

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: P

Luminaire Tested: **4APN-X-22L850-UNV-NP**

Issue Date: 06/06/2024



Test Information

Test Method: LM-79-08
Report Number: P
Test Lab: INNOVATION CENTER(G2)
Issue Date: 06/06/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 4APN-X-22L850-UNV-NP
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture EXAM Light w/ Nature Pattern Lens
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

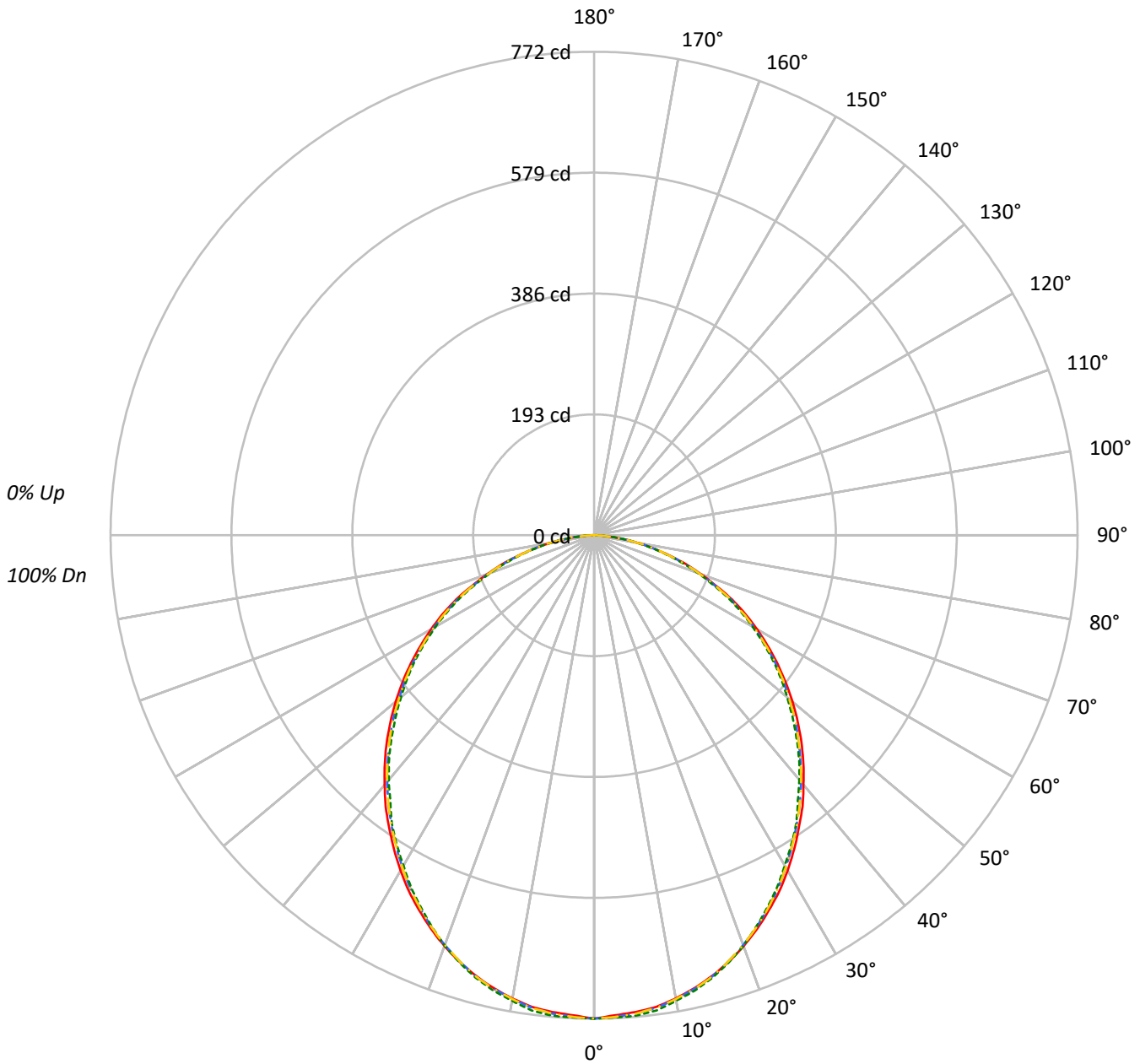
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2008.1 lumens
Efficiency: N/A
Efficacy: 83.7 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): 24
Input Voltage (V): 120
Input Current (A_{in}): 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

