

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: P709093

Luminaire Tested: **4APN-X-30L935-UNV**

Issue Date: 09/12/2023



Test Information

Test Method: LM-79-08
Report Number: P709093
Test Lab: INNOVATION CENTER(G2)
Issue Date: 09/12/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 4APN-X-30L935-UNV
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture EXAM Light
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

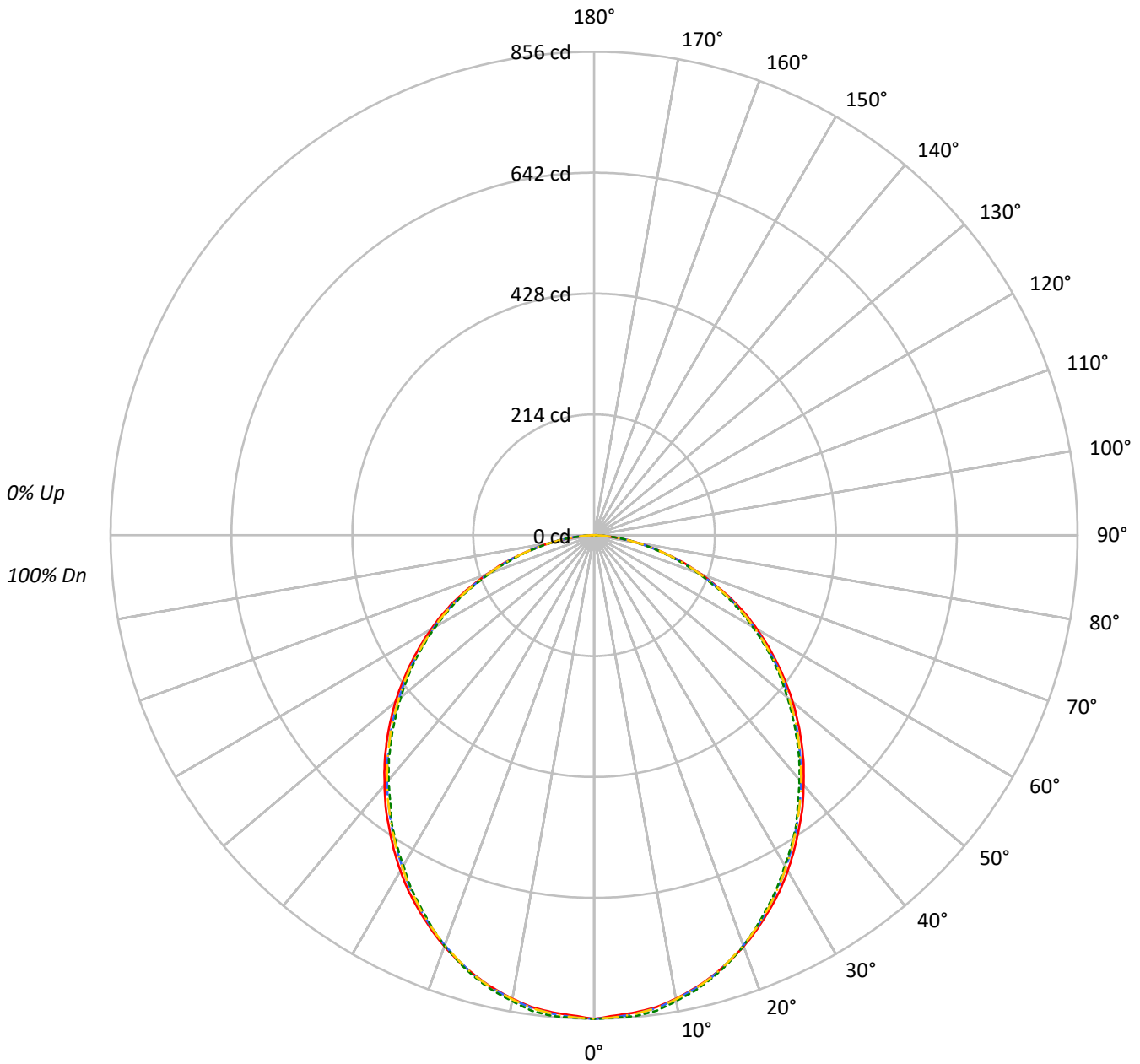
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2227.8 lumens
Efficiency: N/A
Efficacy: 68.5 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°	7900	7900	7900	7900
5°	7853	7911	7853	7911
10°	7807	7846	7807	7846
15°	7720	7749	7720	7749
20°	7606	7596	7606	7596
25°	7461	7397	7461	7397
30°	7307	7195	7307	7195
35°	7124	7030	7124	7030
40°	6951	6812	6951	6812
45°	6780	6617	6780	6617
50°	6588	6407	6588	6407
55°	6375	6222	6375	6222
60°	6154	5980	6154	5980
65°	5888	5707	5888	5707
70°	5444	5274	5444	5274
75°	4919	4770	4919	4770
80°	4224	4112	4224	4112
85°	3208	3208	3208	3208



