

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: P735583

Luminaire Tested: **4APN6-24-B2750-W2D-2700K**

Issue Date: 1/5/2024



**Test Information**

Test Method: LM-79-08  
Report Number: P735583  
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-2700K  
Description: 4FT 2400 AMBIENT LUMEN OUTPUT APN WITH BIO UP LEDS AT 2700K CCT

Light Source: -  
Ballast/Driver: -

**Summary**

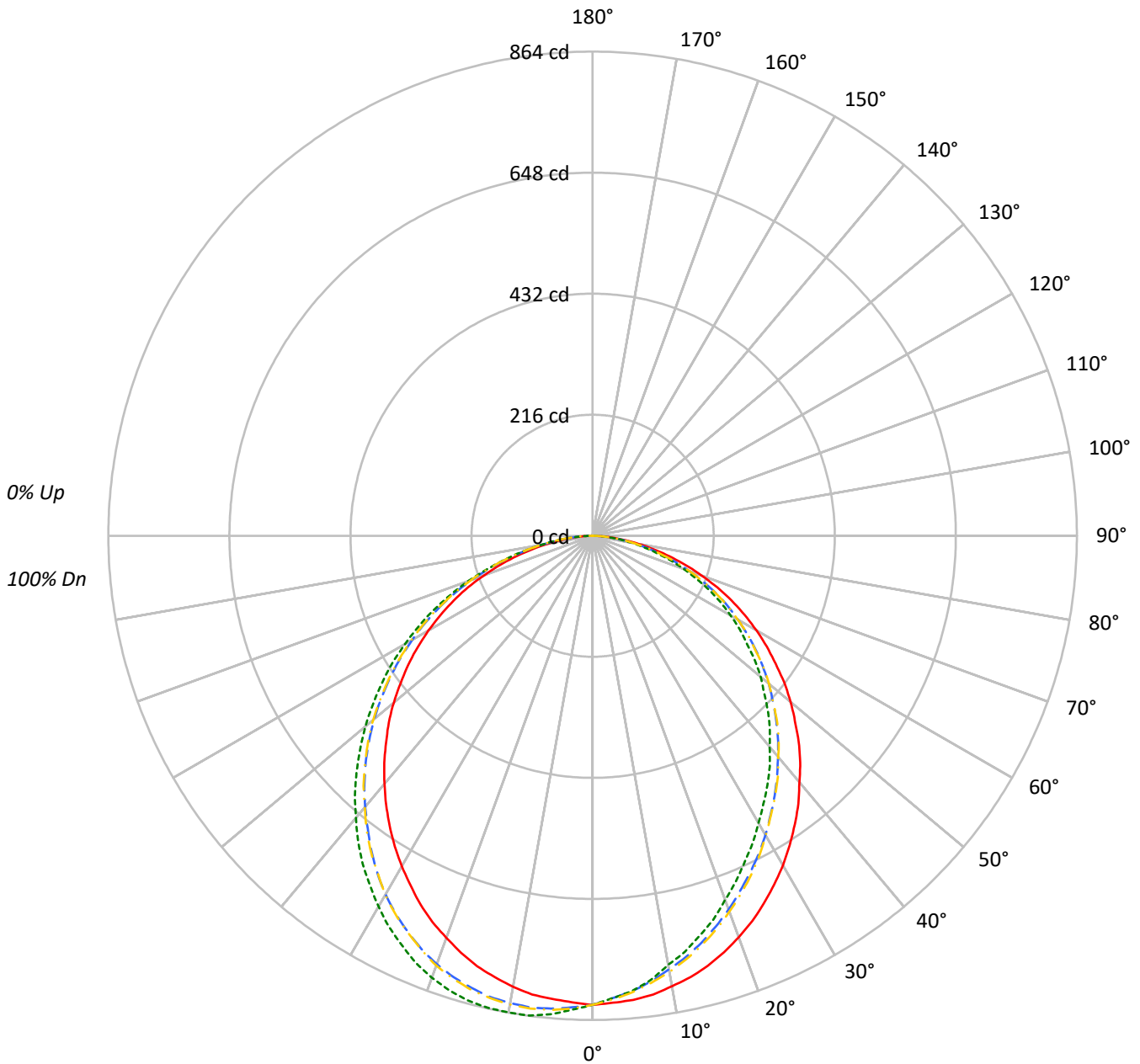
Lumens per Lamp: N/A  
Luminaire Lumens: 2245.0 lumens  
Efficiency: N/A  
Efficacy: 94.3 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.21 / 1.33  
Luminous Opening: Rectangular (W 0.29' x L: 4' x H: 0')  
CIE Type: Direct