TEST NUMBER: P
CATALOG NUMBER: 4APN-X-22L850-UNV-NP

Luminous Intensity Polar Plot



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



TEST NUMBER: P
 CATALOG NUMBER: 4APN-X-22L850-UNV-NP

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	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°	7121	7121	7121	7121
5°	7078	7131	7078	7131
10°	7037	7071	7037	7071
15°	6958	6985	6958	6985
20°	6856	6847	6856	6847
25°	6725	6668	6725	6668
30°	6586	6486	6586	6486
35°	6422	6337	6422	6337
40°	6265	6141	6265	6141
45°	6112	5963	6112	5963
50°	5938	5776	5938	5776
55°	5746	5609	5746	5609
60°	5549	5392	5549	5392
65°	5307	5143	5307	5143
70°	4907	4753	4907	4753
75°	4435	4299	4435	4299
80°	3804	3703	3804	3703
85°	2890	2890	2890	2890



TEST NUMBER: P
 CATALOG NUMBER: 4APN-X-22L850-UNV-NP

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.8	3.6
10°-20°	205.7	10.2
20°-30°	303.2	15.1
30°-40°	353.9	17.6
40°-50°	356.9	17.8
50°-60°	315.4	15.7
60°-70°	235.9	11.7
70°-80°	130.7	6.5
80°-90°	33.5	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°	581.8	29.0
0°-40°	935.7	46.6
0°-60°	1607.9	80.1
0°-90°	2008.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2008.1	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	772	772	772	772	772	
5°	764	770	764	770	764	73
15°	728	731	728	731	728	205
25°	661	655	661	655	661	304
35°	570	563	570	563	570	357
45°	468	457	468	457	468	361
55°	357	349	357	349	357	319
65°	243	236	243	236	243	239
75°	124	121	124	121	124	132
85°	27	27	27	27	27	33
90°	0	0	0	0	0	



TEST NUMBER: P
 CATALOG NUMBER: 4APN-X-22L850-UNV-NP

CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°	100°
0°	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8
2.5°	767.1	770.9	774.7	773.7	770.9	768.9	770.0	770.0	770.9	770.9	770.9
5°	764.2	768.0	770.9	770.0	767.1	766.2	766.2	766.2	768.0	770.0	768.0
7.5°	759.5	762.4	765.3	764.2	761.5	760.5	760.5	761.5	763.3	765.3	763.3
10°	751.1	754.8	757.7	755.8	753.0	751.1	751.1	751.1	753.0	754.8	753.0
12.5°	740.7	743.5	746.4	745.4	742.6	740.7	740.7	740.7	742.6	744.5	742.6
15°	728.5	731.3	734.1	733.2	730.3	728.5	728.5	728.5	730.3	731.3	730.3
17.5°	714.4	717.1	720.0	718.1	714.4	712.4	712.4	712.4	714.4	715.3	714.4
20°	698.3	701.1	703.0	701.1	697.4	695.5	694.5	694.5	696.4	697.4	696.4
22.5°	680.4	682.3	684.1	682.3	678.5	676.7	675.7	674.7	675.7	676.7	675.7
25°	660.6	662.5	664.4	662.5	658.8	655.9	655.0	654.0	655.0	655.0	655.0
27.5°	640.8	641.8	643.6	640.8	637.0	634.2	633.3	632.3	633.3	633.3	633.3
30°	618.2	619.1	621.1	618.2	613.5	610.6	609.7	608.8	608.8	608.8	608.8
32.5°	594.6	596.5	598.4	594.6	589.9	587.1	586.2	585.2	586.2	586.2	586.2
35°	570.2	571.1	572.9	570.2	565.5	562.6	560.8	559.7	561.7	562.6	561.7
37.5°	546.6	547.5	548.5	545.6	540.9	538.1	536.2	535.3	534.3	534.3	534.3
40°	520.2	521.1	523.1	520.2	515.5	512.6	510.8	509.9	509.9	509.9	509.9
42.5°	494.7	495.7	496.7	493.8	489.1	486.3	484.4	483.4	484.4	484.4	484.4
45°	468.4	468.4	469.3	466.4	462.8	459.9	458.0	457.0	457.0	457.0	457.0
47.5°	441.0	442.0	442.9	440.1	436.3	433.5	431.6	429.7	429.7	429.7	429.7
50°	413.7	413.7	414.6	411.9	408.1	405.2	404.3	403.4	402.4	402.4	402.4
52.5°	385.4	386.4	387.3	384.5	381.7	378.8	376.9	376.0	376.0	376.0	376.0
55°	357.2	357.2	358.1	356.3	353.4	350.5	348.7	347.8	348.7	348.7	348.7
57.5°	328.9	329.8	330.8	328.0	325.1	322.3	321.3	320.4	320.4	320.4	320.4
60°	300.7	300.7	301.6	299.7	296.9	294.0	293.1	292.2	292.2	292.2	292.2
62.5°	272.4	272.4	273.3	271.4	268.6	265.7	264.8	263.9	263.9	263.9	263.9
65°	243.1	243.1	243.1	241.3	239.4	238.4	237.5	236.5	235.6	235.6	235.6
67.5°	211.1	211.1	212.1	210.1	208.3	207.4	206.3	205.4	204.5	204.5	204.5
70°	181.9	181.9	182.8	181.9	180.0	179.1	178.1	177.2	176.2	176.2	176.2
72.5°	153.6	153.6	153.6	152.7	151.8	150.7	149.8	148.9	148.0	148.0	148.0
75°	124.4	124.4	125.3	124.4	123.5	122.5	121.6	121.6	120.6	120.6	120.6
77.5°	97.1	98.0	98.9	98.0	97.1	96.2	95.2	95.2	94.2	94.2	94.2
80°	71.6	72.6	73.5	72.6	71.6	70.7	69.7	69.7	69.7	69.7	69.7
82.5°	48.0	49.0	50.0	49.0	48.0	48.0	47.1	47.1	47.1	47.1	47.1
85°	27.3	28.3	29.2	29.2	28.3	28.3	27.3	27.3	27.3	27.3	27.3
87.5°	10.3	11.3	12.3	12.3	11.3	11.3	11.3	11.3	11.3	11.3	11.3
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: P
 CATALOG NUMBER: 4APN-X-22L850-UNV-NP

