

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: P735593

Luminaire Tested: **4APN6-24-B2750-W2D-CP250-2700K**

Issue Date: 1/5/2024



Test Information

Test Method: LM-79-08
Report Number: P735593
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-CP250-2700K
Description: 4FT 2400 AMBIENT LUMEN OUTPUT APN WITH BIO UP LEDS AT 2700K CCT, AND CP250 LENS

Light Source: -
Ballast/Driver: -

Summary

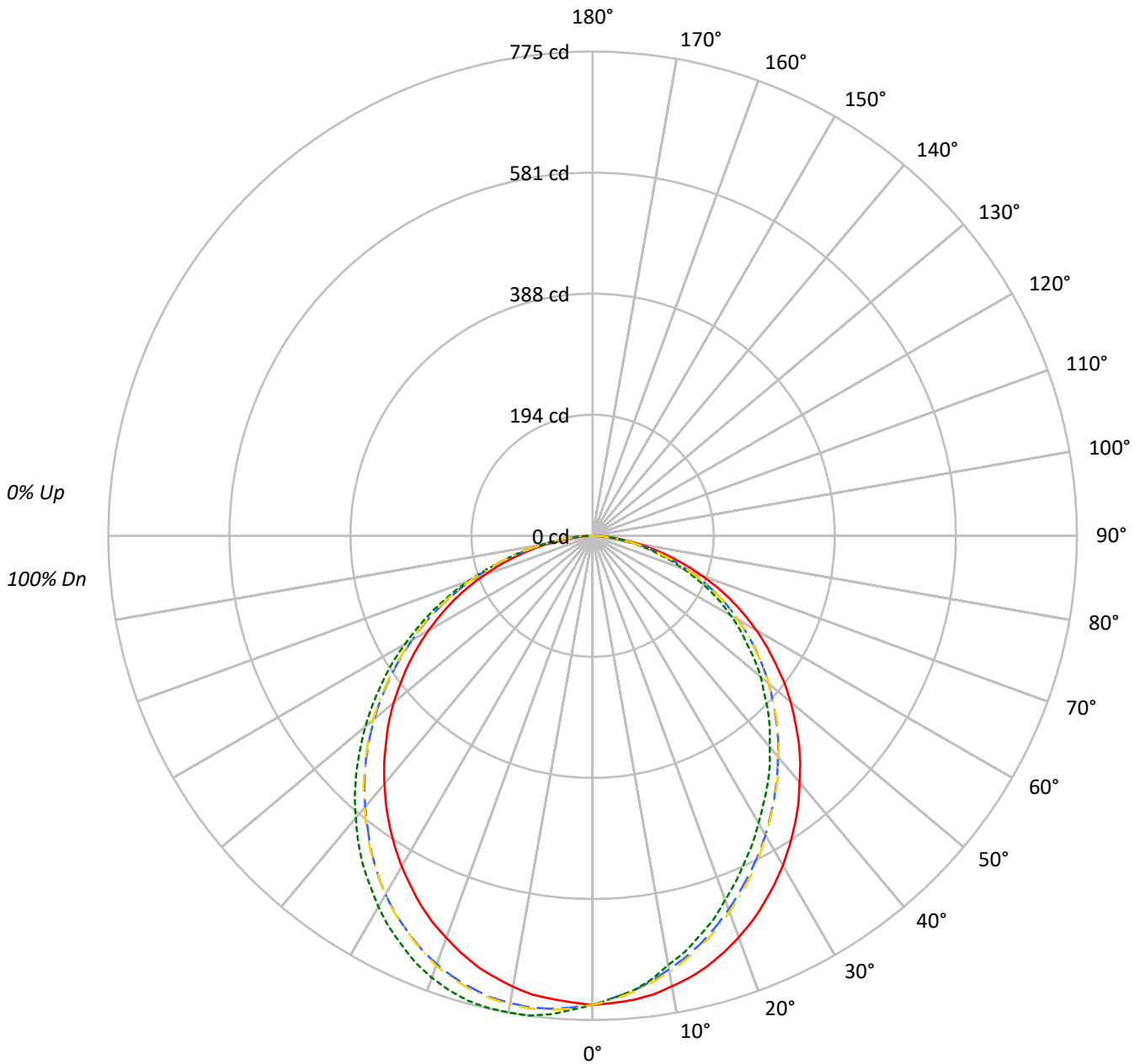
Lumens per Lamp: N/A
Luminaire Lumens: 2014.0 lumens
Efficiency: N/A
Efficacy: 84.6 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.21 / 1.33
Luminous Opening: Rectangular (W 0.29' x L: 4' x H: 0')
CIE Type: Direct

