

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: P392642

Luminaire Tested: **MWL-4-26-25-UNV-L940-EDD**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P392642
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1910-565-1 &
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: MWL-4-26-25-UNV-L940-EDD
Description: MWL 4FT MEDICAL LED FIXTURE
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4658.6 lumens
Efficiency: N/A
Efficacy: 99.2 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 1.19 / 1.25
Luminous Opening: Rectangular w/ Sides (W: 0.42' x L: 4' x H: 0.42')
CIE Type: General Diffuse

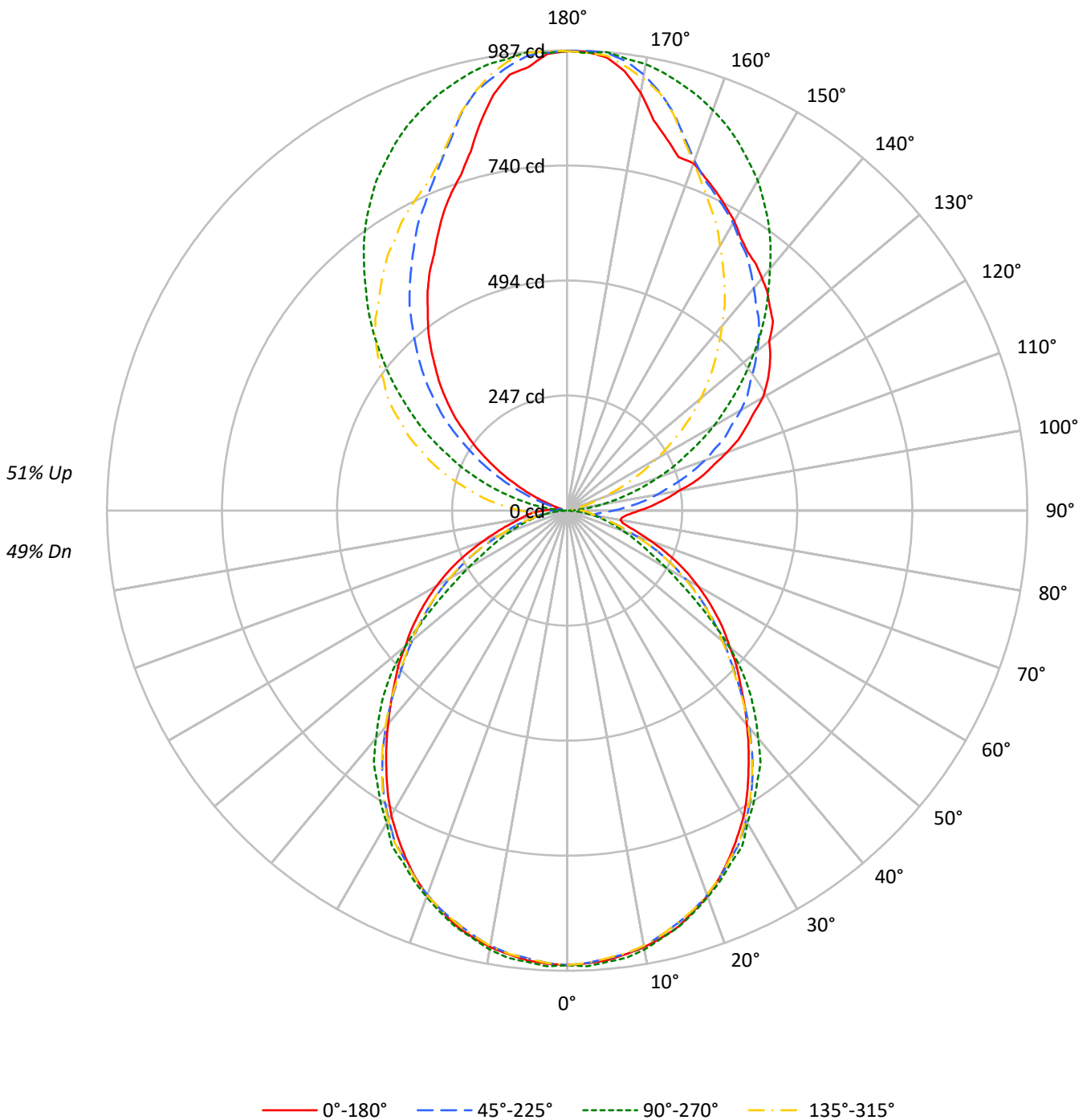
Input Watts (W): 46.965
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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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	107	107	107	107	99	99	99	99	83	83	83	69	69	69	55	55	55	49				49
1	98	93	90	86	90	86	83	80	73	70	68	60	59	57	49	48	47	42				42
2	89	82	76	71	82	76	70	66	64	60	57	53	51	48	44	42	40	35				35
3	82	72	65	59	75	67	61	56	57	52	48	48	44	41	39	36	34	30				30
4	75	64	56	50	69	59	53	47	51	45	41	43	39	36	35	32	30	26				26
5	69	57	49	43	63	53	46	41	45	40	36	38	34	31	32	29	26	23				23
6	63	51	43	38	58	48	41	36	41	36	31	35	31	27	29	26	23	20				20
7	59	47	39	33	54	43	36	31	37	32	28	32	27	24	26	23	21	18				18
8	54	42	35	29	50	39	33	28	34	29	25	29	25	22	24	21	19	16				16
9	51	39	31	26	47	36	29	25	31	26	22	27	23	20	22	19	17	15				15
10	47	35	28	24	44	33	27	22	29	24	20	25	21	18	21	18	15	13				13

