

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: P709099

Luminaire Tested: **4APN-X-30L940-UNV**

Issue Date: 09/12/2023



Test Information

Test Method: LM-79-08
Report Number: P709099
Test Lab: INNOVATION CENTER(G2)
Issue Date: 09/12/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 4APN-X-30L940-UNV
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture EXAM Light
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

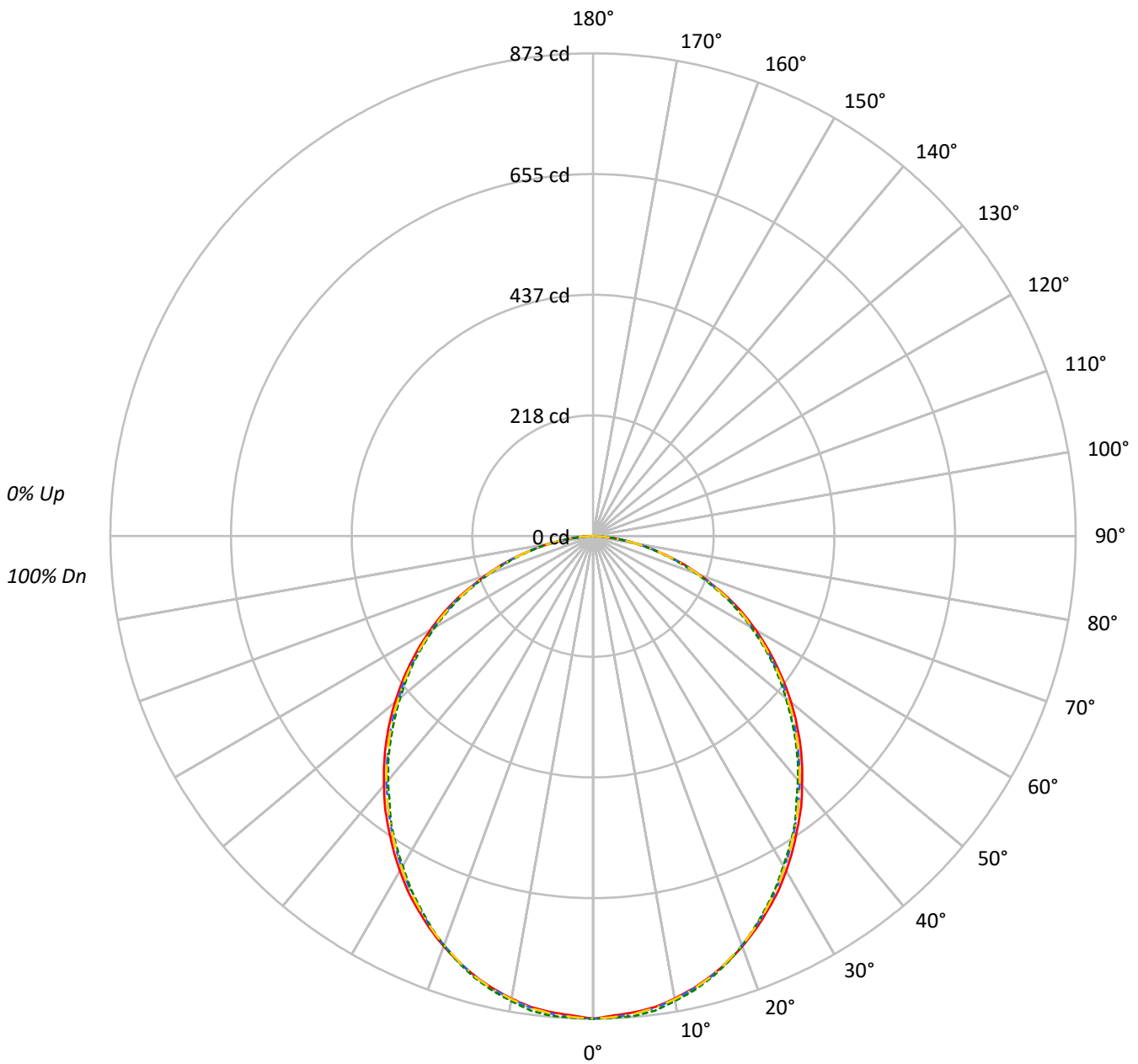
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2271.0 lumens
Efficiency: N/A
Efficacy: 69.9 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): 32.5
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°	8054	8054	8054	8054
5°	8006	8064	8006	8064
10°	7958	7998	7958	7998
15°	7870	7899	7870	7899
20°	7754	7744	7754	7744
25°	7605	7540	7605	7540
30°	7449	7335	7449	7335
35°	7262	7167	7262	7167
40°	7085	6945	7085	6945
45°	6911	6744	6911	6744
50°	6716	6532	6716	6532
55°	6497	6342	6497	6342
60°	6274	6097	6274	6097
65°	6004	5816	6004	5816
70°	5549	5376	5549	5376
75°	5016	4862	5016	4862
80°	4304	4192	4304	4192
85°	3271	3271	3271	3271



