

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: P735587

Luminaire Tested: **4APN6-24-B2750-W2D-5000K**

Issue Date: 1/5/2024



Test Information

Test Method: LM-79-08
Report Number: P735587
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P709119)
Test Lab: INNOVATION CENTER(G2)
Issue Date: 1/5/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 4APN6-24-B2750-W2D-5000K
Description: 4FT 2400 AMBIENT LUMEN OUTPUT APN WITH BIO UP LEDS AT 5000K CCT

Light Source: -
Ballast/Driver: -

Summary

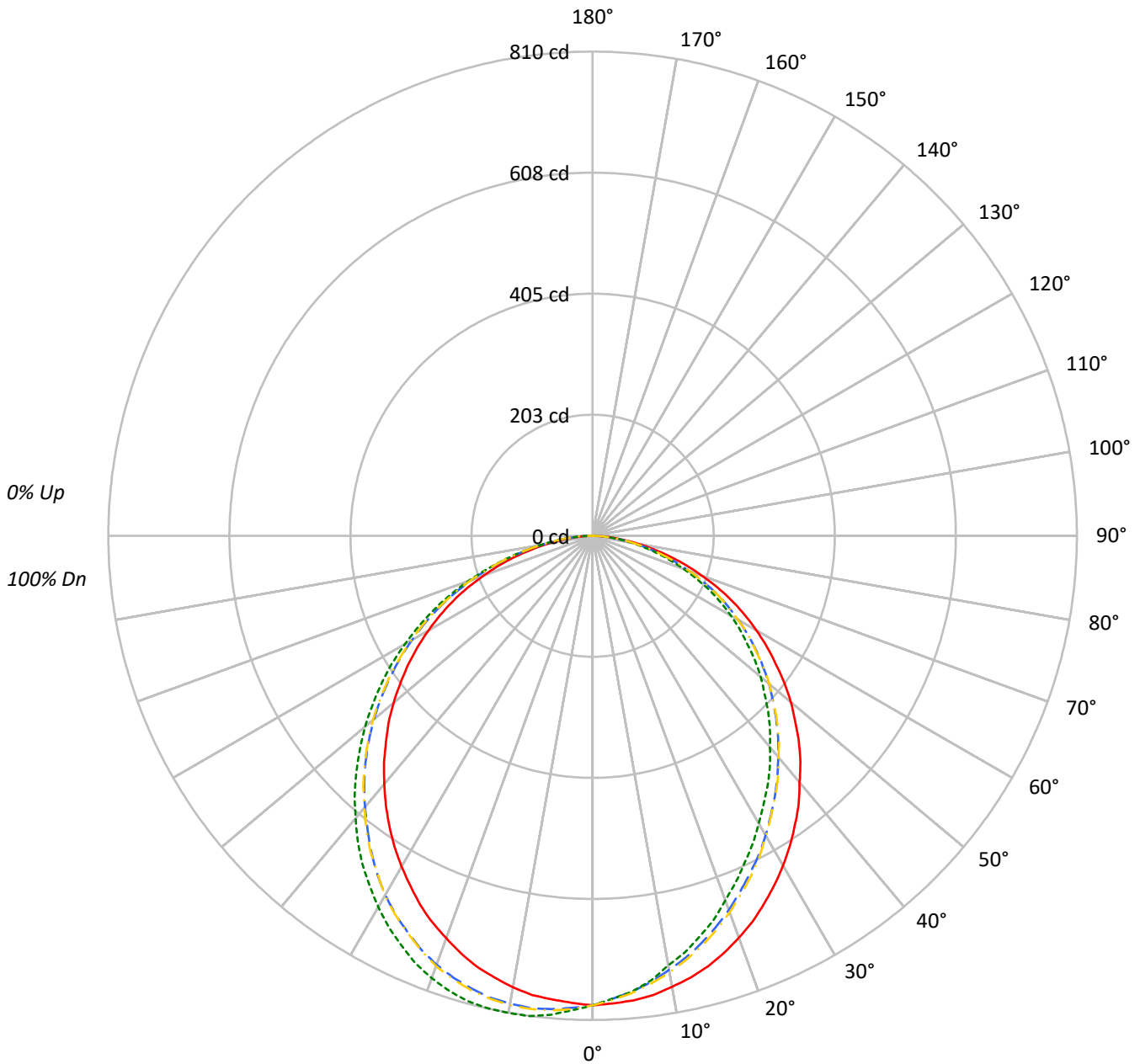
Lumens per Lamp: N/A
Luminaire Lumens: 2107.0 lumens
Efficiency: N/A
Efficacy: 88.5 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.21 / 1.33
Luminous Opening: Rectangular (W 0.29' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 23.8
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									
RC	80									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	100																			
1	109	104	100	96	106	102	98	95	98	94	92	94	91	89	90	88	86	84																			
2	99	91	84	78	96	89	83	77	85	80	76	82	78	74	79	76	72	70																			
3	90	80	72	65	88	78	71	65	75	69	64	73	67	62	70	65	61	59																			
4	83	71	62	55	81	70	61	55	67	60	54	65	59	54	63	57	53	51																			
5	76	63	54	48	74	62	54	48	60	53	47	58	52	47	56	51	46	44																			
6	70	57	48	42	68	56	48	42	54	47	41	53	46	41	51	45	41	38																			
7	65	52	43	37	64	51	43	37	49	42	37	48	41	36	47	41	36	34																			
8	61	47	39	33	59	47	39	33	45	38	33	44	37	33	43	37	32	30																			
9	57	43	35	30	55	43	35	30	42	35	30	41	34	29	40	34	29	27																			
10	53	40	32	27	52	40	32	27	39	32	27	38	31	27	37	31	27	25																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	7248	7248	7248	7248
5°	7227	7087	7210	7449
10°	7176	6835	7186	7593
15°	7122	6621	7131	7699
20°	7025	6370	7033	7731
25°	6912	6134	6939	7699
30°	6788	5918	6808	7640
35°	6646	5745	6676	7558
40°	6486	5555	6529	7428
45°	6366	5416	6378	7294
50°	6214	5268	6237	7131
55°	6018	5075	6061	6934
60°	5838	4919	5855	6691
65°	5606	4713	5606	6403
70°	5225	4365	5204	5967
75°	4752	3960	4688	5354
80°	4107	3400	3969	4580
85°	3208	2541	3017	3769