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°	6928	6928	6928	6928
5°	6908	6774	6892	7120
10°	6860	6534	6868	7258
15°	6807	6329	6816	7359
20°	6715	6089	6723	7389
25°	6607	5864	6632	7359
30°	6488	5657	6507	7303
35°	6352	5492	6382	7224
40°	6200	5309	6241	7100
45°	6084	5177	6096	6971
50°	5938	5035	5962	6815
55°	5752	4851	5792	6627
60°	5580	4704	5597	6396
65°	5360	4506	5360	6119
70°	4996	4170	4974	5705
75°	4541	3786	4481	5119
80°	3926	3252	3794	4378
85°	3059	2435	2879	3599



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	71.0	3.5
10°-20°	201.4	10.0
20°-30°	299.4	14.9
30°-40°	352.9	17.5
40°-50°	359.3	17.8
50°-60°	320.1	15.9
60°-70°	241.1	12.0
70°-80°	134.1	6.7
80°-90°	34.9	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°	571.7	28.4
0°-40°	924.6	45.9
0°-60°	1603.9	79.6
0°-90°	2014.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2014.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	751	751	751	751	751	
5°	746	731	744	769	746	71
15°	713	663	714	770	713	201
25°	649	576	652	723	649	299
35°	564	488	567	641	564	353
45°	466	397	467	534	466	359
55°	358	302	360	412	358	320
65°	246	206	246	280	246	242
75°	127	106	126	144	127	135
85°	29	23	27	34	29	35
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°	750.9	750.9	750.9	750.9	750.9	750.9	750.9	750.9	750.9	750.9	750.9
2.5°	748.4	748.4	749.2	745.9	741.6	739.9	739.1	738.2	739.9	740.7	739.9
5°	745.9	744.2	742.4	738.2	733.1	729.7	728.0	727.2	728.9	731.4	728.9
7.5°	740.7	737.4	733.9	728.0	722.1	716.9	714.4	712.7	714.4	716.9	715.2
10°	732.2	728.0	722.9	716.1	707.6	701.7	699.1	696.6	697.4	697.4	697.4
12.5°	723.7	717.9	711.9	703.4	694.0	687.2	683.0	679.6	681.2	682.2	682.2
15°	712.7	705.1	696.6	687.2	677.9	670.2	665.2	661.7	662.6	662.6	663.4
17.5°	699.1	690.7	682.2	671.1	660.0	651.5	645.6	641.4	643.0	643.9	644.7
20°	683.9	674.5	665.2	653.2	641.4	632.0	626.0	621.0	620.2	620.2	621.0
22.5°	667.7	657.5	646.5	633.7	621.0	610.8	604.8	599.7	598.9	598.9	599.7
25°	649.0	638.0	626.9	614.2	600.5	590.4	582.7	577.7	576.8	576.0	577.7
27.5°	629.5	618.4	607.4	594.7	580.2	570.0	562.3	557.3	555.5	554.7	556.4
30°	609.0	596.3	584.5	570.8	558.1	548.0	540.3	534.3	532.7	531.0	532.7
32.5°	587.0	574.2	561.5	548.0	535.2	525.0	517.3	511.4	509.7	508.8	510.5
35°	564.0	551.3	539.5	525.8	513.1	502.9	495.3	490.2	488.5	487.6	488.5
37.5°	541.1	528.4	516.5	502.9	490.2	480.0	472.3	467.2	466.3	465.5	466.3
40°	514.8	503.8	491.8	479.1	466.3	456.2	450.3	444.3	442.6	440.8	443.5
42.5°	491.8	480.8	469.0	457.0	444.3	434.1	427.3	422.2	420.5	419.6	420.5
45°	466.3	454.5	442.6	431.5	419.6	410.3	403.5	398.4	397.6	396.8	397.6
47.5°	439.2	429.0	418.8	407.8	395.8	386.5	380.6	375.5	373.8	372.1	373.8
50°	413.7	403.5	393.3	383.1	372.1	363.6	357.6	352.6	351.6	350.8	351.6
52.5°	386.5	376.3	367.0	356.8	347.4	338.9	333.0	328.8	327.9	327.1	327.9
55°	357.6	349.1	340.6	332.1	322.8	315.1	310.1	304.9	303.3	301.6	303.3
57.5°	330.4	322.8	314.3	305.8	297.3	290.6	285.4	281.2	280.3	279.4	280.3
60°	302.4	295.6	287.9	280.3	271.9	265.1	260.8	257.4	255.7	254.9	255.7
62.5°	274.4	267.6	261.6	254.0	246.4	241.2	237.0	233.6	231.9	231.1	231.9
65°	245.5	239.6	233.6	226.8	220.9	215.7	211.5	208.1	207.2	206.4	206.4
67.5°	215.7	210.7	205.6	199.6	192.9	187.7	183.5	180.9	180.1	179.2	180.1
70°	185.2	180.9	175.9	170.7	165.7	161.4	158.9	156.4	155.4	154.6	154.6
72.5°	156.4	152.9	148.7	144.4	140.2	135.9	133.4	131.7	130.9	130.0	130.0
75°	127.4	124.0	121.5	118.1	113.9	111.2	108.7	107.0	106.2	106.2	106.2
77.5°	100.2	97.7	95.2	91.7	89.2	86.7	85.0	84.1	83.2	83.2	83.2
80°	73.9	72.2	70.5	68.8	66.2	63.7	62.9	62.0	61.2	61.2	61.2
82.5°	50.2	49.3	47.5	45.9	44.2	43.3	42.5	41.7	41.7	41.7	41.7
85°	28.9	28.0	27.2	26.3	25.5	25.5	24.7	23.8	23.0	23.0	23.0
87.5°	11.9	11.9	11.9	11.0	10.2	10.2	10.2	10.2	10.2	10.2	10.2
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):