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	82.4	3.6
10°-20°	232.6	10.2
20°-30°	342.9	15.1
30°-40°	400.3	17.6
40°-50°	403.6	17.8
50°-60°	356.7	15.7
60°-70°	266.7	11.7
70°-80°	147.9	6.5
80°-90°	37.9	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°	657.9	29.0
0°-40°	1058.2	46.6
0°-60°	1818.5	80.1
0°-90°	2271.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2271.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	873	873	873	873	873	
5°	864	871	864	871	864	82
15°	824	827	824	827	824	232
25°	747	741	747	741	747	344
35°	645	636	645	636	645	404
45°	530	517	530	517	530	408
55°	404	394	404	394	404	361
65°	275	266	275	266	275	271
75°	141	136	141	136	141	150
85°	31	31	31	31	31	37
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°	872.9	872.9	872.9	872.9	872.9	872.9	872.9	872.9	872.9	872.9	872.9
2.5°	867.5	871.8	876.1	875.0	871.8	869.7	870.7	870.7	871.8	871.8	871.8
5°	864.4	868.6	871.8	870.7	867.5	866.5	866.5	866.5	868.6	870.7	868.6
7.5°	859.0	862.2	865.4	864.4	861.2	860.1	860.1	861.2	863.3	865.4	863.3
10°	849.4	853.7	856.9	854.8	851.6	849.4	849.4	849.4	851.6	853.7	851.6
12.5°	837.7	840.9	844.1	843.0	839.8	837.7	837.7	837.7	839.8	842.0	839.8
15°	823.9	827.0	830.2	829.2	826.0	823.9	823.9	823.9	826.0	827.0	826.0
17.5°	807.9	811.1	814.3	812.1	807.9	805.7	805.7	805.7	807.9	808.9	807.9
20°	789.7	792.9	795.1	792.9	788.7	786.5	785.5	785.5	787.6	788.7	787.6
22.5°	769.5	771.6	773.8	771.6	767.4	765.2	764.2	763.1	764.2	765.2	764.2
25°	747.1	749.2	751.4	749.2	745.0	741.8	740.7	739.7	740.7	740.7	740.7
27.5°	724.7	725.8	727.9	724.7	720.5	717.3	716.2	715.1	716.2	716.2	716.2
30°	699.2	700.2	702.4	699.2	693.8	690.6	689.6	688.5	688.5	688.5	688.5
32.5°	672.5	674.6	676.8	672.5	667.2	664.0	662.9	661.9	662.9	662.9	662.9
35°	644.8	645.9	648.0	644.8	639.5	636.3	634.1	633.1	635.2	636.3	635.2
37.5°	618.2	619.2	620.3	617.1	611.8	608.6	606.4	605.4	604.3	604.3	604.3
40°	588.3	589.4	591.5	588.3	583.0	579.8	577.7	576.6	576.6	576.6	576.6
42.5°	559.5	560.6	561.7	558.5	553.1	549.9	547.8	546.7	547.8	547.8	547.8
45°	529.7	529.7	530.8	527.6	523.3	520.1	518.0	516.9	516.9	516.9	516.9
47.5°	498.8	499.9	500.9	497.7	493.5	490.3	488.1	486.0	486.0	486.0	486.0
50°	467.9	467.9	468.9	465.7	461.5	458.3	457.2	456.2	455.1	455.1	455.1
52.5°	435.9	437.0	438.0	434.8	431.6	428.4	426.3	425.2	425.2	425.2	425.2
55°	403.9	403.9	405.0	402.9	399.7	396.5	394.3	393.3	394.3	394.3	394.3
57.5°	372.0	373.0	374.1	370.9	367.7	364.5	363.4	362.4	362.4	362.4	362.4
60°	340.0	340.0	341.1	338.9	335.7	332.5	331.5	330.4	330.4	330.4	330.4
62.5°	308.0	308.0	309.1	306.9	303.7	300.6	299.5	298.4	298.4	298.4	298.4
65°	275.0	275.0	275.0	272.8	270.7	269.6	268.6	267.5	266.4	266.4	266.4
67.5°	238.7	238.7	239.8	237.7	235.5	234.5	233.4	232.3	231.3	231.3	231.3
70°	205.7	205.7	206.8	205.7	203.6	202.5	201.4	200.4	199.3	199.3	199.3
72.5°	173.7	173.7	173.7	172.7	171.6	170.5	169.5	168.4	167.3	167.3	167.3
75°	140.7	140.7	141.7	140.7	139.6	138.6	137.5	137.5	136.4	136.4	136.4