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	74.2	3.5
10°-20°	210.7	10.0
20°-30°	313.2	14.9
30°-40°	369.1	17.5
40°-50°	375.9	17.8
50°-60°	334.9	15.9
60°-70°	252.3	12.0
70°-80°	140.3	6.7
80°-90°	36.5	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°	598.1	28.4
0°-40°	967.3	45.9
0°-60°	1678.0	79.6
0°-90°	2107.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2107.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	786	786	786	786	786	
5°	780	765	778	804	780	74
15°	746	693	747	806	746	210
25°	679	603	682	756	679	313
35°	590	510	593	671	590	369
45°	488	415	489	559	488	376
55°	374	316	377	431	374	335
65°	257	216	257	293	257	253
75°	133	111	132	150	133	142
85°	30	24	28	36	30	36
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°	785.6	785.6	785.6	785.6	785.6	785.6	785.6	785.6	785.6	785.6	785.6
2.5°	783.0	783.0	783.8	780.3	775.9	774.1	773.2	772.3	774.1	774.9	774.1
5°	780.3	778.5	776.7	772.3	767.0	763.4	761.6	760.7	762.5	765.2	762.5
7.5°	774.9	771.4	767.8	761.6	755.5	750.1	747.4	745.6	747.4	750.1	748.3
10°	766.0	761.6	756.3	749.2	740.3	734.1	731.4	728.8	729.6	729.6	729.6
12.5°	757.1	751.0	744.8	735.9	726.0	718.9	714.5	711.0	712.7	713.7	713.7
15°	745.6	737.7	728.8	718.9	709.2	701.2	695.9	692.3	693.2	693.2	694.1
17.5°	731.4	722.5	713.7	702.1	690.5	681.6	675.5	671.0	672.7	673.7	674.5
20°	715.5	705.6	695.9	683.4	671.0	661.2	654.9	649.6	648.8	648.8	649.6
22.5°	698.5	687.8	676.3	663.0	649.6	639.0	632.7	627.4	626.6	626.6	627.4
25°	679.0	667.4	655.9	642.6	628.3	617.7	609.7	604.4	603.4	602.6	604.4
27.5°	658.5	647.0	635.5	622.1	607.0	596.3	588.3	583.0	581.2	580.3	582.1
30°	637.2	623.8	611.4	597.2	583.8	573.3	565.2	559.0	557.3	555.5	557.3
32.5°	614.1	600.8	587.4	573.3	559.9	549.2	541.2	535.1	533.3	532.3	534.1
35°	590.1	576.7	564.4	550.1	536.8	526.2	518.1	512.8	511.0	510.1	511.0
37.5°	566.1	552.8	540.3	526.2	512.8	502.2	494.1	488.8	487.9	487.0	487.9
40°	538.5	527.0	514.5	501.2	487.9	477.3	471.0	464.8	463.0	461.2	464.0
42.5°	514.5	503.0	490.6	478.1	464.8	454.1	447.0	441.7	439.9	439.0	439.9
45°	487.9	475.5	463.0	451.5	439.0	429.3	422.2	416.8	415.9	415.1	415.9
47.5°	459.5	448.8	438.1	426.6	414.1	404.4	398.1	392.9	391.1	389.3	391.1
50°	432.9	422.2	411.5	400.8	389.3	380.4	374.1	368.8	367.9	367.0	367.9
52.5°	404.4	393.7	384.0	373.3	363.4	354.6	348.4	344.0	343.0	342.2	343.0
55°	374.1	365.2	356.4	347.5	337.7	329.7	324.4	319.0	317.3	315.5	317.3
57.5°	345.7	337.7	328.8	320.0	311.1	304.0	298.6	294.1	293.3	292.3	293.3
60°	316.4	309.3	301.2	293.3	284.4	277.3	272.9	269.3	267.5	266.6	267.5
62.5°	287.1	280.0	273.7	265.7	257.7	252.3	247.9	244.4	242.6	241.8	242.6
65°	256.8	250.7	244.4	237.3	231.1	225.7	221.2	217.7	216.8	215.9	215.9
67.5°	225.7	220.4	215.1	208.9	201.8	196.4	191.9	189.3	188.4	187.5	188.4
70°	193.7	189.3	184.0	178.6	173.3	168.9	166.2	163.6	162.6	161.8	161.8
