

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: P735595

Luminaire Tested: **4APN6-24-B2750-W2D-CP250-3500K**

Issue Date: 1/5/2024



Test Information

Test Method: LM-79-08
Report Number: P735595
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-CP250-3500K
Description: 4FT 2400 AMBIENT LUMEN OUTPUT APN WITH BIO UP LEDS AT 3500K CCT, AND CP250 LENS

Light Source: -
Ballast/Driver: -

Summary

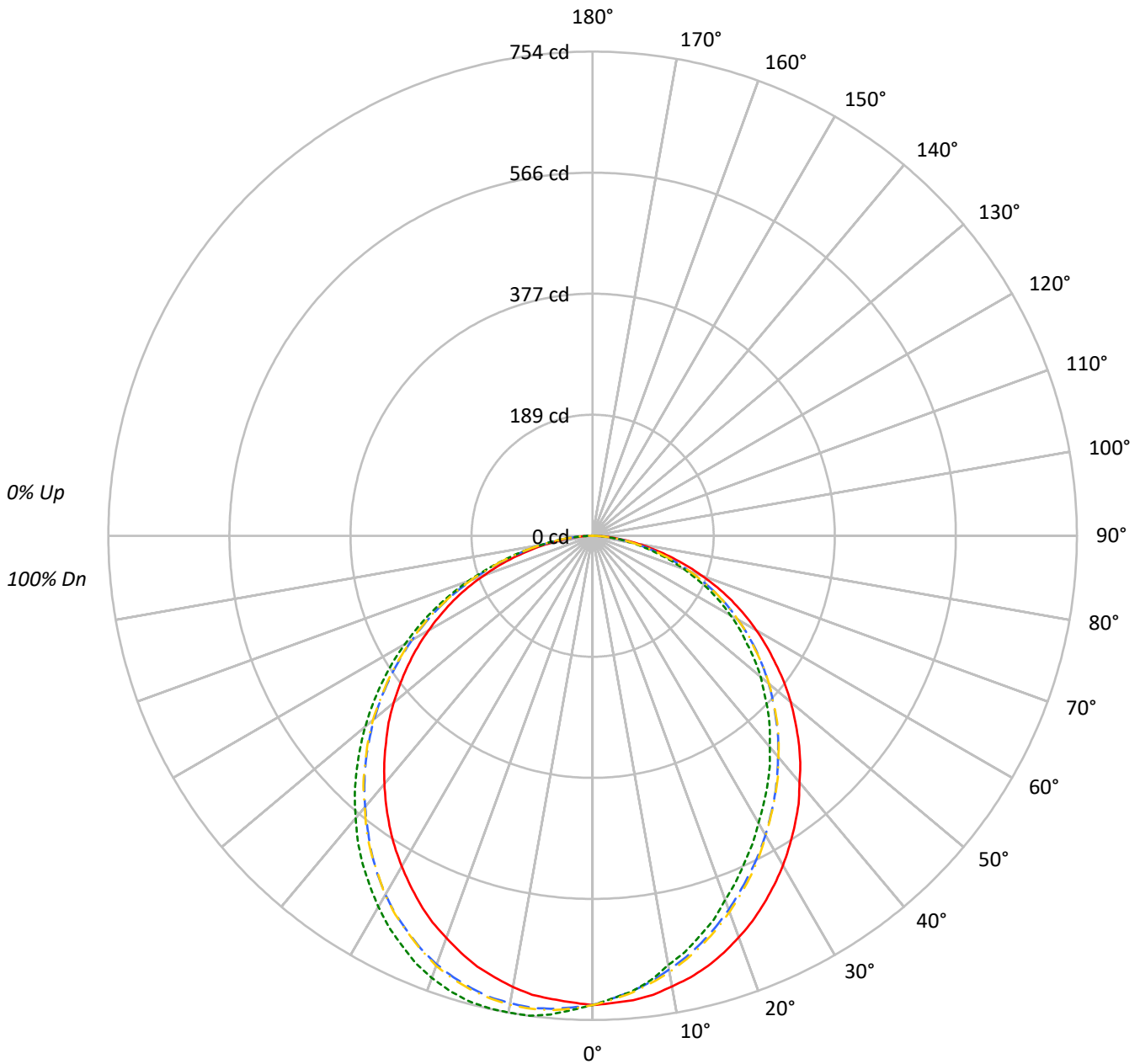
Lumens per Lamp: N/A
Luminaire Lumens: 1960.0 lumens
Efficiency: N/A
Efficacy: 82.4 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.21 / 1.33
Luminous Opening: Rectangular (W 0.29' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 23.8
Input Voltage (V): NR
Input Current (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