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	6298	6298	6298	6298
5°	6222	5795	6222	5795
10°	6122	5329	6122	5329
15°	6008	4875	5995	4875
20°	5826	4444	5813	4444
25°	5591	4047	5577	4047
30°	5326	3657	5307	3657
35°	4983	3296	4968	3296
40°	4650	2923	4629	2923
45°	4345	2537	4328	2537
50°	4069	2076	4050	2076
55°	3829	1560	3816	1560
60°	3550	1155	3542	1155
65°	3224	857	3224	857
70°	2803	640	2813	640
75°	2463	470	2501	470
80°	2719	304	2408	304
85°	4242	135	2713	135



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	91.9	2.0
10°-20°	259.4	5.6
20°-30°	381.0	8.2
30°-40°	433.0	9.3
40°-50°	407.4	8.7
50°-60°	326.7	7.0
60°-70°	217.0	4.7
70°-80°	113.8	2.4
80°-90°	66.3	1.4
90°-100°	85.6	1.8
100°-110°	154.4	3.3
110°-120°	262.2	5.6
120°-130°	356.2	7.6
130°-140°	406.0	8.7
140°-150°	404.9	8.7
150°-160°	352.5	7.6
160°-170°	248.0	5.3
170°-180°	92.4	2.0
0°-30°	732.3	15.7
0°-40°	1165.2	25.0
0°-60°	1899.4	40.8
0°-90°	2296.5	49.3
90°-120°	502.2	10.8
90°-150°	1669.3	35.8
90°-180°	2362.0	50.7
0°-180°	4658.6	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	975	975	975	975	975	
5°	968	972	968	972	968	92
15°	924	924	922	924	924	260
25°	823	833	821	833	823	378
35°	678	711	676	711	678	424
45°	525	556	523	556	525	407
55°	391	336	389	336	391	349
65°	258	176	258	176	258	255
75°	137	89	139	89	137	152
85°	125	23	80	23	125	101
90°	155	1	50	1	155	85
95°	196	29	31	29	196	170
105°	306	138	13	138	306	322
115°	423	281	98	281	423	420
125°	530	442	241	442	530	473
135°	615	602	387	602	615	475
145°	676	753	521	753	676	426
155°	755	871	655	871	755	348
165°	826	947	798	947	826	234
175°	976	987	955	987	976	91
180°	985	985	985	985	985	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	975.1	975.1	975.1	975.1	975.1	975.1	975.1	975.1	975.1	975.1	975.1
2.5°	972.1	971.7	971.2	982.0	978.3	981.3	971.2	971.7	972.8	971.7	971.2
5°	968.5	968.0	964.9	973.1	972.1	973.1	964.1	968.0	968.5	968.0	964.1
7.5°	960.0	959.6	958.7	964.9	967.6	964.1	958.0	958.9	960.0	958.9	958.0
10°	950.7	950.5	948.6	954.1	955.9	953.5	948.0	949.1	950.7	949.1	948.0
12.5°	938.4	940.4	932.5	938.0	939.1	938.0	932.5	939.1	937.1	939.1	932.5
15°	923.7	918.6	916.1	924.3	924.5	923.6	915.4	917.2	921.6	917.2	915.4
17.5°	900.9	902.2	898.8	903.5	903.5	903.5	898.1	901.5	898.8	901.5	898.1
20°	879.9	879.2	877.8	882.6	881.9	881.9	877.1	877.8	877.8	877.8	877.1
22.5°	852.8	855.5	853.2	857.1	859.2	856.4	852.5	854.2	851.4	854.2	852.5