77.5°	109.8	110.8	111.9	110.8	109.8	108.7	107.6	107.6	106.6	106.6	106.6
80°	81.0	82.1	83.1	82.1	81.0	79.9	78.9	78.9	78.9	78.9	78.9
82.5°	54.4	55.4	56.5	55.4	54.4	54.4	53.3	53.3	53.3	53.3	53.3
85°	30.9	32.0	33.0	33.0	32.0	32.0	30.9	30.9	30.9	30.9	30.9
87.5°	11.7	12.8	13.9	13.9	12.8	12.8	12.8	12.8	12.8	12.8	12.8
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°	872.9	872.9	872.9	872.9	872.9	872.9	872.9	872.9	872.9	872.9	872.9
2.5°	870.7	870.7	869.7	871.8	875.0	876.1	871.8	867.5	871.8	876.1	875.0
5°	866.5	866.5	866.5	867.5	870.7	871.8	868.6	864.4	868.6	871.8	870.7
7.5°	861.2	860.1	860.1	861.2	864.4	865.4	862.2	859.0	862.2	865.4	864.4
10°	849.4	849.4	849.4	851.6	854.8	856.9	853.7	849.4	853.7	856.9	854.8
12.5°	837.7	837.7	837.7	839.8	843.0	844.1	840.9	837.7	840.9	844.1	843.0
15°	823.9	823.9	823.9	826.0	829.2	830.2	827.0	823.9	827.0	830.2	829.2
17.5°	805.7	805.7	805.7	807.9	812.1	814.3	811.1	807.9	811.1	814.3	812.1
20°	785.5	785.5	786.5	788.7	792.9	795.1	792.9	789.7	792.9	795.1	792.9
22.5°	763.1	764.2	765.2	767.4	771.6	773.8	771.6	769.5	771.6	773.8	771.6
25°	739.7	740.7	741.8	745.0	749.2	751.4	749.2	747.1	749.2	751.4	749.2
27.5°	715.1	716.2	717.3	720.5	724.7	727.9	725.8	724.7	725.8	727.9	724.7
30°	688.5	689.6	690.6	693.8	699.2	702.4	700.2	699.2	700.2	702.4	699.2
32.5°	661.9	662.9	664.0	667.2	672.5	676.8	674.6	672.5	674.6	676.8	672.5
35°	633.1	634.1	636.3	639.5	644.8	648.0	645.9	644.8	645.9	648.0	644.8
37.5°	605.4	606.4	608.6	611.8	617.1	620.3	619.2	618.2	619.2	620.3	617.1
40°	576.6	577.7	579.8	583.0	588.3	591.5	589.4	588.3	589.4	591.5	588.3
42.5°	546.7	547.8	549.9	553.1	558.5	561.7	560.6	559.5	560.6	561.7	558.5
45°	516.9	518.0	520.1	523.3	527.6	530.8	529.7	529.7	529.7	530.8	527.6
47.5°	486.0	488.1	490.3	493.5	497.7	500.9	499.9	498.8	499.9	500.9	497.7
50°	456.2	457.2	458.3	461.5	465.7	468.9	467.9	467.9	467.9	468.9	465.7
52.5°	425.2	426.3	428.4	431.6	434.8	438.0	437.0	435.9	437.0	438.0	434.8
55°	393.3	394.3	396.5	399.7	402.9	405.0	403.9	403.9	403.9	405.0	402.9
57.5°	362.4	363.4	364.5	367.7	370.9	374.1	373.0	372.0	373.0	374.1	370.9
60°	330.4	331.5	332.5	335.7	338.9	341.1	340.0	340.0	340.0	341.1	338.9
62.5°	298.4	299.5	300.6	303.7	306.9	309.1	308.0	308.0	308.0	309.1	306.9
65°	267.5	268.6	269.6	270.7	272.8	275.0	275.0	275.0	275.0	275.0	272.8
67.5°	232.3	233.4	234.5	235.5	237.7	239.8	238.7	238.7	238.7	239.8	237.7
70°	200.4	201.4	202.5	203.6	205.7	206.8	205.7	205.7	205.7	206.8	205.7
72.5°	168.4	169.5	170.5	171.6	172.7	173.7	173.7	173.7	173.7	173.7	172.7
75°	137.5	137.5	138.6	139.6	140.7	141.7	140.7	140.7	140.7	141.7	140.7
77.5°	107.6	107.6	108.7	109.8	110.8	111.9	110.8	109.8	110.8	111.9	110.8
80°	78.9	78.9	79.9	81.0	82.1	83.1	82.1	81.0	82.1	83.1	82.1
82.5°	53.3	53.3	54.4	54.4	55.4	56.5	55.4	54.4	55.4	56.5	55.4
85°	30.9	30.9	32.0	32.0	33.0	33.0	32.0	30.9	32.0	33.0	33.0
87.5°	12.8	12.8	12.8	12.8	13.9	13.9	12.8	11.7	12.8	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):