72.5°	163.6	160.0	155.5	151.1	146.6	142.2	139.6	137.8	136.9	136.0	136.0
75°	133.3	129.7	127.1	123.6	119.1	116.4	113.7	111.9	111.1	111.1	111.1
77.5°	104.9	102.2	99.6	96.0	93.3	90.7	88.9	88.0	87.1	87.1	87.1
80°	77.3	75.5	73.7	71.9	69.3	66.7	65.8	64.9	64.0	64.0	64.0
82.5°	52.5	51.5	49.7	48.0	46.2	45.3	44.4	43.6	43.6	43.6	43.6
85°	30.3	29.3	28.5	27.5	26.7	26.7	25.8	24.9	24.0	24.0	24.0
87.5°	12.5	12.5	12.5	11.5	10.7	10.7	10.7	10.7	10.7	10.7	10.7
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°	785.6	785.6	785.6	785.6	785.6	785.6	785.6	785.6	785.6	785.6	785.6
2.5°	772.3	774.1	775.9	778.5	781.2	783.8	783.0	782.1	785.6	790.0	791.0
5°	760.7	762.5	765.2	769.6	774.1	777.7	778.5	778.5	785.6	791.8	793.6
7.5°	746.6	749.2	752.7	757.1	763.4	768.8	771.4	774.9	782.1	790.0	793.6
10°	728.8	733.2	738.5	744.8	751.0	757.1	762.5	767.0	775.9	784.8	790.0
12.5°	712.7	717.1	722.5	729.6	737.7	745.6	751.0	757.1	767.8	778.5	784.8
15°	694.9	699.4	705.6	712.7	721.6	730.5	738.5	746.6	757.1	768.8	775.9
17.5°	675.5	679.9	686.0	694.9	704.8	714.5	723.4	732.3	744.8	757.1	765.2
20°	651.4	657.7	665.6	674.5	686.0	697.7	706.6	716.3	729.6	743.0	751.9
22.5°	628.3	634.5	643.4	654.1	666.6	679.0	689.6	700.3	714.5	727.8	737.7
25°	606.1	613.2	622.1	632.7	644.4	656.7	669.2	681.6	695.9	710.1	719.9
27.5°	583.8	590.1	599.0	609.7	623.0	635.5	647.8	660.3	675.5	690.5	701.2
30°	559.0	566.1	574.1	584.8	599.0	613.2	625.6	639.0	654.1	669.2	679.9
32.5°	535.9	542.1	550.1	560.8	574.9	589.2	602.6	616.7	631.0	646.0	656.7
35°	512.8	519.0	527.0	537.7	551.9	566.1	579.4	592.7	607.0	621.2	631.9
37.5°	489.7	495.9	504.0	514.5	527.9	542.1	554.5	567.9	582.1	596.3	606.1
40°	465.6	471.9	478.1	488.8	502.2	516.3	528.8	542.1	556.3	570.5	580.3
42.5°	441.7	447.9	455.9	466.6	479.0	491.5	504.0	516.3	529.7	543.0	552.8
45°	417.7	423.0	431.1	440.8	453.3	464.8	477.3	488.8	502.2	514.5	524.4
47.5°	392.9	398.1	404.4	414.1	426.6	439.0	451.5	463.0	474.5	487.0	495.9
50°	368.8	374.1	381.2	390.1	401.7	413.3	424.0	434.5	446.2	457.7	465.6
52.5°	344.0	349.3	355.5	364.4	374.1	384.8	394.5	405.2	415.9	426.6	434.5
55°	319.0	322.6	327.9	335.9	346.6	357.3	367.0	376.8	386.6	395.5	403.4
57.5°	294.1	298.6	304.8	311.9	320.8	329.7	338.6	347.5	356.4	365.2	372.3
60°	269.3	272.9	277.3	283.5	292.3	300.4	309.3	317.3	325.2	333.3	339.5
62.5°	243.5	247.1	251.5	257.7	264.8	271.9	280.0	287.1	294.1	301.2	307.5
65°	216.8	220.4	224.8	230.1	236.4	242.6	249.7	256.8	262.2	267.5	273.7
67.5°	189.3	192.9	197.3	201.8	207.1	213.3	219.5	225.7	231.1	236.4	240.8
70°	162.6	165.3	169.7	173.3	177.8	182.2	187.5	192.9	196.4	200.8	206.2
72.5°	136.9	139.6	143.0	146.6	149.3	152.9	158.2	162.6	167.1	172.5	175.1
75°	111.9	113.7	116.4	119.1	121.8	124.4	128.0	131.5	135.1	137.8	141.4
77.5°	87.1	88.9	91.5	93.3	95.1	96.9	99.6	102.2	104.9	106.7	110.2
80°	64.0	65.8	67.5	69.3	71.1	72.9	73.7	74.7	78.2	80.8	82.6