25°	822.7	823.6	826.5	832.5	832.7	831.8	825.2	821.5	820.6	821.5	825.2
27.5°	789.9	793.6	802.0	809.5	812.7	808.8	800.6	791.5	787.8	791.5	800.6
30°	757.1	757.1	767.1	774.6	773.5	773.3	765.1	755.0	754.4	755.0	765.1
32.5°	718.9	718.9	732.6	745.6	744.2	744.2	730.5	716.2	716.2	716.2	730.5
35°	678.1	680.9	693.6	711.8	710.7	709.8	691.6	678.9	676.1	678.9	691.6
37.5°	639.0	637.1	651.7	672.7	681.3	670.7	649.7	635.1	637.0	635.1	649.7
40°	599.8	596.1	607.1	631.0	637.6	629.7	604.3	593.4	597.0	593.4	604.3
42.5°	562.4	556.0	561.8	586.4	596.6	585.0	559.7	553.3	559.7	553.3	559.7
45°	525.3	518.1	516.2	542.7	555.6	541.3	513.4	516.0	523.2	516.0	513.4
47.5°	492.5	482.5	475.2	491.8	508.2	491.2	472.4	480.4	490.4	480.4	472.4
50°	455.2	447.0	437.0	444.4	452.9	443.1	434.1	444.2	453.1	444.2	434.1
52.5°	424.2	414.2	399.8	400.7	393.7	399.3	397.7	411.4	422.1	411.4	397.7
55°	390.7	381.6	364.3	353.6	336.5	352.1	362.2	379.5	389.3	379.5	362.2
57.5°	357.9	351.5	328.7	307.1	285.4	305.7	326.6	349.4	356.5	349.4	326.6
60°	324.4	318.1	292.6	258.1	244.4	257.4	291.1	316.6	323.7	316.6	291.1
62.5°	291.6	287.1	257.0	218.0	205.5	217.3	255.6	285.6	290.9	285.6	255.6
65°	258.1	250.8	222.6	182.5	176.3	181.8	221.9	250.1	258.1	250.1	221.9
67.5°	223.5	216.2	188.0	153.5	152.6	153.5	187.2	215.5	223.5	215.5	187.2
70°	190.9	179.9	154.4	127.1	127.1	127.1	154.4	180.7	191.6	180.7	154.4
72.5°	161.7	148.1	126.2	105.2	108.2	104.6	126.2	148.8	163.2	148.8	126.2
75°	137.1	119.8	100.0	84.6	89.1	84.6	100.7	120.5	139.2	120.5	100.7
77.5°	121.7	100.8	78.2	66.3	71.8	66.3	78.8	98.7	119.0	98.7	78.8
80°	116.3	93.2	63.0	49.9	54.5	49.9	61.5	82.1	103.0	82.1	61.5
82.5°	118.4	94.8	60.3	35.4	38.1	35.4	52.0	69.8	91.9	69.8	52.0
85°	125.4	104.8	67.4	30.2	22.6	28.7	47.3	62.3	80.2	62.3	47.3
87.5°	137.7	122.3	80.4	34.2	7.3	24.4	40.6	55.5	66.1	55.5	40.6
90°	154.8	141.4	99.9	43.3	0.7	16.9	31.1	43.4	50.4	43.4	31.1
92.5°	176.3	165.2	120.2	58.5	12.0	10.5	24.9	36.5	39.9	36.5	24.9
95°	196.2	191.1	144.6	76.0	28.7	6.5	19.4	29.6	31.3	29.6	19.4
97.5°	220.4	217.8	169.7	98.3	50.3	9.3	16.0	26.5	25.6	26.5	16.0
100°	242.9	241.4	195.6	128.2	76.7	23.9	11.2	22.9	23.8	22.9	11.2
102.5°	277.2	267.0	219.6	156.7	105.2	44.0	12.3	16.5	18.3	16.5	12.3
105°	305.9	294.4	252.7	186.7	137.9	71.2	28.1	14.8	13.0	14.8	28.1
107.5°	331.3	322.5	283.4	217.3	172.7	102.5	51.7	27.6	19.7	27.6	51.7
110°	364.3	356.0	313.3	247.9	208.9	135.8	78.8	49.8	38.7	49.8	78.8



