

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: P392562

Luminaire Tested: **MWL-3-27-25-UNV-L830-EDD**

Issue Date: 3/12/2020

Test Information

Test Method: LM-79-08
Report Number: P392562
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1910-565-1 &
Test Lab: INNOVATION CENTER
Issue Date: 3/12/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: MWL-3-27-25-UNV-L830-EDD
Description: MWL 3FT MEDICAL LED FIXTURE
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

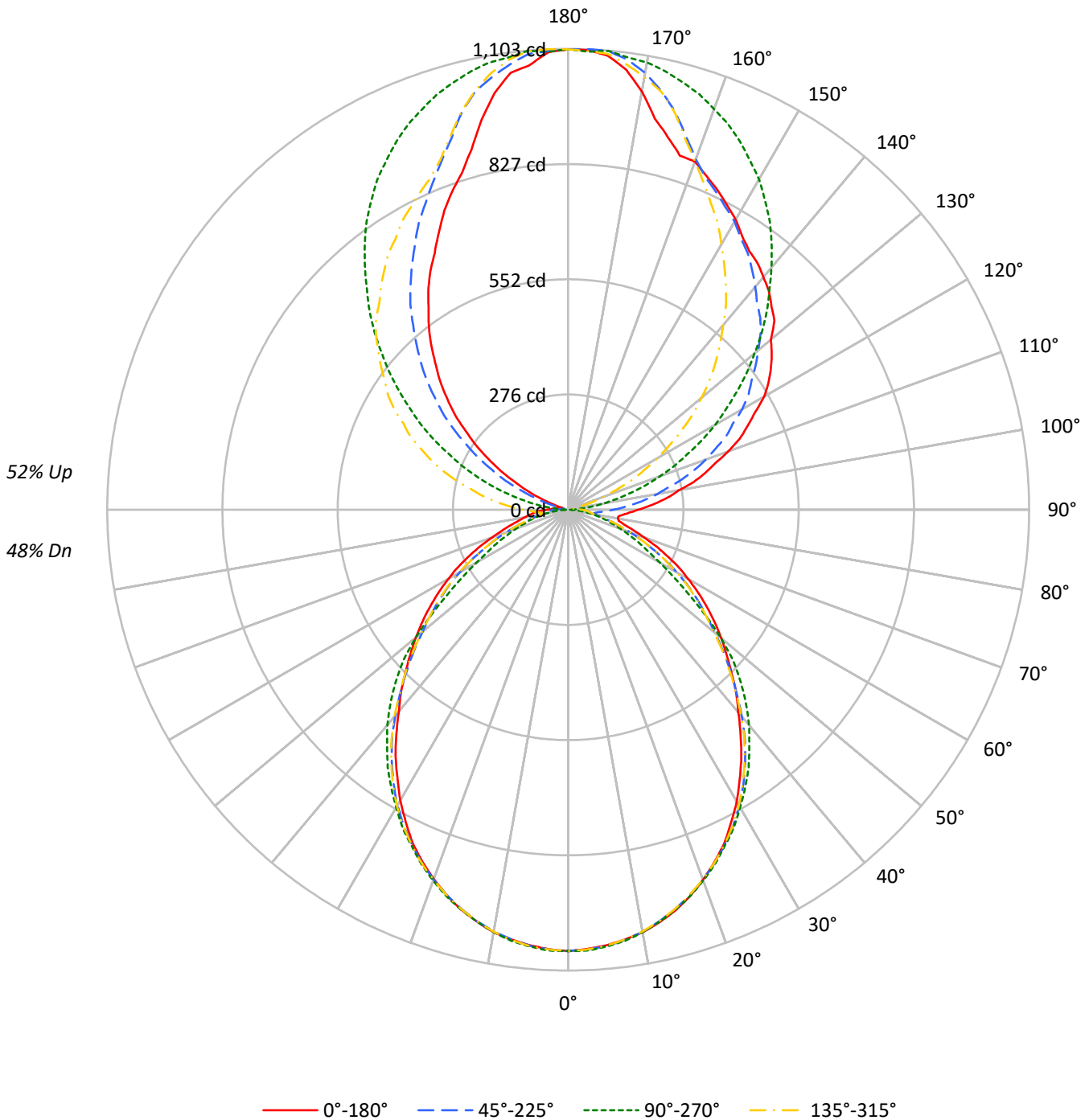
Lumens per Lamp: N/A
Luminaire Lumens: 5058.0 lumens
Efficiency: N/A
Efficacy: 102.8 lumens/watt
Spacing Criteria (0/90/45): 1.15 / 1.17 / 1.24
Luminous Opening: Rectangular w/ Sides (W: 0.42' x L: 3' x H: 0.42')
CIE Type: General Diffuse