CANDELA DISTRIBUTION (continued):

	110°	120°	130°	140°	150°	160°	170°	180°	190°	200°	210°
0°	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8
2.5°	770.0	770.0	768.9	770.9	773.7	774.7	770.9	767.1	770.9	774.7	773.7
5°	766.2	766.2	766.2	767.1	770.0	770.9	768.0	764.2	768.0	770.9	770.0
7.5°	761.5	760.5	760.5	761.5	764.2	765.3	762.4	759.5	762.4	765.3	764.2
10°	751.1	751.1	751.1	753.0	755.8	757.7	754.8	751.1	754.8	757.7	755.8
12.5°	740.7	740.7	740.7	742.6	745.4	746.4	743.5	740.7	743.5	746.4	745.4
15°	728.5	728.5	728.5	730.3	733.2	734.1	731.3	728.5	731.3	734.1	733.2
17.5°	712.4	712.4	712.4	714.4	718.1	720.0	717.1	714.4	717.1	720.0	718.1
20°	694.5	694.5	695.5	697.4	701.1	703.0	701.1	698.3	701.1	703.0	701.1
22.5°	674.7	675.7	676.7	678.5	682.3	684.1	682.3	680.4	682.3	684.1	682.3
25°	654.0	655.0	655.9	658.8	662.5	664.4	662.5	660.6	662.5	664.4	662.5
27.5°	632.3	633.3	634.2	637.0	640.8	643.6	641.8	640.8	641.8	643.6	640.8
30°	608.8	609.7	610.6	613.5	618.2	621.1	619.1	618.2	619.1	621.1	618.2
32.5°	585.2	586.2	587.1	589.9	594.6	598.4	596.5	594.6	596.5	598.4	594.6
35°	559.7	560.8	562.6	565.5	570.2	572.9	571.1	570.2	571.1	572.9	570.2
37.5°	535.3	536.2	538.1	540.9	545.6	548.5	547.5	546.6	547.5	548.5	545.6
40°	509.9	510.8	512.6	515.5	520.2	523.1	521.1	520.2	521.1	523.1	520.2
42.5°	483.4	484.4	486.3	489.1	493.8	496.7	495.7	494.7	495.7	496.7	493.8
45°	457.0	458.0	459.9	462.8	466.4	469.3	468.4	468.4	468.4	469.3	466.4
47.5°	429.7	431.6	433.5	436.3	440.1	442.9	442.0	441.0	442.0	442.9	440.1
50°	403.4	404.3	405.2	408.1	411.9	414.6	413.7	413.7	413.7	414.6	411.9
52.5°	376.0	376.9	378.8	381.7	384.5	387.3	386.4	385.4	386.4	387.3	384.5
55°	347.8	348.7	350.5	353.4	356.3	358.1	357.2	357.2	357.2	358.1	356.3
57.5°	320.4	321.3	322.3	325.1	328.0	330.8	329.8	328.9	329.8	330.8	328.0
60°	292.2	293.1	294.0	296.9	299.7	301.6	300.7	300.7	300.7	301.6	299.7
62.5°	263.9	264.8	265.7	268.6	271.4	273.3	272.4	272.4	272.4	273.3	271.4
65°	236.5	237.5	238.4	239.4	241.3	243.1	243.1	243.1	243.1	243.1	241.3
67.5°	205.4	206.3	207.4	208.3	210.1	212.1	211.1	211.1	211.1	212.1	210.1
70°	177.2	178.1	179.1	180.0	181.9	182.8	181.9	181.9	181.9	182.8	181.9
72.5°	148.9	149.8	150.7	151.8	152.7	153.6	153.6	153.6	153.6	153.6	152.7
75°	121.6	121.6	122.5	123.5	124.4	125.3	124.4	124.4	124.4	125.3	124.4
77.5°	95.2	95.2	96.2	97.1	98.0	98.9	98.0	97.1	98.0	98.9	98.0
80°	69.7	69.7	70.7	71.6	72.6	73.5	72.6	71.6	72.6	73.5	72.6
82.5°	47.1	47.1	48.0	48.0	49.0	50.0	49.0	48.0	49.0	50.0	49.0
85°	27.3	27.3	28.3	28.3	29.2	29.2	28.3	27.3	28.3	29.2	29.2
87.5°	11.3	11.3	11.3	11.3	12.3	12.3	11.3	10.3	11.3	12.3	12.3
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: P
 CATALOG NUMBER: 4APN-X-22L850-UNV-NP

CANDELA DISTRIBUTION (continued):