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	80.8	3.6
10°-20°	228.2	10.2
20°-30°	336.4	15.1
30°-40°	392.7	17.6
40°-50°	395.9	17.8
50°-60°	349.9	15.7
60°-70°	261.7	11.7
70°-80°	145.0	6.5
80°-90°	37.2	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°	645.4	29.0
0°-40°	1038.1	46.6
0°-60°	1783.9	80.1
0°-90°	2227.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2227.8	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	856	856	856	856	856	
5°	848	854	848	854	848	81
15°	808	811	808	811	808	228
25°	733	727	733	727	733	338
35°	632	624	632	624	632	396
45°	520	507	520	507	520	401
55°	396	387	396	387	396	354
65°	270	261	270	261	270	266
75°	138	134	138	134	138	147
85°	30	30	30	30	30	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°	856.3	856.3	856.3	856.3	856.3	856.3	856.3	856.3	856.3	856.3	856.3
2.5°	851.0	855.2	859.4	858.4	855.2	853.1	854.2	854.2	855.2	855.2	855.2
5°	847.9	852.1	855.2	854.2	851.0	850.0	850.0	850.0	852.1	854.2	852.1
7.5°	842.7	845.8	849.0	847.9	844.8	843.7	843.7	844.8	846.9	849.0	846.9
10°	833.3	837.5	840.6	838.5	835.4	833.3	833.3	833.3	835.4	837.5	835.4
12.5°	821.8	824.9	828.0	827.0	823.9	821.8	821.8	821.8	823.9	826.0	823.9
15°	808.2	811.3	814.5	813.4	810.3	808.2	808.2	808.2	810.3	811.3	810.3
17.5°	792.5	795.6	798.8	796.7	792.5	790.4	790.4	790.4	792.5	793.5	792.5
20°	774.7	777.9	780.0	777.9	773.7	771.6	770.5	770.5	772.6	773.7	772.6
22.5°	754.9	757.0	759.0	757.0	752.8	750.7	749.6	748.6	749.6	750.7	749.6
25°	732.9	735.0	737.1	735.0	730.8	727.7	726.6	725.6	726.6	726.6	726.6
27.5°	711.0	712.0	714.1	711.0	706.8	703.6	702.6	701.5	702.6	702.6	702.6
30°	685.9	686.9	689.0	685.9	680.6	677.5	676.4	675.4	675.4	675.4	675.4
32.5°	659.7	661.8	663.9	659.7	654.5	651.4	650.3	649.3	650.3	650.3	650.3
35°	632.5	633.6	635.7	632.5	627.3	624.2	622.1	621.0	623.1	624.2	623.1
37.5°	606.4	607.4	608.5	605.4	600.1	597.0	594.9	593.9	592.8	592.8	592.8
40°	577.1	578.2	580.3	577.1	571.9	568.8	566.7	565.6	565.6	565.6	565.6
42.5°	548.9	549.9	551.0	547.9	542.6	539.5	537.4	536.3	537.4	537.4	537.4
45°	519.6	519.6	520.7	517.5	513.3	510.2	508.1	507.1	507.1	507.1	507.1
47.5°	489.3	490.3	491.4	488.3	484.1	480.9	478.8	476.8	476.8	476.8	476.8
50°	459.0	459.0	460.0	456.9	452.7	449.6	448.5	447.5	446.4	446.4	446.4
52.5°	427.6	428.7	429.7	426.6	423.4	420.3	418.2	417.2	417.2	417.2	417.2
55°	396.3	396.3	397.3	395.2	392.1	388.9	386.8	385.8	386.8	386.8	386.8
57.5°	364.9	365.9	367.0	363.8	360.7	357.6	356.5	355.5	355.5	355.5	355.5
60°	333.5	333.5	334.6	332.5	329.3	326.2	325.2	324.1	324.1	324.1	324.1
62.5°	302.2	302.2	303.2	301.1	298.0	294.8	293.8	292.7	292.7	292.7	292.7
65°	269.7	269.7	269.7	267.7	265.6	264.5	263.5	262.4	261.4	261.4	261.4
67.5°	234.2	234.2	235.2	233.2	231.1	230.0	229.0	227.9	226.9	226.9	226.9
70°	201.8	201.8	202.8	201.8	199.7	198.6	197.6	196.6	195.5	195.5	195.5
72.5°	170.4	170.4	170.4	169.4	168.3	167.3	166.2	165.2	164.1	164.1	164.1
75°	138.0	138.0	139.1	138.0	137.0	135.9	134.9	134.9	133.8	133.8	133.8