Input Watts (W): 49.2
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	98	98	98	98	82	82	82	68	68	68	54	54	54	48	48	48	48	
1	97	93	89	86	89	86	83	80	72	70	68	60	58	56	48	47	46	41	41	41	41	
2	89	82	76	71	82	75	70	66	64	60	57	53	50	48	43	41	39	34	34	34	34	
3	81	72	65	59	75	67	60	55	56	52	48	47	44	41	38	36	34	30	30	30	30	
4	75	64	56	50	68	59	53	47	50	45	41	42	38	35	34	32	29	26	26	26	26	
5	69	57	49	43	63	53	46	41	45	40	36	38	34	31	31	28	26	23	23	23	23	
6	63	51	43	38	58	48	41	36	41	35	31	34	30	27	28	25	23	20	20	20	20	
7	59	46	39	33	54	43	36	31	37	32	28	31	27	24	26	23	20	18	18	18	18	
8	54	42	35	29	50	39	33	28	34	28	25	29	25	21	24	21	18	16	16	16	16	
9	51	39	31	26	47	36	29	25	31	26	22	26	22	19	22	19	17	15	15	15	15	
10	47	35	28	24	44	33	27	22	29	24	20	24	20	18	21	17	15	13	13	13	13	

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	9098	9098	9098	9098
5°	8937	8343	8937	8343
10°	8765	7632	8765	7632
15°	8533	6966	8513	6966
20°	8225	6347	8205	6347
25°	7876	5748	7855	5748
30°	7427	5187	7397	5187
35°	6922	4654	6899	4654
40°	6375	4114	6344	4114
45°	5911	3554	5885	3554
50°	5493	2911	5465	2911
55°	5064	2168	5044	2168
60°	4601	1588	4590	1588
65°	4090	1204	4090	1204
70°	3492	888	3506	888
75°	3041	647	3094	647
80°	3351	419	2943	419
85°	5071	181	3146	181