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°	7723	7723	7723	7723
5°	7700	7551	7682	7937
10°	7647	7283	7656	8091
15°	7588	7055	7598	8203
20°	7485	6787	7493	8238
25°	7364	6536	7393	8203
30°	7233	6306	7253	8140
35°	7081	6122	7113	8053
40°	6911	5918	6958	7914
45°	6782	5771	6795	7771
50°	6620	5614	6646	7597
55°	6412	5408	6458	7388
60°	6220	5242	6239	7128
65°	5973	5023	5973	6822
70°	5568	4651	5543	6358
75°	5062	4221	4994	5707
80°	4378	3624	4229	4883
85°	3409	2710	3208	4012



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	79.1	3.5
10°-20°	224.5	10.0
20°-30°	333.7	14.9
30°-40°	393.3	17.5
40°-50°	400.5	17.8
50°-60°	356.8	15.9
60°-70°	268.8	12.0
70°-80°	149.5	6.7
80°-90°	38.8	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°	637.3	28.4
0°-40°	1030.6	45.9
0°-60°	1787.9	79.6
0°-90°	2245.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2245.0	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	837	837	837	837	837	
5°	831	815	830	857	831	79
15°	794	739	796	859	794	224
25°	723	642	726	806	723	333
35°	629	544	632	715	629	393
45°	520	442	521	596	520	401
55°	399	336	402	459	399	357
65°	274	230	274	312	274	270
75°	142	118	140	160	142	151
85°	32	26	30	38	32	39
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°	837.1	837.1	837.1	837.1	837.1	837.1	837.1	837.1	837.1	837.1	837.1
2.5°	834.2	834.2	835.1	831.4	826.7	824.8	823.9	822.9	824.8	825.7	824.8
5°	831.4	829.5	827.6	822.9	817.2	813.4	811.5	810.6	812.5	815.3	812.5
7.5°	825.7	822.0	818.1	811.5	804.9	799.2	796.4	794.4	796.4	799.2	797.3
10°	816.2	811.5	805.8	798.3	788.8	782.2	779.3	776.5	777.4	777.4	777.4
12.5°	806.7	800.2	793.5	784.1	773.6	766.0	761.3	757.6	759.4	760.4	760.4
15°	794.4	786.0	776.5	766.0	755.7	747.1	741.5	737.6	738.6	738.6	739.5
17.5°	779.3	769.9	760.4	748.1	735.7	726.2	719.7	715.0	716.8	717.8	718.7
20°	762.3	751.8	741.5	728.2	715.0	704.5	697.8	692.2	691.3	691.3	692.2
22.5°	744.3	732.9	720.6	706.4	692.2	680.8	674.2	668.5	667.6	667.6	668.5
25°	723.4	711.1	698.8	684.6	669.4	658.1	649.6	643.9	642.9	642.0	643.9
27.5°	701.7	689.4	677.1	662.9	646.8	635.4	626.8	621.2	619.3	618.4	620.3
30°	678.9	664.7	651.5	636.3	622.1	610.8	602.2	595.6	593.8	591.9	593.8
32.5°	654.3	640.1	625.9	610.8	596.6	585.2	576.6	570.1	568.2	567.2	569.1
35°	628.7	614.5	601.3	586.1	571.9	560.6	552.1	546.4	544.5	543.5	544.5
37.5°	603.1	589.0	575.7	560.6	546.4	535.0	526.5	520.8	519.8	518.9	519.8
40°	573.8	561.5	548.2	534.0	519.8	508.5	501.9	495.2	493.3	491.4	494.3
42.5°	548.2	535.9	522.8	509.5	495.2	483.9	476.3	470.7	468.8	467.7	468.8