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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°	6743	6743	6743	6743
5°	6723	6592	6707	6929
10°	6676	6358	6684	7063
15°	6625	6160	6634	7162
20°	6534	5925	6542	7192
25°	6430	5706	6454	7162
30°	6314	5505	6332	7107
35°	6182	5344	6210	7030
40°	6034	5167	6074	6910
45°	5921	5038	5933	6785
50°	5780	4900	5802	6633
55°	5598	4721	5638	6450
60°	5431	4576	5447	6224
65°	5215	4386	5215	5956
70°	4861	4060	4839	5552
75°	4420	3682	4360	4983
80°	3820	3161	3693	4261
85°	2975	2361	2805	3504



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	69.1	3.5
10°-20°	196.0	10.0
20°-30°	291.4	14.9
30°-40°	343.4	17.5
40°-50°	349.6	17.8
50°-60°	311.5	15.9
60°-70°	234.7	12.0
70°-80°	130.5	6.7
80°-90°	33.9	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°	556.4	28.4
0°-40°	899.8	45.9
0°-60°	1560.9	79.6
0°-90°	1960.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1960.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	731	731	731	731	731	
5°	726	712	724	748	726	69
15°	694	645	694	750	694	195
25°	632	560	634	704	632	291
35°	549	474	551	624	549	343
45°	454	386	455	520	454	350
55°	348	294	350	401	348	312
65°	239	201	239	273	239	236
75°	124	103	122	140	124	132
85°	28	22	26	33	28	34
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°	730.8	730.8	730.8	730.8	730.8	730.8	730.8	730.8	730.8	730.8	730.8
2.5°	728.3	728.3	729.1	725.9	721.7	720.1	719.3	718.4	720.1	720.9	720.1
5°	725.9	724.2	722.5	718.4	713.5	710.1	708.5	707.7	709.3	711.8	709.3
7.5°	720.9	717.6	714.3	708.5	702.7	697.7	695.3	693.6	695.3	697.7	696.1
10°	712.6	708.5	703.5	696.9	688.7	682.9	680.4	677.9	678.7	678.7	678.7
12.5°	704.3	698.6	692.8	684.5	675.4	668.8	664.7	661.4	663.0	663.9	663.9
15°	693.6	686.2	677.9	668.8	659.7	652.3	647.3	644.0	644.9	644.9	645.7
17.5°	680.4	672.1	663.9	653.1	642.3	634.0	628.3	624.2	625.8	626.7	627.5
20°	665.5	656.4	647.3	635.7	624.2	615.0	609.2	604.3	603.5	603.5	604.3
22.5°	649.8	639.9	629.1	616.7	604.3	594.4	588.6	583.7	582.9	582.9	583.7
25°	631.6	620.9	610.1	597.7	584.4	574.6	567.1	562.2	561.3	560.5	562.2
27.5°	612.6	601.9	591.1	578.7	564.7	554.7	547.2	542.3	540.6	539.9	541.5
30°	592.7	580.3	568.8	555.5	543.1	533.3	525.8	520.0	518.4	516.7	518.4
32.5°	571.3	558.8	546.4	533.3	520.9	510.9	503.4	497.7	496.1	495.2	496.8
35°	548.9	536.5	525.0	511.7	499.3	489.5	482.0	477.1	475.4	474.5	475.4
37.5°	526.6	514.3	502.6	489.5	477.1	467.1	459.6	454.7	453.8	453.0	453.8
40°	501.0	490.2	478.6	466.2	453.8	444.0	438.2	432.4	430.7	429.0	431.6
42.5°	478.6	467.9	456.4	444.8	432.4	422.4	415.8	410.9	409.2	408.4	409.2
45°	453.8	442.3	430.7	420.0	408.4	399.3	392.7	387.7	386.9	386.1	386.9
47.5°	427.5	417.5	407.6	396.8	385.2	376.2	370.4	365.4	363.8	362.1	363.8
50°	402.7	392.7	382.8	372.8	362.1	353.8	348.0	343.1	342.2	341.4	342.2
52.5°	376.2	366.2	357.2	347.2	338.1	329.8	324.1	320.0	319.1	318.3	319.1
55°	348.0	339.8	331.5	323.2	314.2	306.7	301.8	296.7	295.2	293.5	295.2
57.5°	321.6	314.2	305.9	297.6	289.4	282.8	277.8	273.6	272.8	271.9	272.8