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	99.4	2.0
10°-20°	279.0	5.5
20°-30°	407.1	8.0
30°-40°	459.8	9.1
40°-50°	430.3	8.5
50°-60°	339.6	6.7
60°-70°	222.0	4.4
70°-80°	115.7	2.3
80°-90°	69.2	1.4
90°-100°	93.6	1.9
100°-110°	171.5	3.4
110°-120°	292.8	5.8
120°-130°	397.6	7.9
130°-140°	453.6	9.0
140°-150°	452.5	8.9
150°-160°	393.9	7.8
160°-170°	277.2	5.5
170°-180°	103.2	2.0
0°-30°	785.5	15.5
0°-40°	1245.3	24.6
0°-60°	2015.2	39.8
0°-90°	2422.1	47.9
90°-120°	557.9	11.0
90°-150°	1861.6	36.8
90°-180°	2636.0	52.1
0°-180°	5058.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1056	1056	1056	1056	1056	
5°	1046	1050	1046	1050	1046	99
15°	993	991	990	991	993	279
25°	883	887	880	887	883	405
35°	722	753	720	753	722	451
45°	553	584	550	584	553	428
55°	404	351	403	351	404	362
65°	260	186	260	186	260	259
75°	139	92	141	92	139	154
85°	133	23	82	23	133	106
90°	167	1	51	1	167	93
95°	218	32	34	32	218	189
105°	339	154	11	154	339	357
115°	473	314	109	314	473	470
125°	592	492	270	492	592	529
135°	688	672	433	672	688	531
145°	756	841	582	841	756	476
155°	844	972	732	972	844	389
165°	923	1059	892	1059	923	262
175°	1091	1102	1067	1102	1091	102
180°	1102	1102	1102	1102	1102	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	1056.5	1056.5	1056.5	1056.5	1056.5	1056.5	1056.5	1056.5	1056.5	1056.5	1056.5
2.5°	1052.2	1055.8	1053.5	1055.2	1056.2	1054.4	1053.5	1055.8	1053.1	1055.8	1053.5
5°	1046.5	1050.0	1048.7	1048.7	1049.6	1048.7	1047.9	1050.0	1046.5	1050.0	1047.9
7.5°	1037.7	1040.2	1038.3	1040.0	1041.0	1039.3	1037.5	1039.5	1037.7	1039.5	1037.5
10°	1027.0	1026.8	1025.8	1026.8	1026.8	1026.0	1025.1	1025.3	1027.0	1025.3	1025.1
12.5°	1011.2	1009.5	1008.7	1010.7	1009.9	1010.7	1008.7	1008.0	1009.7	1008.0	1008.7
15°	992.8	991.3	989.5	991.5	990.7	990.7	988.8	989.7	990.5	989.7	988.8
17.5°	969.8	968.2	967.5	969.6	969.6	969.6	966.7	967.5	967.5	967.5	966.7
20°	942.9	944.1	942.5	945.6	944.7	944.7	941.7	942.5	940.6	942.5	941.7
22.5°	913.3	915.3	915.6	917.7	917.8	916.9	914.9	913.7	911.8	913.7	914.9
25°	882.6	881.7	885.7	889.9	887.1	889.0	884.2	879.4	880.3	879.4	884.2
27.5°	844.2	850.0	854.0	859.0	858.3	858.2	852.5	847.7	841.9	847.7	852.5
30°	806.8	809.7	819.3	825.2	822.8	823.7	817.0	807.4	803.6	807.4	817.0
32.5°	763.6	769.4	779.9	789.7	788.2	788.2	777.6	766.2	760.4	766.2	777.6
35°	722.5	724.4	737.9	751.3	752.7	748.9	735.5	722.0	720.1	722.0	735.5
37.5°	677.4	679.3	694.7	711.0	711.4	708.6	692.3	676.9	675.0	676.9	692.3
40°	633.2	634.2	646.7	668.0	673.0	666.4	643.5	631.0	630.1	631.0	643.5
42.5°	594.8	588.1	597.0	621.9	629.8	620.3	594.6	585.0	591.7	585.0	594.6
45°	552.8	545.1	549.9	573.0	583.7	571.3	546.8	542.7	550.4	542.7	546.8
47.5°	514.4	504.8	503.8	520.4	535.7	519.5	500.7	502.4	512.0	502.4	500.7
50°	477.9	466.4	457.8	469.5	476.3	467.8	454.6	463.2	475.5	463.2	454.6
52.5°	441.5	429.9	416.7	419.6	412.0	417.9	414.3	426.8	439.1	426.8	414.3
55°	404.2	394.6	378.3	368.8	350.7	367.3	375.9	392.2	402.6	392.2	375.9
57.5°	368.7	361.0	340.9	319.8	297.9	318.3	338.5	358.6	367.1	358.6	338.5
60°	331.4	327.5	300.6	270.1	251.9	269.3	299.1	326.0	330.6	326.0	299.1
62.5°	297.8	291.0	262.2	226.9	214.6	226.1	260.7	289.5	297.0	289.5	260.7
65°	260.5	255.7	223.1	191.4	185.8	190.6	222.3	254.9	260.5	254.9	222.3
67.5°	226.9	217.3	190.4	157.0	157.0	157.0	189.7	216.6	226.9	216.6	189.7
70°	191.6	182.0	157.0	131.1	132.1	131.1	157.0	182.8	192.4	182.8	157.0
72.5°	163.8	149.4	128.2	107.1	110.2	106.4	128.2	150.1	165.3	150.1	128.2
75°	138.8	121.5	101.6	87.2	92.0	87.2	102.3	122.3	141.2	122.3	102.3
77.5°	123.9	100.7	79.5	68.0	73.7	68.0	80.2	98.3	120.8	98.3	80.2
80°	120.8	94.3	64.5	51.6	56.4	51.6	63.0	81.8	106.1	81.8	63.0
82.5°	121.2	98.9	62.4	37.2	39.2	37.2	53.0	70.9	91.7	70.9	53.0
85°	132.8	111.6	70.8	29.9	22.8	28.4	48.3	64.2	82.4	64.2	48.3
87.5°	148.4	132.8	86.7	35.9	6.7	25.1	42.3	58.1	68.3	58.1	42.3
90°	167.2	155.6	108.9	45.5	0.8	15.9	31.9	46.0	50.6	46.0	31.9
92.5°	192.8	181.6	131.9	63.8	13.4	10.2	25.3	37.6	40.4	37.6	25.3
95°	218.4	211.8	159.6	82.8	32.1	5.0	19.6	31.3	34.0	31.3	19.6
97.5°	245.8	240.1	187.1	109.8	56.2	10.3	15.3	26.1	28.0	26.1	15.3
100°	269.4	266.8	216.4	143.3	85.7	26.6	10.3	22.6	24.5	22.6	10.3
102.5°	308.0	295.8	244.4	175.2	117.7	49.1	12.7	15.8	18.7	15.8	12.7
105°	338.6	324.9	282.5	208.7	154.2	79.5	31.3	12.2	11.2	12.2	31.3
107.5°	368.3	360.5	316.8	242.9	193.1	114.5	57.8	30.7	19.8	30.7	57.8
110°	407.2	397.9	350.2	277.1	233.5	151.9	88.1	55.6	43.1	55.6	88.1