	110°	120°	130°	140°	150°	160°	170°	180°	190°	200°	210°
0°	750.9	750.9	750.9	750.9	750.9	750.9	750.9	750.9	750.9	750.9	750.9
2.5°	738.2	739.9	741.6	744.2	746.7	749.2	748.4	747.6	750.9	755.2	756.1
5°	727.2	728.9	731.4	735.7	739.9	743.3	744.2	744.2	750.9	756.9	758.6
7.5°	713.6	716.1	719.5	723.7	729.7	734.8	737.4	740.7	747.6	755.2	758.6
10°	696.6	700.9	705.9	711.9	717.9	723.7	728.9	733.1	741.6	750.1	755.2
12.5°	681.2	685.5	690.7	697.4	705.1	712.7	717.9	723.7	733.9	744.2	750.1
15°	664.3	668.5	674.5	681.2	689.7	698.2	705.9	713.6	723.7	734.8	741.6
17.5°	645.6	649.9	655.8	664.3	673.7	683.0	691.5	700.0	711.9	723.7	731.4
20°	622.7	628.7	636.2	644.7	655.8	666.9	675.4	684.7	697.4	710.2	718.7
22.5°	600.5	606.5	615.0	625.2	637.2	649.0	659.2	669.4	683.0	695.7	705.1
25°	579.3	586.2	594.7	604.8	615.9	627.7	639.7	651.5	665.2	678.7	688.1
27.5°	558.1	564.0	572.5	582.7	595.5	607.4	619.3	631.2	645.6	660.0	670.2
30°	534.3	541.1	548.8	559.0	572.5	586.2	598.0	610.8	625.2	639.7	649.9
32.5°	512.3	518.2	525.8	536.0	549.6	563.2	576.0	589.5	603.2	617.5	627.7
35°	490.2	496.1	503.8	514.0	527.5	541.1	553.8	566.6	580.2	593.8	604.0
37.5°	468.1	474.0	481.7	491.8	504.6	518.2	530.1	542.8	556.4	570.0	579.3
40°	445.1	451.1	457.0	467.2	480.0	493.5	505.5	518.2	531.8	545.3	554.7
42.5°	422.2	428.1	435.8	446.0	457.8	469.8	481.7	493.5	506.3	519.0	528.4
45°	399.3	404.3	412.0	421.3	433.3	444.3	456.2	467.2	480.0	491.8	501.2
47.5°	375.5	380.6	386.5	395.8	407.8	419.6	431.5	442.6	453.6	465.5	474.0
50°	352.6	357.6	364.4	372.9	384.0	395.0	405.2	415.4	426.5	437.5	445.1
52.5°	328.8	333.8	339.8	348.3	357.6	367.8	377.1	387.3	397.6	407.8	415.4
55°	304.9	308.4	313.4	321.1	331.3	341.5	350.8	360.1	369.5	378.0	385.6
57.5°	281.2	285.4	291.4	298.1	306.6	315.1	323.6	332.1	340.6	349.1	355.9