60°	294.3	287.7	280.2	272.8	264.6	258.0	253.8	250.5	248.8	248.0	248.8
62.5°	267.0	260.4	254.6	247.1	239.8	234.7	230.6	227.4	225.7	224.9	225.7
65°	238.9	233.2	227.4	220.8	215.0	209.9	205.8	202.6	201.7	200.9	200.9
67.5°	209.9	205.0	200.1	194.3	187.7	182.7	178.5	176.1	175.3	174.4	175.3
70°	180.2	176.1	171.2	166.1	161.2	157.1	154.6	152.2	151.3	150.5	150.5
72.5°	152.2	148.8	144.7	140.5	136.4	132.3	129.8	128.1	127.4	126.5	126.5
75°	124.0	120.7	118.2	115.0	110.8	108.3	105.8	104.1	103.3	103.3	103.3
77.5°	97.5	95.1	92.6	89.3	86.8	84.3	82.7	81.9	81.0	81.0	81.0
80°	71.9	70.3	68.6	66.9	64.5	62.0	61.2	60.3	59.5	59.5	59.5
82.5°	48.8	47.9	46.3	44.7	43.0	42.1	41.3	40.6	40.6	40.6	40.6
85°	28.1	27.3	26.5	25.6	24.8	24.8	24.0	23.1	22.3	22.3	22.3
87.5°	11.6	11.6	11.6	10.7	9.9	9.9	9.9	9.9	9.9	9.9	9.9
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°	730.8	730.8	730.8	730.8	730.8	730.8	730.8	730.8	730.8	730.8	730.8
2.5°	718.4	720.1	721.7	724.2	726.7	729.1	728.3	727.5	730.8	734.9	735.8
5°	707.7	709.3	711.8	715.9	720.1	723.4	724.2	724.2	730.8	736.6	738.3
7.5°	694.5	696.9	700.2	704.3	710.1	715.1	717.6	720.9	727.5	734.9	738.3
10°	677.9	682.1	687.0	692.8	698.6	704.3	709.3	713.5	721.7	730.0	734.9
12.5°	663.0	667.1	672.1	678.7	686.2	693.6	698.6	704.3	714.3	724.2	730.0
15°	646.4	650.6	656.4	663.0	671.2	679.5	687.0	694.5	704.3	715.1	721.7
17.5°	628.3	632.5	638.2	646.4	655.6	664.7	672.9	681.2	692.8	704.3	711.8
20°	606.0	611.8	619.2	627.5	638.2	649.0	657.3	666.3	678.7	691.1	699.4
22.5°	584.4	590.2	598.5	608.5	620.1	631.6	641.5	651.5	664.7	677.1	686.2
25°	563.8	570.5	578.7	588.6	599.4	610.9	622.5	634.0	647.3	660.5	669.7
27.5°	543.1	548.9	557.2	567.1	579.5	591.1	602.6	614.3	628.3	642.3	652.3
30°	520.0	526.6	534.0	544.0	557.2	570.5	582.0	594.4	608.5	622.5	632.5
32.5°	498.5	504.3	511.7	521.6	534.8	548.1	560.5	573.7	587.0	601.0	610.9
35°	477.1	482.8	490.2	500.2	513.4	526.6	539.0	551.4	564.7	577.8	587.8
37.5°	455.5	461.3	468.8	478.6	491.0	504.3	515.8	528.2	541.5	554.7	563.8
40°	433.2	439.0	444.8	454.7	467.1	480.3	491.9	504.3	517.5	530.7	539.9
42.5°	410.9	416.6	424.1	434.0	445.6	457.2	468.8	480.3	492.7	505.1	514.3
45°	388.6	393.5	401.0	410.0	421.6	432.4	444.0	454.7	467.1	478.6	487.8
47.5°	365.4	370.4	376.2	385.2	396.8	408.4	420.0	430.7	441.4	453.0	461.3
50°	343.1	348.0	354.6	362.9	373.7	384.4	394.4	404.2	415.1	425.8	433.2
52.5°	320.0	324.9	330.7	339.0	348.0	358.0	367.0	377.0	386.9	396.8	404.2
55°	296.7	300.1	305.0	312.5	322.4	332.4	341.4	350.5	359.6	367.9	375.3
57.5°	273.6	277.8	283.6	290.2	298.4	306.7	315.0	323.2	331.5	339.8	346.4
60°	250.5	253.8	258.0	263.7	271.9	279.4	287.7	295.2	302.6	310.0	315.8
62.5°	226.5	229.8	234.0	239.8	246.4	252.9	260.4	267.0	273.6	280.2	286.0
65°	201.7	205.0	209.2	214.1	219.9	225.7	232.3	238.9	243.9	248.8	254.6
67.5°	176.1	179.4	183.6	187.7	192.6	198.4	204.2	209.9	215.0	219.9	224.0
70°	151.3	153.7	157.9	161.2	165.4	169.5	174.4	179.4	182.7	186.8	191.8
72.5°	127.4	129.8	133.1	136.4	138.9	142.2	147.1	151.3	155.4	160.4	162.9