77.5°	107.7	108.7	109.8	108.7	107.7	106.6	105.6	105.6	104.6	104.6	104.6
80°	79.5	80.5	81.6	80.5	79.5	78.4	77.4	77.4	77.4	77.4	77.4
82.5°	53.3	54.4	55.4	54.4	53.3	53.3	52.3	52.3	52.3	52.3	52.3
85°	30.3	31.4	32.4	32.4	31.4	31.4	30.3	30.3	30.3	30.3	30.3
87.5°	11.5	12.5	13.6	13.6	12.5	12.5	12.5	12.5	12.5	12.5	12.5
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°	856.3	856.3	856.3	856.3	856.3	856.3	856.3	856.3	856.3	856.3	856.3
2.5°	854.2	854.2	853.1	855.2	858.4	859.4	855.2	851.0	855.2	859.4	858.4
5°	850.0	850.0	850.0	851.0	854.2	855.2	852.1	847.9	852.1	855.2	854.2
7.5°	844.8	843.7	843.7	844.8	847.9	849.0	845.8	842.7	845.8	849.0	847.9
10°	833.3	833.3	833.3	835.4	838.5	840.6	837.5	833.3	837.5	840.6	838.5
12.5°	821.8	821.8	821.8	823.9	827.0	828.0	824.9	821.8	824.9	828.0	827.0
15°	808.2	808.2	808.2	810.3	813.4	814.5	811.3	808.2	811.3	814.5	813.4
17.5°	790.4	790.4	790.4	792.5	796.7	798.8	795.6	792.5	795.6	798.8	796.7
20°	770.5	770.5	771.6	773.7	777.9	780.0	777.9	774.7	777.9	780.0	777.9
22.5°	748.6	749.6	750.7	752.8	757.0	759.0	757.0	754.9	757.0	759.0	757.0
25°	725.6	726.6	727.7	730.8	735.0	737.1	735.0	732.9	735.0	737.1	735.0
27.5°	701.5	702.6	703.6	706.8	711.0	714.1	712.0	711.0	712.0	714.1	711.0
30°	675.4	676.4	677.5	680.6	685.9	689.0	686.9	685.9	686.9	689.0	685.9
32.5°	649.3	650.3	651.4	654.5	659.7	663.9	661.8	659.7	661.8	663.9	659.7
35°	621.0	622.1	624.2	627.3	632.5	635.7	633.6	632.5	633.6	635.7	632.5
37.5°	593.9	594.9	597.0	600.1	605.4	608.5	607.4	606.4	607.4	608.5	605.4
40°	565.6	566.7	568.8	571.9	577.1	580.3	578.2	577.1	578.2	580.3	577.1
42.5°	536.3	537.4	539.5	542.6	547.9	551.0	549.9	548.9	549.9	551.0	547.9
45°	507.1	508.1	510.2	513.3	517.5	520.7	519.6	519.6	519.6	520.7	517.5
47.5°	476.8	478.8	480.9	484.1	488.3	491.4	490.3	489.3	490.3	491.4	488.3
50°	447.5	448.5	449.6	452.7	456.9	460.0	459.0	459.0	459.0	460.0	456.9
52.5°	417.2	418.2	420.3	423.4	426.6	429.7	428.7	427.6	428.7	429.7	426.6
55°	385.8	386.8	388.9	392.1	395.2	397.3	396.3	396.3	396.3	397.3	395.2
57.5°	355.5	356.5	357.6	360.7	363.8	367.0	365.9	364.9	365.9	367.0	363.8
60°	324.1	325.2	326.2	329.3	332.5	334.6	333.5	333.5	333.5	334.6	332.5
62.5°	292.7	293.8	294.8	298.0	301.1	303.2	302.2	302.2	302.2	303.2	301.1
65°	262.4	263.5	264.5	265.6	267.7	269.7	269.7	269.7	269.7	269.7	267.7
67.5°	227.9	229.0	230.0	231.1	233.2	235.2	234.2	234.2	234.2	235.2	233.2
70°	196.6	197.6	198.6	199.7	201.8	202.8	201.8	201.8	201.8	202.8	201.8
72.5°	165.2	166.2	167.3	168.3	169.4	170.4	170.4	170.4	170.4	170.4	169.4
75°	134.9	134.9	135.9	137.0	138.0	139.1	138.0	138.0	138.0	139.1	138.0
77.5°	105.6	105.6	106.6	107.7	108.7	109.8	108.7	107.7	108.7	109.8	108.7
80°	77.4	77.4	78.4	79.5	80.5	81.6	80.5	79.5	80.5	81.6	80.5
82.5°	52.3	52.3	53.3	53.3	54.4	55.4	54.4	53.3	54.4	55.4	54.4
85°	30.3	30.3	31.4	31.4	32.4	32.4	31.4	30.3	31.4	32.4	32.4
87.5°	12.5	12.5	12.5	12.5	13.6	13.6	12.5	11.5	12.5	13.6	13.6
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):