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
112.5°	444.5	437.5	381.4	312.8	275.5	192.3	125.5	86.7	75.1	86.7	125.5
115°	473.3	469.4	417.1	346.3	314.5	238.2	166.6	123.2	109.2	123.2	166.6
117.5°	503.7	502.9	443.6	380.5	361.1	279.4	204.7	159.8	145.0	159.8	204.7
120°	541.8	535.5	480.1	414.8	405.5	323.0	246.8	201.9	187.1	201.9	246.8
122.5°	568.2	564.3	511.2	447.4	447.4	367.3	287.2	242.3	226.7	242.3	287.2
125°	592.3	590.7	534.6	480.1	492.5	408.5	332.3	286.6	269.5	286.6	332.3
127.5°	614.0	616.4	564.9	515.8	538.4	450.6	376.7	326.3	308.4	326.3	376.7
130°	632.8	640.5	593.7	548.6	582.0	496.5	416.3	365.9	354.3	365.9	416.3
132.5°	669.3	664.6	624.2	582.0	628.6	538.4	459.3	405.6	392.4	405.6	459.3
135°	688.0	689.5	649.8	610.8	672.2	580.4	499.0	446.1	432.8	446.1	499.0
137.5°	710.5	705.9	669.1	645.8	712.7	620.9	536.9	488.9	467.8	488.9	536.9
140°	726.8	726.1	696.5	677.9	756.2	661.6	577.6	527.7	508.3	527.7	577.6
142.5°	744.0	748.6	723.0	711.1	799.8	702.5	620.3	565.9	547.1	565.9	620.3
145°	755.6	765.8	749.4	754.9	841.1	750.2	657.6	602.4	582.2	602.4	657.6
147.5°	775.1	788.4	768.9	785.2	876.8	791.4	695.0	640.5	622.6	640.5	695.0
150°	801.5	807.7	796.1	827.2	913.3	837.3	733.1	677.1	659.2	677.1	733.1
152.5°	822.5	830.3	816.1	872.2	942.1	878.4	774.2	712.8	691.9	712.8	774.2
155°	844.3	847.4	838.1	916.5	972.5	919.6	808.5	752.6	732.3	752.6	808.5
157.5°	864.6	870.7	859.9	949.9	999.0	955.4	846.6	792.2	774.3	792.2	846.6
160°	886.4	886.4	892.5	989.7	1020.7	987.4	887.1	835.8	810.9	835.8	887.1
162.5°	888.7	902.5	936.9	1017.0	1042.6	1014.7	930.6	865.9	845.1	865.9	930.6
165°	922.8	935.1	986.7	1041.1	1058.9	1038.8	984.4	917.3	892.5	917.3	984.4
167.5°	958.6	985.7	1027.1	1068.4	1074.6	1061.3	1025.5	978.7	956.3	978.7	1025.5
170°	1016.0	1040.1	1061.3	1078.4	1087.0	1079.2	1051.2	1027.7	1012.9	1027.7	1051.2
172.5°	1061.9	1077.5	1086.2	1097.2	1091.7	1088.5	1074.6	1062.7	1054.9	1062.7	1074.6
175°	1090.7	1093.8	1101.8	1097.9	1102.5	1094.0	1094.8	1099.3	1067.4	1099.3	1094.8
177.5°	1100.8	1106.3	1103.3	1096.3	1097.2	1095.5	1098.7	1100.8	1096.2	1100.8	1098.7
180°	1101.8	1101.8	1101.8	1101.8	1101.8	1101.8	1101.8	1101.8	1101.8	1101.8	1101.8