75°	104.1	105.8	108.3	110.8	113.3	115.7	119.1	122.3	125.7	128.1	131.5
77.5°	81.0	82.7	85.1	86.8	88.5	90.2	92.6	95.1	97.5	99.2	102.6
80°	59.5	61.2	62.8	64.5	66.1	67.8	68.6	69.5	72.7	75.2	76.9
82.5°	40.6	41.3	42.1	43.8	44.7	45.5	46.3	46.3	47.9	49.6	52.1
85°	23.1	24.0	24.8	24.8	24.8	24.8	25.6	26.5	27.3	28.9	30.6
87.5°	9.1	9.1	9.9	9.9	9.9	9.9	9.9	9.9	10.7	12.4	13.2
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°	730.8	730.8	730.8	730.8	730.8	730.8	730.8	730.8	730.8	730.8	730.8
2.5°	734.9	735.8	737.4	738.3	739.1	739.1	739.9	740.7	739.1	737.4	736.6
5°	739.1	739.9	742.4	744.9	746.5	748.2	747.3	746.5	744.9	742.4	740.7
7.5°	739.9	742.4	744.9	748.2	750.7	753.9	752.4	750.7	747.3	744.1	741.5
10°	737.4	740.7	744.9	749.0	751.5	753.9	752.4	750.7	747.3	743.2	739.9
12.5°	734.1	738.3	743.2	747.3	749.8	753.1	750.7	748.2	744.1	739.9	735.8
15°	726.7	731.7	737.4	742.4	746.5	749.8	747.3	745.7	740.7	734.9	729.1
17.5°	717.6	724.2	730.0	735.8	739.1	742.4	740.7	739.1	733.3	726.7	720.1
20°	706.9	713.5	719.3	725.0	729.1	732.5	730.0	727.5	721.7	715.9	709.3
22.5°	693.6	700.2	706.9	712.6	716.7	720.1	716.7	712.6	706.9	701.1	694.5
25°	677.1	684.5	691.9	697.7	700.2	703.5	700.2	696.9	691.1	685.3	677.9
27.5°	660.5	668.0	675.4	681.2	683.7	687.0	683.7	680.4	674.6	668.8	661.4
30°	641.5	649.0	656.4	662.2	664.7	667.1	663.9	660.5	655.6	649.8	642.3
32.5°	620.1	627.5	633.3	639.1	642.3	645.7	642.3	639.9	634.0	626.7	619.2
35°	596.8	604.3	611.8	617.5	620.9	624.2	620.1	615.9	610.9	605.1	598.5
37.5°	571.3	579.5	587.8	594.4	596.8	600.2	596.8	592.7	587.8	582.0	574.6
40°	547.2	554.7	562.2	568.8	571.3	573.7	570.5	567.1	561.3	555.5	548.1
42.5°	522.5	529.9	536.5	542.3	544.8	548.1	544.8	540.6	536.5	531.6	525.0
45°	496.1	503.4	509.2	515.1	517.5	520.0	516.7	512.6	508.5	504.3	497.7
47.5°	468.8	475.4	481.2	486.9	488.6	491.0	487.8	485.3	481.2	477.1	471.3
50°	440.6	447.2	453.0	458.0	459.6	462.1	458.9	455.5	452.3	448.9	444.0
52.5°	411.7	417.5	423.3	428.2	429.9	431.6	428.2	424.9	421.6	418.3	413.4
55°	382.0	387.7	393.5	397.6	399.3	401.0	397.6	395.2	391.8	389.4	384.4
57.5°	352.2	358.0	362.9	367.0	368.7	370.4	367.0	363.8	361.3	358.8	354.6
60°	321.6	327.4	331.5	334.8	336.5	337.3	334.0	331.5	329.8	328.2	324.1
62.5°	291.8	296.0	300.1	302.6	304.2	305.0	302.6	300.9	299.3	297.6	294.3
65°	260.4	265.4	268.7	271.2	271.9	272.8	270.4	268.7	267.0	265.4	262.9
67.5°	229.0	233.2	235.6	238.1	238.9	238.9	238.9	238.1	236.4	234.0	231.5
70°	197.5	200.9	203.3	205.0	205.8	205.8	204.2	202.6	202.6	201.7	200.1
72.5°	165.4	167.8	169.5	171.2	171.2	171.2	171.2	171.9	171.2	169.5	167.0
75°	134.7	137.2	138.9	139.8	139.8	139.8	139.8	140.5	139.8	138.9	137.2
77.5°	105.8	107.5	108.3	109.2	109.2	109.2	109.9	110.8	109.9	109.2	108.3
80°	78.5	79.3	80.2	81.0	80.2	80.2	81.0	82.7	81.9	81.0	80.2
82.5°	53.7	54.5	55.4	55.4	56.2	57.1	57.1	57.1	57.1	56.2	55.4
85°	32.3	33.1	33.1	33.1	33.1	33.1	33.9	34.7	34.7	33.9	33.9
87.5°	14.9	15.7	14.9	14.1	13.2	13.2	14.9	16.5	16.5	15.7	15.7
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):