82.5°	43.6	44.4	45.3	47.1	48.0	48.9	49.7	49.7	51.5	53.3	56.0
85°	24.9	25.8	26.7	26.7	26.7	26.7	27.5	28.5	29.3	31.1	32.9
87.5°	9.7	9.7	10.7	10.7	10.7	10.7	10.7	10.7	11.5	13.3	14.2
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°	785.6	785.6	785.6	785.6	785.6	785.6	785.6	785.6	785.6	785.6	785.6
2.5°	790.0	791.0	792.7	793.6	794.5	794.5	795.4	796.3	794.5	792.7	791.8
5°	794.5	795.4	798.1	800.7	802.5	804.3	803.4	802.5	800.7	798.1	796.3
7.5°	795.4	798.1	800.7	804.3	807.0	810.5	808.8	807.0	803.4	799.9	797.1
10°	792.7	796.3	800.7	805.2	807.8	810.5	808.8	807.0	803.4	798.9	795.4
12.5°	789.2	793.6	798.9	803.4	806.0	809.6	807.0	804.3	799.9	795.4	791.0
15°	781.2	786.6	792.7	798.1	802.5	806.0	803.4	801.6	796.3	790.0	783.8
17.5°	771.4	778.5	784.8	791.0	794.5	798.1	796.3	794.5	788.3	781.2	774.1
20°	759.9	767.0	773.2	779.4	783.8	787.4	784.8	782.1	775.9	769.6	762.5
22.5°	745.6	752.7	759.9	766.0	770.5	774.1	770.5	766.0	759.9	753.7	746.6
25°	727.8	735.9	743.8	750.1	752.7	756.3	752.7	749.2	743.0	736.7	728.8
27.5°	710.1	718.1	726.0	732.3	734.9	738.5	734.9	731.4	725.2	718.9	711.0
30°	689.6	697.7	705.6	711.9	714.5	717.1	713.7	710.1	704.8	698.5	690.5
32.5°	666.6	674.5	680.8	687.0	690.5	694.1	690.5	687.8	681.6	673.7	665.6
35°	641.6	649.6	657.7	663.8	667.4	671.0	666.6	662.1	656.7	650.5	643.4
37.5°	614.1	623.0	631.9	639.0	641.6	645.2	641.6	637.2	631.9	625.6	617.7
40°	588.3	596.3	604.4	611.4	614.1	616.7	613.2	609.7	603.4	597.2	589.2
42.5°	561.7	569.7	576.7	583.0	585.6	589.2	585.6	581.2	576.7	571.5	564.4
45°	533.3	541.2	547.4	553.7	556.3	559.0	555.5	551.0	546.6	542.1	535.1
47.5°	504.0	511.0	517.3	523.4	525.2	527.9	524.4	521.7	517.3	512.8	506.6
50°	473.7	480.8	487.0	492.3	494.1	496.8	493.3	489.7	486.2	482.6	477.3
52.5°	442.6	448.8	455.1	460.4	462.2	464.0	460.4	456.8	453.3	449.7	444.4
55°	410.6	416.8	423.0	427.5	429.3	431.1	427.5	424.8	421.2	418.6	413.3
57.5°	378.6	384.8	390.1	394.5	396.3	398.1	394.5	391.1	388.4	385.7	381.2
60°	345.7	351.9	356.4	360.0	361.7	362.6	359.0	356.4	354.6	352.9	348.4
62.5°	313.7	318.2	322.6	325.2	327.0	327.9	325.2	323.4	321.8	320.0	316.4
65°	280.0	285.3	288.8	291.5	292.3	293.3	290.6	288.8	287.1	285.3	282.6
67.5°	246.2	250.7	253.3	255.9	256.8	256.8	256.8	255.9	254.1	251.5	248.9
70°	212.4	215.9	218.6	220.4	221.2	221.2	219.5	217.7	217.7	216.8	215.1
72.5°	177.8	180.4	182.2	184.0	184.0	184.0	184.0	184.8	184.0	182.2	179.6
75°	144.8	147.5	149.3	150.2	150.2	150.2	150.2	151.1	150.2	149.3	147.5
77.5°	113.7	115.5	116.4	117.3	117.3	117.3	118.2	119.1	118.2	117.3	116.4
80°	84.4	85.3	86.2	87.1	86.2	86.2	87.1	88.9	88.0	87.1	86.2
82.5°	57.8	58.6	59.6	59.6	60.4	61.4	61.4	61.4	61.4	60.4	59.6
85°	34.7	35.6	35.6	35.6	35.6	35.6	36.4	37.3	37.3	36.4	36.4
87.5°	16.0	16.9	16.0	15.1	14.2	14.2	16.0	17.8	17.8	16.9	16.9
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: P735587