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	1056.5	1056.5	1056.5	1056.5	1056.5	1056.5
2.5°	1054.4	1056.2	1055.2	1053.5	1055.8	1052.2
5°	1048.7	1049.6	1048.7	1048.7	1050.0	1046.5
7.5°	1039.3	1041.0	1040.0	1038.3	1040.2	1037.7
10°	1026.0	1026.8	1026.8	1025.8	1026.8	1027.0
12.5°	1010.7	1009.9	1010.7	1008.7	1009.5	1011.2
15°	990.7	990.7	991.5	989.5	991.3	992.8
17.5°	969.6	969.6	969.6	967.5	968.2	969.8
20°	944.7	944.7	945.6	942.5	944.1	942.9
22.5°	916.9	917.8	917.7	915.6	915.3	913.3
25°	889.0	887.1	889.9	885.7	881.7	882.6
27.5°	858.2	858.3	859.0	854.0	850.0	844.2
30°	823.7	822.8	825.2	819.3	809.7	806.8
32.5°	788.2	788.2	789.7	779.9	769.4	763.6
35°	748.9	752.7	751.3	737.9	724.4	722.5
37.5°	708.6	711.4	711.0	694.7	679.3	677.4
40°	666.4	673.0	668.0	646.7	634.2	633.2
42.5°	620.3	629.8	621.9	597.0	588.1	594.8
45°	571.3	583.7	573.0	549.9	545.1	552.8
47.5°	519.5	535.7	520.4	503.8	504.8	514.4
50°	467.8	476.3	469.5	457.8	466.4	477.9
52.5°	417.9	412.0	419.6	416.7	429.9	441.5
55°	367.3	350.7	368.8	378.3	394.6	404.2
57.5°	318.3	297.9	319.8	340.9	361.0	368.7
60°	269.3	251.9	270.1	300.6	327.5	331.4
62.5°	226.1	214.6	226.9	262.2	291.0	297.8
65°	190.6	185.8	191.4	223.1	255.7	260.5
67.5°	157.0	157.0	157.0	190.4	217.3	226.9
70°	131.1	132.1	131.1	157.0	182.0	191.6
72.5°	106.4	110.2	107.1	128.2	149.4	163.8
75°	87.2	92.0	87.2	101.6	121.5	138.8
77.5°	68.0	73.7	68.0	79.5	100.7	123.9
80°	51.6	56.4	51.6	64.5	94.3	120.8
82.5°	37.2	39.2	37.2	62.4	98.9	121.2
85°	28.4	22.8	29.9	70.8	111.6	132.8
87.5°	25.1	6.7	35.9	86.7	132.8	148.4
90°	15.9	0.8	45.5	108.9	155.6	167.2
92.5°	10.2	13.4	63.8	131.9	181.6	192.8
95°	5.0	32.1	82.8	159.6	211.8	218.4
97.5°	10.3	56.2	109.8	187.1	240.1	245.8
100°	26.6	85.7	143.3	216.4	266.8	269.4
102.5°	49.1	117.7	175.2	244.4	295.8	308.0
105°	79.5	154.2	208.7	282.5	324.9	338.6
107.5°	114.5	193.1	242.9	316.8	360.5	368.3
110°	151.9	233.5	277.1	350.2	397.9	407.2



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CATALOG NUMBER: MWL-3-27-25-UNV-L830-EDD

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	192.3	275.5	312.8	381.4	437.5	444.5
115°	238.2	314.5	346.3	417.1	469.4	473.3
117.5°	279.4	361.1	380.5	443.6	502.9	503.7
120°	323.0	405.5	414.8	480.1	535.5	541.8
122.5°	367.3	447.4	447.4	511.2	564.3	568.2
125°	408.5	492.5	480.1	534.6	590.7	592.3
127.5°	450.6	538.4	515.8	564.9	616.4	614.0
130°	496.5	582.0	548.6	593.7	640.5	632.8
132.5°	538.4	628.6	582.0	624.2	664.6	669.3
135°	580.4	672.2	610.8	649.8	689.5	688.0
137.5°	620.9	712.7	645.8	669.1	705.9	710.5
140°	661.6	756.2	677.9	696.5	726.1	726.8
142.5°	702.5	799.8	711.1	723.0	748.6	744.0
145°	750.2	841.1	754.9	749.4	765.8	755.6
147.5°	791.4	876.8	785.2	768.9	788.4	775.1
150°	837.3	913.3	827.2	796.1	807.7	801.5
152.5°	878.4	942.1	872.2	816.1	830.3	822.5
155°	919.6	972.5	916.5	838.1	847.4	844.3
157.5°	955.4	999.0	949.9	859.9	870.7	864.6
160°	987.4	1020.7	989.7	892.5	886.4	886.4
162.5°	1014.7	1042.6	1017.0	936.9	902.5	888.7
165°	1038.8	1058.9	1041.1	986.7	935.1	922.8
167.5°	1061.3	1074.6	1068.4	1027.1	985.7	958.6
170°	1079.2	1087.0	1078.4	1061.3	1040.1	1016.0
172.5°	1088.5	1091.7	1097.2	1086.2	1077.5	1061.9
175°	1094.0	1102.5	1097.9	1101.8	1093.8	1090.7
177.5°	1095.5	1097.2	1096.3	1103.3	1106.3	1100.8
180°	1101.8	1101.8	1101.8	1101.8	1101.8	1101.8

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