	330°	340°	350°	360°
0°	730.8	730.8	730.8	730.8
2.5°	737.4	736.6	732.5	728.3
5°	739.9	737.4	731.7	725.9
7.5°	739.9	736.6	728.3	720.9
10°	735.8	730.8	721.7	712.6
12.5°	730.8	725.0	714.3	704.3
15°	723.4	716.7	705.2	693.6
17.5°	712.6	704.3	692.8	680.4
20°	701.9	692.8	678.7	665.5
22.5°	687.0	678.7	663.9	649.8
25°	670.5	661.4	646.4	631.6
27.5°	653.1	642.3	627.5	612.6
30°	633.3	622.5	607.7	592.7
32.5°	611.8	601.9	587.0	571.3
35°	590.2	579.5	564.7	548.9
37.5°	566.3	556.4	541.5	526.6
40°	540.6	530.7	515.8	501.0
42.5°	516.7	507.6	492.7	478.6
45°	490.2	481.2	467.1	453.8
47.5°	463.0	453.8	440.6	427.5
50°	436.5	427.5	415.1	402.7
52.5°	406.8	399.3	387.7	376.2
55°	377.8	370.4	358.8	348.0
57.5°	348.9	342.2	331.5	321.6
60°	318.3	311.7	303.4	294.3
62.5°	289.4	283.6	275.3	267.0
65°	258.8	253.8	246.4	238.9
67.5°	227.4	223.2	216.6	209.9
70°	196.0	190.9	186.0	180.2
72.5°	164.6	162.0	157.1	152.2
75°	134.7	132.3	128.1	124.0
77.5°	106.7	104.1	100.9	97.5
80°	78.5	76.9	74.4	71.9
82.5°	54.5	53.0	51.3	48.8
85°	33.1	31.4	29.7	28.1
87.5°	14.9	14.1	12.4	11.6
90°	0.0	0.0	0.0	0.0



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













(END OF REPORT)