CATALOG NUMBER: 4APN6-24-B2750-W2D-5000K

CANDELA DISTRIBUTION (continued):

	330°	340°	350°	360°
0°	785.6	785.6	785.6	785.6
2.5°	792.7	791.8	787.4	783.0
5°	795.4	792.7	786.6	780.3
7.5°	795.4	791.8	783.0	774.9
10°	791.0	785.6	775.9	766.0
12.5°	785.6	779.4	767.8	757.1
15°	777.7	770.5	758.1	745.6
17.5°	766.0	757.1	744.8	731.4
20°	754.5	744.8	729.6	715.5
22.5°	738.5	729.6	713.7	698.5
25°	720.7	711.0	694.9	679.0
27.5°	702.1	690.5	674.5	658.5
30°	680.8	669.2	653.2	637.2
32.5°	657.7	647.0	631.0	614.1
35°	634.5	623.0	607.0	590.1
37.5°	608.8	598.1	582.1	566.1
40°	581.2	570.5	554.5	538.5
42.5°	555.5	545.6	529.7	514.5
45°	527.0	517.3	502.2	487.9
47.5°	497.7	487.9	473.7	459.5
50°	469.2	459.5	446.2	432.9
52.5°	437.3	429.3	416.8	404.4
55°	406.2	398.1	385.7	374.1
57.5°	375.1	367.9	356.4	345.7
60°	342.2	335.1	326.2	316.4
62.5°	311.1	304.8	295.9	287.1
65°	278.2	272.9	264.8	256.8
67.5°	244.4	240.0	232.9	225.7
70°	210.7	205.3	200.0	193.7
72.5°	176.9	174.2	168.9	163.6
75°	144.8	142.2	137.8	133.3
77.5°	114.7	111.9	108.5	104.9
80°	84.4	82.6	80.0	77.3
82.5°	58.6	56.9	55.1	52.5
85°	35.6	33.8	32.0	30.3
87.5°	16.0	15.1	13.3	12.5
90°	0.0	0.0	0.0	0.0



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













(END OF REPORT)