45°	519.8	506.6	493.3	481.0	467.7	457.4	449.8	444.1	443.2	442.3	443.2
47.5°	489.6	478.2	466.8	454.5	441.2	430.9	424.2	418.6	416.7	414.8	416.7
50°	461.2	449.8	438.4	427.0	414.8	405.3	398.6	393.0	392.0	391.1	392.0
52.5°	430.9	419.5	409.1	397.7	387.2	377.8	371.2	366.5	365.5	364.6	365.5
55°	398.6	389.2	379.7	370.2	359.9	351.3	345.6	339.9	338.1	336.2	338.1
57.5°	368.3	359.9	350.4	340.9	331.4	323.9	318.1	313.4	312.5	311.5	312.5
60°	337.1	329.5	321.0	312.5	303.0	295.5	290.7	286.9	285.0	284.1	285.0
62.5°	305.9	298.3	291.6	283.1	274.6	268.9	264.1	260.4	258.5	257.6	258.5
65°	273.6	267.1	260.4	252.9	246.2	240.5	235.7	232.0	231.0	230.1	230.1
67.5°	240.5	234.8	229.2	222.5	215.0	209.2	204.5	201.7	200.8	199.8	200.8
70°	206.4	201.7	196.0	190.3	184.7	179.9	177.1	174.3	173.3	172.4	172.4
72.5°	174.3	170.5	165.7	161.0	156.3	151.5	148.7	146.8	145.9	144.9	144.9
75°	142.0	138.2	135.4	131.7	126.9	124.0	121.2	119.3	118.4	118.4	118.4
77.5°	111.7	108.9	106.1	102.3	99.4	96.6	94.7	93.8	92.8	92.8	92.8
80°	82.4	80.5	78.6	76.7	73.8	71.0	70.1	69.1	68.2	68.2	68.2
82.5°	55.9	54.9	53.0	51.2	49.3	48.3	47.3	46.4	46.4	46.4	46.4
85°	32.2	31.2	30.3	29.3	28.4	28.4	27.5	26.5	25.6	25.6	25.6
87.5°	13.3	13.3	13.3	12.3	11.4	11.4	11.4	11.4	11.4	11.4	11.4
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°	837.1	837.1	837.1	837.1	837.1	837.1	837.1	837.1	837.1	837.1	837.1
2.5°	822.9	824.8	826.7	829.5	832.3	835.1	834.2	833.3	837.1	841.8	842.8
5°	810.6	812.5	815.3	820.0	824.8	828.6	829.5	829.5	837.1	843.7	845.6
7.5°	795.5	798.3	802.0	806.7	813.4	819.1	822.0	825.7	833.3	841.8	845.6
10°	776.5	781.3	786.9	793.5	800.2	806.7	812.5	817.2	826.7	836.2	841.8
12.5°	759.4	764.1	769.9	777.4	786.0	794.4	800.2	806.7	818.1	829.5	836.2
15°	740.4	745.2	751.8	759.4	768.9	778.3	786.9	795.5	806.7	819.1	826.7
17.5°	719.7	724.4	731.0	740.4	750.9	761.3	770.8	780.2	793.5	806.7	815.3
20°	694.1	700.8	709.2	718.7	731.0	743.4	752.8	763.2	777.4	791.6	801.1
22.5°	669.4	676.1	685.5	696.9	710.2	723.4	734.8	746.2	761.3	775.5	786.0
25°	645.7	653.4	662.9	674.2	686.6	699.7	713.1	726.2	741.5	756.6	767.1
27.5°	622.1	628.7	638.2	649.6	663.8	677.1	690.3	703.6	719.7	735.7	747.1
30°	595.6	603.1	611.7	623.1	638.2	653.4	666.6	680.8	696.9	713.1	724.4
32.5°	571.0	577.7	586.1	597.5	612.6	627.8	642.0	657.1	672.4	688.4	699.7
35°	546.4	553.0	561.5	572.9	588.0	603.1	617.3	631.5	646.8	661.9	673.3
37.5°	521.7	528.4	537.0	548.2	562.4	577.7	590.8	605.1	620.3	635.4	645.7
40°	496.1	502.8	509.5	520.8	535.0	550.1	563.5	577.7	592.8	607.9	618.4