	220°	230°	240°	250°	260°	270°	280°	290°	300°	310°	320°
0°	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8
2.5°	770.9	768.9	770.0	770.0	770.9	770.9	770.9	770.0	770.0	768.9	770.9
5°	767.1	766.2	766.2	766.2	768.0	770.0	768.0	766.2	766.2	766.2	767.1
7.5°	761.5	760.5	760.5	761.5	763.3	765.3	763.3	761.5	760.5	760.5	761.5
10°	753.0	751.1	751.1	751.1	753.0	754.8	753.0	751.1	751.1	751.1	753.0
12.5°	742.6	740.7	740.7	740.7	742.6	744.5	742.6	740.7	740.7	740.7	742.6
15°	730.3	728.5	728.5	728.5	730.3	731.3	730.3	728.5	728.5	728.5	730.3
17.5°	714.4	712.4	712.4	712.4	714.4	715.3	714.4	712.4	712.4	712.4	714.4
20°	697.4	695.5	694.5	694.5	696.4	697.4	696.4	694.5	694.5	695.5	697.4
22.5°	678.5	676.7	675.7	674.7	675.7	676.7	675.7	674.7	675.7	676.7	678.5
25°	658.8	655.9	655.0	654.0	655.0	655.0	655.0	654.0	655.0	655.9	658.8
27.5°	637.0	634.2	633.3	632.3	633.3	633.3	633.3	632.3	633.3	634.2	637.0
30°	613.5	610.6	609.7	608.8	608.8	608.8	608.8	608.8	609.7	610.6	613.5
32.5°	589.9	587.1	586.2	585.2	586.2	586.2	586.2	585.2	586.2	587.1	589.9
35°	565.5	562.6	560.8	559.7	561.7	562.6	561.7	559.7	560.8	562.6	565.5
37.5°	540.9	538.1	536.2	535.3	534.3	534.3	534.3	535.3	536.2	538.1	540.9
40°	515.5	512.6	510.8	509.9	509.9	509.9	509.9	509.9	510.8	512.6	515.5
42.5°	489.1	486.3	484.4	483.4	484.4	484.4	484.4	483.4	484.4	486.3	489.1
45°	462.8	459.9	458.0	457.0	457.0	457.0	457.0	458.0	459.9	462.8	462.8
47.5°	436.3	433.5	431.6	429.7	429.7	429.7	429.7	429.7	431.6	433.5	436.3
50°	408.1	405.2	404.3	403.4	402.4	402.4	402.4	403.4	404.3	405.2	408.1
52.5°	381.7	378.8	376.9	376.0	376.0	376.0	376.0	376.9	378.8	381.7	381.7
55°	353.4	350.5	348.7	347.8	348.7	348.7	348.7	347.8	348.7	350.5	353.4
57.5°	325.1	322.3	321.3	320.4	320.4	320.4	320.4	321.3	322.3	325.1	325.1
60°	296.9	294.0	293.1	292.2	292.2	292.2	292.2	293.1	294.0	296.9	296.9
62.5°	268.6	265.7	264.8	263.9	263.9	263.9	263.9	264.8	265.7	268.6	268.6