	220°	230°	240°	250°	260°	270°	280°	290°	300°	310°	320°
0°	872.9	872.9	872.9	872.9	872.9	872.9	872.9	872.9	872.9	872.9	872.9
2.5°	871.8	869.7	870.7	870.7	871.8	871.8	871.8	870.7	870.7	869.7	871.8
5°	867.5	866.5	866.5	866.5	868.6	870.7	868.6	866.5	866.5	866.5	867.5
7.5°	861.2	860.1	860.1	861.2	863.3	865.4	863.3	861.2	860.1	860.1	861.2
10°	851.6	849.4	849.4	849.4	851.6	853.7	851.6	849.4	849.4	849.4	851.6
12.5°	839.8	837.7	837.7	837.7	839.8	842.0	839.8	837.7	837.7	837.7	839.8
15°	826.0	823.9	823.9	823.9	826.0	827.0	826.0	823.9	823.9	823.9	826.0
17.5°	807.9	805.7	805.7	805.7	807.9	808.9	807.9	805.7	805.7	805.7	807.9
20°	788.7	786.5	785.5	785.5	787.6	788.7	787.6	785.5	785.5	786.5	788.7
22.5°	767.4	765.2	764.2	763.1	764.2	765.2	764.2	763.1	764.2	765.2	767.4
25°	745.0	741.8	740.7	739.7	740.7	740.7	740.7	739.7	740.7	741.8	745.0
27.5°	720.5	717.3	716.2	715.1	716.2	716.2	716.2	715.1	716.2	717.3	720.5
30°	693.8	690.6	689.6	688.5	688.5	688.5	688.5	688.5	689.6	690.6	693.8
32.5°	667.2	664.0	662.9	661.9	662.9	662.9	662.9	661.9	662.9	664.0	667.2
35°	639.5	636.3	634.1	633.1	635.2	636.3	635.2	633.1	634.1	636.3	639.5
37.5°	611.8	608.6	606.4	605.4	604.3	604.3	604.3	605.4	606.4	608.6	611.8
40°	583.0	579.8	577.7	576.6	576.6	576.6	576.6	576.6	577.7	579.8	583.0
42.5°	553.1	549.9	547.8	546.7	547.8	547.8	547.8	546.7	547.8	549.9	553.1
45°	523.3	520.1	518.0	516.9	516.9	516.9	516.9	516.9	518.0	520.1	523.3
47.5°	493.5	490.3	488.1	486.0	486.0	486.0	486.0	486.0	488.1	490.3	493.5
50°	461.5	458.3	457.2	456.2	455.1	455.1	455.1	456.2	457.2	458.3	461.5
52.5°	431.6	428.4	426.3	425.2	425.2	425.2	425.2	425.2	426.3	428.4	431.6
55°	399.7	396.5	394.3	393.3	394.3	394.3	394.3	393.3	394.3	396.5	399.7
57.5°	367.7	364.5	363.4	362.4	362.4	362.4	362.4	362.4	363.4	364.5	367.7
60°	335.7	332.5	331.5	330.4	330.4	330.4	330.4	330.4	331.5	332.5	335.7
62.5°	303.7	300.6	299.5	298.4	298.4	298.4	298.4	298.4	299.5	300.6	303.7
65°	270.7	269.6	268.6	267.5	266.4	266.4	266.4	267.5	268.6	269.6	270.7
67.5°	235.5	234.5	233.4	232.3	231.3	231.3	231.3	232.3	233.4	234.5	235.5
70°	203.6	202.5	201.4	200.4	199.3	199.3	199.3	200.4	201.4	202.5	203.6
72.5°	171.6	170.5	169.5	168.4	167.3	167.3	167.3	168.4	169.5	170.5	171.6
75°	139.6	138.6	137.5	137.5	136.4	136.4	136.4	137.5	137.5	138.6	139.6
77.5°	109.8	108.7	107.6	107.6	106.6	106.6	106.6	107.6	107.6	108.7	109.8
80°	81.0	79.9	78.9	78.9	78.9	78.9	78.9	78.9	78.9	79.9	81.0
82.5°	54.4	54.4	53.3	53.3	53.3	53.3	53.3	53.3	53.3	54.4	54.4
85°	32.0	32.0	30.9	30.9	30.9	30.9	30.9	30.9	30.9	32.0	32.0
87.5°	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8
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: P709099
 CATALOG NUMBER: 4APN-X-30L940-UNV