	220°	230°	240°	250°	260°	270°	280°	290°	300°	310°	320°
0°	856.3	856.3	856.3	856.3	856.3	856.3	856.3	856.3	856.3	856.3	856.3
2.5°	855.2	853.1	854.2	854.2	855.2	855.2	855.2	854.2	854.2	853.1	855.2
5°	851.0	850.0	850.0	850.0	852.1	854.2	852.1	850.0	850.0	850.0	851.0
7.5°	844.8	843.7	843.7	844.8	846.9	849.0	846.9	844.8	843.7	843.7	844.8
10°	835.4	833.3	833.3	833.3	835.4	837.5	835.4	833.3	833.3	833.3	835.4
12.5°	823.9	821.8	821.8	821.8	823.9	826.0	823.9	821.8	821.8	821.8	823.9
15°	810.3	808.2	808.2	808.2	810.3	811.3	810.3	808.2	808.2	808.2	810.3
17.5°	792.5	790.4	790.4	790.4	792.5	793.5	792.5	790.4	790.4	790.4	792.5
20°	773.7	771.6	770.5	770.5	772.6	773.7	772.6	770.5	770.5	771.6	773.7
22.5°	752.8	750.7	749.6	748.6	749.6	750.7	749.6	748.6	749.6	750.7	752.8
25°	730.8	727.7	726.6	725.6	726.6	726.6	726.6	725.6	726.6	727.7	730.8
27.5°	706.8	703.6	702.6	701.5	702.6	702.6	702.6	701.5	702.6	703.6	706.8
30°	680.6	677.5	676.4	675.4	675.4	675.4	675.4	675.4	676.4	677.5	680.6
32.5°	654.5	651.4	650.3	649.3	650.3	650.3	650.3	649.3	650.3	651.4	654.5
35°	627.3	624.2	622.1	621.0	623.1	624.2	623.1	621.0	622.1	624.2	627.3
37.5°	600.1	597.0	594.9	593.9	592.8	592.8	592.8	593.9	594.9	597.0	600.1
40°	571.9	568.8	566.7	565.6	565.6	565.6	565.6	565.6	566.7	568.8	571.9
42.5°	542.6	539.5	537.4	536.3	537.4	537.4	537.4	536.3	537.4	539.5	542.6
45°	513.3	510.2	508.1	507.1	507.1	507.1	507.1	507.1	508.1	510.2	513.3
47.5°	484.1	480.9	478.8	476.8	476.8	476.8	476.8	476.8	478.8	480.9	484.1
50°	452.7	449.6	448.5	447.5	446.4	446.4	446.4	447.5	448.5	449.6	452.7
52.5°	423.4	420.3	418.2	417.2	417.2	417.2	417.2	417.2	418.2	420.3	423.4
55°	392.1	388.9	386.8	385.8	386.8	386.8	386.8	385.8	386.8	388.9	392.1
57.5°	360.7	357.6	356.5	355.5	355.5	355.5	355.5	355.5	356.5	357.6	360.7
60°	329.3	326.2	325.2	324.1	324.1	324.1	324.1	324.1	325.2	326.2	329.3