65°	239.4	238.4	237.5	236.5	235.6	235.6	235.6	237.5	238.4	239.4	239.4
67.5°	208.3	207.4	206.3	205.4	204.5	204.5	204.5	205.4	206.3	207.4	208.3
70°	180.0	179.1	178.1	177.2	176.2	176.2	176.2	177.2	178.1	179.1	180.0
72.5°	151.8	150.7	149.8	148.9	148.0	148.0	148.0	148.9	149.8	150.7	151.8
75°	123.5	122.5	121.6	121.6	120.6	120.6	120.6	121.6	121.6	122.5	123.5
77.5°	97.1	96.2	95.2	95.2	94.2	94.2	94.2	95.2	95.2	96.2	97.1
80°	71.6	70.7	69.7	69.7	69.7	69.7	69.7	69.7	69.7	70.7	71.6
82.5°	48.0	48.0	47.1	47.1	47.1	47.1	47.1	47.1	47.1	48.0	48.0
85°	28.3	28.3	27.3	27.3	27.3	27.3	27.3	27.3	27.3	28.3	28.3
87.5°	11.3	11.3	11.3	11.3	11.3	11.3	11.3	11.3	11.3	11.3	11.3
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: P
 CATALOG NUMBER: 4APN-X-22L850-UNV-NP

CANDELA DISTRIBUTION (continued):

	330°	340°	350°	360°
0°	771.8	771.8	771.8	771.8
2.5°	773.7	774.7	770.9	767.1
5°	770.0	770.9	768.0	764.2
7.5°	764.2	765.3	762.4	759.5
10°	755.8	757.7	754.8	751.1
12.5°	745.4	746.4	743.5	740.7
15°	733.2	734.1	731.3	728.5
17.5°	718.1	720.0	717.1	714.4
20°	701.1	703.0	701.1	698.3
22.5°	682.3	684.1	682.3	680.4
25°	662.5	664.4	662.5	660.6
27.5°	640.8	643.6	641.8	640.8
30°	618.2	621.1	619.1	618.2
32.5°	594.6	598.4	596.5	594.6
35°	570.2	572.9	571.1	570.2
37.5°	545.6	548.5	547.5	546.6
40°	520.2	523.1	521.1	520.2
42.5°	493.8	496.7	495.7	494.7
45°	466.4	469.3	468.4	468.4
47.5°	440.1	442.9	442.0	441.0
50°	411.9	414.6	413.7	413.7
52.5°	384.5	387.3	386.4	385.4
55°	356.3	358.1	357.2	357.2
57.5°	328.0	330.8	329.8	328.9
60°	299.7	301.6	300.7	300.7
62.5°	271.4	273.3	272.4	272.4
65°	241.3	243.1	243.1	243.1
67.5°	210.1	212.1	211.1	211.1
70°	181.9	182.8	181.9	181.9
72.5°	152.7	153.6	153.6	153.6
75°	124.4	125.3	124.4	124.4
77.5°	98.0	98.9	98.0	97.1
80°	72.6	73.5	72.6	71.6
82.5°	49.0	50.0	49.0	48.0
85°	29.2	29.2	28.3	27.3
87.5°	12.3	12.3	11.3	10.3
90°	0.0	0.0	0.0	0.0

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