42.5°	470.7	477.2	485.8	497.2	510.4	523.7	537.0	550.1	564.4	578.6	589.0
45°	445.1	450.7	459.3	469.7	483.0	495.2	508.5	520.8	535.0	548.2	558.7
47.5°	418.6	424.2	430.9	441.2	454.5	467.7	481.0	493.3	505.6	518.9	528.4
50°	393.0	398.6	406.2	415.7	428.1	440.3	451.7	463.0	475.4	487.7	496.1
52.5°	366.5	372.1	378.8	388.3	398.6	410.0	420.4	431.8	443.2	454.5	463.0
55°	339.9	343.7	349.4	357.9	369.3	380.7	391.1	401.5	411.9	421.4	429.9
57.5°	313.4	318.1	324.8	332.3	341.8	351.3	360.8	370.2	379.7	389.2	396.7
60°	286.9	290.7	295.5	302.0	311.5	320.1	329.5	338.1	346.5	355.1	361.8
62.5°	259.4	263.2	268.0	274.6	282.2	289.7	298.3	305.9	313.4	321.0	327.6
65°	231.0	234.8	239.6	245.2	251.9	258.5	266.1	273.6	279.4	285.0	291.6
67.5°	201.7	205.5	210.3	215.0	220.6	227.3	233.9	240.5	246.2	251.9	256.6
70°	173.3	176.1	180.8	184.7	189.4	194.1	199.8	205.5	209.2	214.0	219.7
72.5°	145.9	148.7	152.4	156.3	159.1	162.9	168.5	173.3	178.0	183.8	186.6
75°	119.3	121.2	124.0	126.9	129.8	132.6	136.4	140.1	144.0	146.8	150.6
77.5°	92.8	94.7	97.5	99.4	101.3	103.3	106.1	108.9	111.7	113.6	117.5
80°	68.2	70.1	71.9	73.8	75.8	77.7	78.6	79.6	83.3	86.1	88.0
82.5°	46.4	47.3	48.3	50.2	51.2	52.1	53.0	53.0	54.9	56.8	59.6
85°	26.5	27.5	28.4	28.4	28.4	28.4	29.3	30.3	31.2	33.1	35.1
87.5°	10.4	10.4	11.4	11.4	11.4	11.4	11.4	11.4	12.3	14.2	15.1
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°	837.1	837.1	837.1	837.1	837.1	837.1	837.1	837.1	837.1	837.1	837.1
2.5°	841.8	842.8	844.6	845.6	846.5	846.5	847.5	848.4	846.5	844.6	843.7
5°	846.5	847.5	850.4	853.2	855.1	857.0	856.0	855.1	853.2	850.4	848.4
7.5°	847.5	850.4	853.2	857.0	859.8	863.6	861.7	859.8	856.0	852.3	849.3
10°	844.6	848.4	853.2	857.9	860.7	863.6	861.7	859.8	856.0	851.3	847.5
12.5°	840.9	845.6	851.3	856.0	858.8	862.7	859.8	857.0	852.3	847.5	842.8
15°	832.3	838.1	844.6	850.4	855.1	858.8	856.0	854.1	848.4	841.8	835.1
17.5°	822.0	829.5	836.2	842.8	846.5	850.4	848.4	846.5	839.9	832.3	824.8
20°	809.7	817.2	823.9	830.4	835.1	839.0	836.2	833.3	826.7	820.0	812.5
22.5°	794.4	802.0	809.7	816.2	820.9	824.8	820.9	816.2	809.7	803.0	795.5
25°	775.5	784.1	792.5	799.2	802.0	805.8	802.0	798.3	791.6	785.0	776.5
27.5°	756.6	765.1	773.6	780.2	783.1	786.9	783.1	779.3	772.7	766.0	757.6
30°	734.8	743.4	751.8	758.5	761.3	764.1	760.4	756.6	750.9	744.3	735.7
32.5°	710.2	718.7	725.3	732.0	735.7	739.5	735.7	732.9	726.2	717.8	709.2
35°	683.6	692.2	700.8	707.3	711.1	715.0	710.2	705.5	699.7	693.1	685.5
37.5°	654.3	663.8	673.3	680.8	683.6	687.5	683.6	678.9	673.3	666.6	658.1
40°	626.8	635.4	643.9	651.5	654.3	657.1	653.4	649.6	642.9	636.3	627.8