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CATALOG NUMBER: MWL-4-26-25-UNV-L940-EDD

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
112.5°	397.7	391.4	341.1	279.9	246.5	172.0	112.2	77.6	67.2	77.6	112.2
115°	423.4	419.9	374.0	309.8	281.3	213.1	150.0	110.3	97.9	110.3	150.0
117.5°	450.5	449.9	397.7	341.3	323.0	250.9	184.1	143.0	129.8	143.0	184.1
120°	484.6	479.1	430.4	371.9	363.6	289.8	221.7	180.6	167.4	180.6	221.7
122.5°	508.3	504.8	458.2	401.2	401.2	329.5	257.8	216.8	202.9	216.8	257.8
125°	529.9	528.4	479.1	430.4	441.5	366.4	298.2	256.5	241.2	256.5	298.2
127.5°	549.3	551.4	506.2	462.4	482.5	404.0	337.8	291.9	276.0	291.9	337.8
130°	566.1	573.0	532.0	491.6	521.5	445.0	373.4	327.4	317.0	327.4	373.4
132.5°	598.8	594.6	558.4	521.5	563.2	482.5	410.9	362.9	351.0	362.9	410.9
135°	615.4	616.8	581.4	547.3	602.2	520.1	446.3	399.1	387.2	399.1	446.3
137.5°	635.6	631.4	599.4	578.5	638.4	556.3	481.2	437.3	418.6	437.3	481.2
140°	650.3	649.5	623.1	606.4	677.3	591.8	516.7	472.1	454.7	472.1	516.7
142.5°	665.6	670.6	646.7	637.0	716.3	629.4	555.0	507.1	489.5	507.1	555.0
145°	675.9	685.0	670.4	675.3	753.1	671.1	588.3	538.9	520.8	538.9	588.3
147.5°	693.3	705.2	687.8	702.4	785.1	707.9	621.7	573.0	557.0	573.0	621.7
150°	717.0	722.6	712.1	740.0	817.8	748.9	655.8	605.7	589.7	605.7	655.8
152.5°	735.8	742.7	730.9	780.9	843.5	786.5	693.3	637.7	618.9	637.7	693.3
155°	755.2	757.9	749.7	820.5	870.6	823.4	723.2	673.2	655.1	673.2	723.2
157.5°	773.3	778.8	769.1	850.5	894.3	855.3	757.3	708.7	692.6	708.7	757.3
160°	792.7	792.7	798.3	885.3	913.8	883.2	793.5	747.6	725.3	747.6	793.5
162.5°	794.8	808.1	837.9	909.6	932.6	907.5	832.4	775.3	755.8	775.3	832.4
165°	825.5	837.3	882.5	931.2	947.2	929.1	880.4	821.3	798.3	821.3	880.4
167.5°	857.4	882.5	918.7	955.6	961.1	949.3	917.3	876.2	855.3	876.2	917.3
170°	909.6	931.2	949.3	964.6	972.2	965.3	940.3	920.0	906.8	920.0	940.3
172.5°	949.7	964.6	971.5	981.3	977.3	973.6	961.1	951.4	943.5	951.4	961.1
175°	975.5	979.2	985.4	982.0	987.1	978.5	979.2	984.1	954.7	984.1	979.2
177.5°	984.5	990.4	986.8	980.6	982.2	979.9	982.7	985.4	980.3	985.4	982.7
180°	985.4	985.4	985.4	985.4	985.4	985.4	985.4	985.4	985.4	985.4	985.4



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CATALOG NUMBER: MWL-4-26-25-UNV-L940-EDD