CANDELA DISTRIBUTION (continued):

	330°	340°	350°	360°
0°	872.9	872.9	872.9	872.9
2.5°	875.0	876.1	871.8	867.5
5°	870.7	871.8	868.6	864.4
7.5°	864.4	865.4	862.2	859.0
10°	854.8	856.9	853.7	849.4
12.5°	843.0	844.1	840.9	837.7
15°	829.2	830.2	827.0	823.9
17.5°	812.1	814.3	811.1	807.9
20°	792.9	795.1	792.9	789.7
22.5°	771.6	773.8	771.6	769.5
25°	749.2	751.4	749.2	747.1
27.5°	724.7	727.9	725.8	724.7
30°	699.2	702.4	700.2	699.2
32.5°	672.5	676.8	674.6	672.5
35°	644.8	648.0	645.9	644.8
37.5°	617.1	620.3	619.2	618.2
40°	588.3	591.5	589.4	588.3
42.5°	558.5	561.7	560.6	559.5
45°	527.6	530.8	529.7	529.7
47.5°	497.7	500.9	499.9	498.8
50°	465.7	468.9	467.9	467.9
52.5°	434.8	438.0	437.0	435.9
55°	402.9	405.0	403.9	403.9
57.5°	370.9	374.1	373.0	372.0
60°	338.9	341.1	340.0	340.0
62.5°	306.9	309.1	308.0	308.0
65°	272.8	275.0	275.0	275.0
67.5°	237.7	239.8	238.7	238.7
70°	205.7	206.8	205.7	205.7
72.5°	172.7	173.7	173.7	173.7
75°	140.7	141.7	140.7	140.7
77.5°	110.8	111.9	110.8	109.8
80°	82.1	83.1	82.1	81.0
82.5°	55.4	56.5	55.4	54.4
85°	33.0	33.0	32.0	30.9
87.5°	13.9	13.9	12.8	11.7
90°	0.0	0.0	0.0	0.0

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