9	152.9	154.0	152.9
77.5°	117.0	117.0	118.1	119.3	120.5	121.6	120.5	119.3	120.5	121.6	120.5
80°	85.7	85.7	86.9	88.0	89.2	90.3	89.2	88.0	89.2	90.3	89.2
82.5°	57.9	57.9	59.1	59.1	60.2	61.4	60.2	59.1	60.2	61.4	60.2
85°	33.6	33.6	34.7	34.7	35.9	35.9	34.7	33.6	34.7	35.9	35.9
87.5°	13.9	13.9	13.9	13.9	15.1	15.1	13.9	12.7	13.9	15.1	15.1
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):

	220°	230°	240°	250°	260°	270°	280°	290°	300°	310°	320°
0°	948.6	948.6	948.6	948.6	948.6	948.6	948.6	948.6	948.6	948.6	948.6
2.5°	947.4	945.1	946.3	946.3	947.4	947.4	947.4	946.3	946.3	945.1	947.4
5°	942.8	941.6	941.6	941.6	944.0	946.3	944.0	941.6	941.6	941.6	942.8
7.5°	935.9	934.7	934.7	935.9	938.2	940.5	938.2	935.9	934.7	934.7	935.9
10°	925.4	923.1	923.1	923.1	925.4	927.7	925.4	923.1	923.1	923.1	925.4
12.5°	912.7	910.4	910.4	910.4	912.7	915.0	912.7	910.4	910.4	910.4	912.7
15°	897.6	895.3	895.3	895.3	897.6	898.8	897.6	895.3	895.3	895.3	897.6
17.5°	877.9	875.6	875.6	875.6	877.9	879.1	877.9	875.6	875.6	875.6	877.9
20°	857.1	854.8	853.6	853.6	855.9	857.1	855.9	853.6	853.6	854.8	857.1
22.5°	833.9	831.6	830.5	829.3	830.5	831.6	830.5	829.3	830.5	831.6	833.9
25°	809.6	806.1	805.0	803.8	805.0	805.0	805.0	803.8	805.0	806.1	809.6
27.5°	783.0	779.5	778.3	777.2	778.3	778.3	778.3	777.2	778.3	779.5	783.0
30°	754.0	750.5	749.4	748.2	748.2	748.2	748.2	748.2	749.4	750.5	754.0
32.5°	725.1	721.6	720.4	719.3	720.4	720.4	720.4	719.3	720.4	721.6	725.1
35°	694.9	691.5	689.1	688.0	690.3	691.5	690.3	688.0	689.1	691.5	694.9
37.5°	664.8	661.4	659.0	657.9	656.7	656.7	656.7	657.9	659.0	661.4	664.8
40°	633.6	630.1	627.8	626.6	626.6	626.6	626.6	626.6	627.8	630.1	633.6
42.5°	601.1	597.6	595.3	594.2	595.3	595.3	595.3	594.2	595.3	597.6	601.1
45°	568.7	565.2	562.9	561.7	561.7	561.7	561.7	561.7	562.9	565.2	568.7
47.5°	536.3	532.8	530.5	528.2	528.2	528.2	528.2	528.2	530.5	532.8	536.3
50°	501.5	498.0	496.9	495.7	494.6	494.6	494.6	495.7	496.9	498.0	501.5
52.5°	469.1	465.6	463.3	462.1	462.1	462.1	462.1	462.1	463.3	465.6	469.1
55°	434.3	430.9	428.5	427.4	428.5	428.5	428.5	427.4	428.5	430.9	434.3
57.5°	399.6	396.1	395.0	393.8	393.8	393.8	393.8	393.8	395.0	396.1	399.6
60°	364.8	361.4	360.2	359.1	359.1	359.1	359.1	359.1	360.2	361.4	364.8
62.5°	330.1	326.6	325.5	324.3	324.3	324.3	324.3	324.3	325.5	326.6	330.1
65°	294.2	293.0	291.9	290.7	289.6	289.6	289.6	290.7	291.9	293.0	294.2
67.5°	256.0	254.8	253.7	252.5	251.3	251.3	251.3	252.5	253.7	254.8	256.0
70°	221.2	220.1	218.9	217.7	216.6	216.6	216.6	217.7	218.9	220.1	221.2
72.5°	186.5	185.3	184.2	183.0	181.8	181.8	181.8	183.0	184.2	185.3	186.5
75°	151.7	150.6	149.4	149.4	148.3	148.3	148.3	149.4	149.4	150.6	151.7
77.5°	119.3	118.1	117.0	117.0	115.8	115.8	115.8	117.0	117.0	118.1	119.3
80°	88.0	86.9	85.7	85.7	85.7	85.7	85.7	85.7	85.7	86.9	88.0
82.5°	59.1	59.1	57.9	57.9	57.9	57.9	57.9	57.9	57.9	59.1	59.1
85°	34.7	34.7	33.6	33.6	33.6	33.6	33.6	33.6	33.6	34.7	34.7
87.5°	13.9	13.9	13.9	13.9	13.9	13.9	13.9	13.9	13.9	13.9	13.9
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°	948.6	948.6	948.6	948.6
2.5°	950.9	952.1	947.4	942.8
5°	946.3	947.4	944.0	939.3
7.5°	939.3	940.5	937.0	933.5
10°	928.9	931.2	927.7	923.1
12.5°	916.2	917.3	913.8	910.4
15°	901.1	902.3	898.8	895.3
17.5°	882.6	884.9	881.4	877.9
20°	861.7	864.0	861.7	858.3
22.5°	838.6	840.9	838.6	836.2
25°	814.2	816.6	814.2	811.9
27.5°	787.6	791.1	788.8	787.6
30°	759.8	763.3	761.0	759.8
32.5°	730.8	735.5	733.2	730.8
35°	700.7	704.2	701.9	700.7
37.5°	670.6	674.1	672.9	671.8
40°	639.3	642.8	640.5	639.3
42.5°	606.9	610.4	609.2	608.1
45°	573.3	576.8	575.6	575.6
47.5°	540.9	544.4	543.2	542.1
50°	506.1	509.6	508.5	508.5
52.5°	472.6	476.0	474.9	473.7
55°	437.8	440.1	439.0	439.0
57.5°	403.1	406.5	405.4	404.2
60°	368.3	370.6	369.5	369.5
62.5°	333.6	335.9	334.7	334.7
65°	296.5	298.8	298.8	298.8
67.5°	258.3	260.6	259.4	259.4
70°	223.5	224.7	223.5	223.5
72.5°	187.6	188.8	188.8	188.8
75°	152.9	154.0	152.9	152.9
77.5°	120.5	121.6	120.5	119.3
80°	89.2	90.3	89.2	88.0
82.5°	60.2	61.4	60.2	59.1
85°	35.9	35.9	34.7	33.6
87.5°	15.1	15.1	13.9	12.7
90°	0.0	0.0	0.0	0.0

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