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	975.1	975.1	975.1	975.1	975.1	975.1
2.5°	981.3	978.3	982.0	971.2	971.7	972.1
5°	973.1	972.1	973.1	964.9	968.0	968.5
7.5°	964.1	967.6	964.9	958.7	959.6	960.0
10°	953.5	955.9	954.1	948.6	950.5	950.7
12.5°	938.0	939.1	938.0	932.5	940.4	938.4
15°	923.6	924.5	924.3	916.1	918.6	923.7
17.5°	903.5	903.5	903.5	898.8	902.2	900.9
20°	881.9	881.9	882.6	877.8	879.2	879.9
22.5°	856.4	859.2	857.1	853.2	855.5	852.8
25°	831.8	832.7	832.5	826.5	823.6	822.7
27.5°	808.8	812.7	809.5	802.0	793.6	789.9
30°	773.3	773.5	774.6	767.1	757.1	757.1
32.5°	744.2	744.2	745.6	732.6	718.9	718.9
35°	709.8	710.7	711.8	693.6	680.9	678.1
37.5°	670.7	681.3	672.7	651.7	637.1	639.0
40°	629.7	637.6	631.0	607.1	596.1	599.8
42.5°	585.0	596.6	586.4	561.8	556.0	562.4
45°	541.3	555.6	542.7	516.2	518.1	525.3
47.5°	491.2	508.2	491.8	475.2	482.5	492.5
50°	443.1	452.9	444.4	437.0	447.0	455.2
52.5°	399.3	393.7	400.7	399.8	414.2	424.2
55°	352.1	336.5	353.6	364.3	381.6	390.7
57.5°	305.7	285.4	307.1	328.7	351.5	357.9
60°	257.4	244.4	258.1	292.6	318.1	324.4
62.5°	217.3	205.5	218.0	257.0	287.1	291.6
65°	181.8	176.3	182.5	222.6	250.8	258.1
67.5°	153.5	152.6	153.5	188.0	216.2	223.5
70°	127.1	127.1	127.1	154.4	179.9	190.9
72.5°	104.6	108.2	105.2	126.2	148.1	161.7
75°	84.6	89.1	84.6	100.0	119.8	137.1
77.5°	66.3	71.8	66.3	78.2	100.8	121.7
80°	49.9	54.5	49.9	63.0	93.2	116.3
82.5°	35.4	38.1	35.4	60.3	94.8	118.4
85°	28.7	22.6	30.2	67.4	104.8	125.4
87.5°	24.4	7.3	34.2	80.4	122.3	137.7
90°	16.9	0.7	43.3	99.9	141.4	154.8
92.5°	10.5	12.0	58.5	120.2	165.2	176.3
95°	6.5	28.7	76.0	144.6	191.1	196.2
97.5°	9.3	50.3	98.3	169.7	217.8	220.4
100°	23.9	76.7	128.2	195.6	241.4	242.9
102.5°	44.0	105.2	156.7	219.6	267.0	277.2
105°	71.2	137.9	186.7	252.7	294.4	305.9
107.5°	102.5	172.7	217.3	283.4	322.5	331.3
110°	135.8	208.9	247.9	313.3	356.0	364.3



TEST NUMBER: P392642

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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	172.0	246.5	279.9	341.1	391.4	397.7
115°	213.1	281.3	309.8	374.0	419.9	423.4
117.5°	250.9	323.0	341.3	397.7	449.9	450.5
120°	289.8	363.6	371.9	430.4	479.1	484.6
122.5°	329.5	401.2	401.2	458.2	504.8	508.3
125°	366.4	441.5	430.4	479.1	528.4	529.9
127.5°	404.0	482.5	462.4	506.2	551.4	549.3
130°	445.0	521.5	491.6	532.0	573.0	566.1
132.5°	482.5	563.2	521.5	558.4	594.6	598.8
135°	520.1	602.2	547.3	581.4	616.8	615.4
137.5°	556.3	638.4	578.5	599.4	631.4	635.6
140°	591.8	677.3	606.4	623.1	649.5	650.3
142.5°	629.4	716.3	637.0	646.7	670.6	665.6
145°	671.1	753.1	675.3	670.4	685.0	675.9
147.5°	707.9	785.1	702.4	687.8	705.2	693.3
150°	748.9	817.8	740.0	712.1	722.6	717.0
152.5°	786.5	843.5	780.9	730.9	742.7	735.8
155°	823.4	870.6	820.5	749.7	757.9	755.2
157.5°	855.3	894.3	850.5	769.1	778.8	773.3
160°	883.2	913.8	885.3	798.3	792.7	792.7
162.5°	907.5	932.6	909.6	837.9	808.1	794.8
165°	929.1	947.2	931.2	882.5	837.3	825.5
167.5°	949.3	961.1	955.6	918.7	882.5	857.4
170°	965.3	972.2	964.6	949.3	931.2	909.6
172.5°	973.6	977.3	981.3	971.5	964.6	949.7
175°	978.5	987.1	982.0	985.4	979.2	975.5
177.5°	979.9	982.2	980.6	986.8	990.4	984.5
180°	985.4	985.4	985.4	985.4	985.4	985.4

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