42.5°	598.5	607.0	614.5	621.2	624.0	627.8	624.0	619.3	614.5	608.9	601.3
45°	568.2	576.6	583.3	589.9	592.8	595.6	591.9	587.1	582.4	577.7	570.1
47.5°	537.0	544.5	551.2	557.7	559.6	562.4	558.7	555.9	551.2	546.4	539.8
50°	504.7	512.3	518.9	524.6	526.5	529.3	525.6	521.7	518.0	514.2	508.5
52.5°	471.6	478.2	484.9	490.5	492.4	494.3	490.5	486.7	483.0	479.1	473.5
55°	437.5	444.1	450.7	455.5	457.4	459.3	455.5	452.6	448.8	446.0	440.3
57.5°	403.4	410.0	415.7	420.4	422.3	424.2	420.4	416.7	413.9	410.9	406.2
60°	368.3	375.0	379.7	383.5	385.4	386.3	382.5	379.7	377.8	376.0	371.2
62.5°	334.3	339.0	343.7	346.5	348.5	349.4	346.5	344.6	342.8	340.9	337.1
65°	298.3	303.9	307.8	310.6	311.5	312.5	309.7	307.8	305.9	303.9	301.1
67.5°	262.3	267.1	269.9	272.7	273.6	273.6	273.6	272.7	270.8	268.0	265.2
70°	226.3	230.1	232.9	234.8	235.7	235.7	233.9	232.0	232.0	231.0	229.2
72.5°	189.4	192.2	194.1	196.0	196.0	196.0	196.0	196.9	196.0	194.1	191.3
75°	154.3	157.2	159.1	160.1	160.1	160.1	160.1	161.0	160.1	159.1	157.2
77.5°	121.2	123.1	124.0	125.0	125.0	125.0	125.9	126.9	125.9	125.0	124.0
80°	90.0	90.9	91.9	92.8	91.9	91.9	92.8	94.7	93.8	92.8	91.9
82.5°	61.6	62.5	63.5	63.5	64.4	65.4	65.4	65.4	65.4	64.4	63.5
85°	37.0	37.9	37.9	37.9	37.9	37.9	38.8	39.8	39.8	38.8	38.8
87.5°	17.0	18.0	17.0	16.1	15.1	15.1	17.0	18.9	18.9	18.0	18.0
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°	837.1	837.1	837.1	837.1
2.5°	844.6	843.7	839.0	834.2
5°	847.5	844.6	838.1	831.4
7.5°	847.5	843.7	834.2	825.7
10°	842.8	837.1	826.7	816.2
12.5°	837.1	830.4	818.1	806.7
15°	828.6	820.9	807.7	794.4
17.5°	816.2	806.7	793.5	779.3
20°	803.9	793.5	777.4	762.3
22.5°	786.9	777.4	760.4	744.3
25°	768.0	757.6	740.4	723.4
27.5°	748.1	735.7	718.7	701.7
30°	725.3	713.1	696.0	678.9
32.5°	700.8	689.4	672.4	654.3
35°	676.1	663.8	646.8	628.7
37.5°	648.7	637.3	620.3	603.1
40°	619.3	607.9	590.8	573.8
42.5°	591.9	581.4	564.4	548.2
45°	561.5	551.2	535.0	519.8
47.5°	530.3	519.8	504.7	489.6
50°	500.0	489.6	475.4	461.2
52.5°	465.9	457.4	444.1	430.9
55°	432.8	424.2	410.9	398.6
57.5°	399.6	392.0	379.7	368.3
60°	364.6	357.0	347.6	337.1
62.5°	331.4	324.8	315.3	305.9
65°	296.4	290.7	282.2	273.6
67.5°	260.4	255.7	248.1	240.5
70°	224.5	218.7	213.1	206.4
72.5°	188.5	185.6	179.9	174.3
75°	154.3	151.5	146.8	142.0
77.5°	122.2	119.3	115.6	111.7
80°	90.0	88.0	85.2	82.4
82.5°	62.5	60.7	58.7	55.9
85°	37.9	36.0	34.0	32.2
87.5°	17.0	16.1	14.2	13.3
90°	0.0	0.0	0.0	0.0



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















(END OF REPORT)