62.5°	298.0	294.8	293.8	292.7	292.7	292.7	292.7	292.7	293.8	294.8	298.0
65°	265.6	264.5	263.5	262.4	261.4	261.4	261.4	262.4	263.5	264.5	265.6
67.5°	231.1	230.0	229.0	227.9	226.9	226.9	226.9	227.9	229.0	230.0	231.1
70°	199.7	198.6	197.6	196.6	195.5	195.5	195.5	196.6	197.6	198.6	199.7
72.5°	168.3	167.3	166.2	165.2	164.1	164.1	164.1	165.2	166.2	167.3	168.3
75°	137.0	135.9	134.9	134.9	133.8	133.8	133.8	134.9	134.9	135.9	137.0
77.5°	107.7	106.6	105.6	105.6	104.6	104.6	104.6	105.6	105.6	106.6	107.7
80°	79.5	78.4	77.4	77.4	77.4	77.4	77.4	77.4	77.4	78.4	79.5
82.5°	53.3	53.3	52.3	52.3	52.3	52.3	52.3	52.3	52.3	53.3	53.3
85°	31.4	31.4	30.3	30.3	30.3	30.3	30.3	30.3	30.3	31.4	31.4
87.5°	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5
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°	856.3	856.3	856.3	856.3
2.5°	858.4	859.4	855.2	851.0
5°	854.2	855.2	852.1	847.9
7.5°	847.9	849.0	845.8	842.7
10°	838.5	840.6	837.5	833.3
12.5°	827.0	828.0	824.9	821.8
15°	813.4	814.5	811.3	808.2
17.5°	796.7	798.8	795.6	792.5
20°	777.9	780.0	777.9	774.7
22.5°	757.0	759.0	757.0	754.9
25°	735.0	737.1	735.0	732.9
27.5°	711.0	714.1	712.0	711.0
30°	685.9	689.0	686.9	685.9
32.5°	659.7	663.9	661.8	659.7
35°	632.5	635.7	633.6	632.5
37.5°	605.4	608.5	607.4	606.4
40°	577.1	580.3	578.2	577.1
42.5°	547.9	551.0	549.9	548.9
45°	517.5	520.7	519.6	519.6
47.5°	488.3	491.4	490.3	489.3
50°	456.9	460.0	459.0	459.0
52.5°	426.6	429.7	428.7	427.6
55°	395.2	397.3	396.3	396.3
57.5°	363.8	367.0	365.9	364.9
60°	332.5	334.6	333.5	333.5
62.5°	301.1	303.2	302.2	302.2
65°	267.7	269.7	269.7	269.7
67.5°	233.2	235.2	234.2	234.2
70°	201.8	202.8	201.8	201.8
72.5°	169.4	170.4	170.4	170.4
75°	138.0	139.1	138.0	138.0
77.5°	108.7	109.8	108.7	107.7
80°	80.5	81.6	80.5	79.5
82.5°	54.4	55.4	54.4	53.3
85°	32.4	32.4	31.4	30.3
87.5°	13.6	13.6	12.5	11.5
90°	0.0	0.0	0.0	0.0

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