60°	257.4	260.8	265.1	270.9	279.4	287.1	295.6	303.3	310.9	318.6	324.5
62.5°	232.7	236.2	240.4	246.4	253.1	259.9	267.6	274.4	281.2	287.9	293.9
65°	207.2	210.7	214.9	220.0	225.9	231.9	238.7	245.5	250.6	255.7	261.6
67.5°	180.9	184.4	188.6	192.9	197.9	203.9	209.9	215.7	220.9	225.9	230.2
70°	155.4	158.0	162.2	165.7	169.9	174.2	179.2	184.4	187.7	192.0	197.1
72.5°	130.9	133.4	136.7	140.2	142.7	146.1	151.2	155.4	159.7	164.9	167.4
75°	107.0	108.7	111.2	113.9	116.4	118.9	122.4	125.7	129.1	131.7	135.1
77.5°	83.2	85.0	87.5	89.2	90.9	92.6	95.2	97.7	100.2	101.9	105.4
80°	61.2	62.9	64.5	66.2	68.0	69.7	70.5	71.4	74.7	77.3	79.0
82.5°	41.7	42.5	43.3	45.0	45.9	46.7	47.5	47.5	49.3	51.0	53.5
85°	23.8	24.7	25.5	25.5	25.5	25.5	26.3	27.2	28.0	29.7	31.5
87.5°	9.3	9.3	10.2	10.2	10.2	10.2	10.2	10.2	11.0	12.7	13.6
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°	750.9	750.9	750.9	750.9	750.9	750.9	750.9	750.9	750.9	750.9	750.9
2.5°	755.2	756.1	757.7	758.6	759.4	759.4	760.3	761.1	759.4	757.7	756.9
5°	759.4	760.3	762.9	765.4	767.1	768.8	767.9	767.1	765.4	762.9	761.1
7.5°	760.3	762.9	765.4	768.8	771.4	774.7	773.1	771.4	767.9	764.6	762.0
10°	757.7	761.1	765.4	769.6	772.2	774.7	773.1	771.4	767.9	763.7	760.3
12.5°	754.4	758.6	763.7	767.9	770.4	773.9	771.4	768.8	764.6	760.3	756.1
15°	746.7	751.8	757.7	762.9	767.1	770.4	767.9	766.2	761.1	755.2	749.2
17.5°	737.4	744.2	750.1	756.1	759.4	762.9	761.1	759.4	753.5	746.7	739.9
20°	726.4	733.1	739.1	745.0	749.2	752.6	750.1	747.6	741.6	735.7	728.9
22.5°	712.7	719.5	726.4	732.2	736.5	739.9	736.5	732.2	726.4	720.4	713.6
25°	695.7	703.4	711.0	716.9	719.5	722.9	719.5	716.1	710.2	704.2	696.6
27.5°	678.7	686.4	694.0	700.0	702.5	705.9	702.5	699.1	693.2	687.2	679.6
30°	659.2	666.9	674.5	680.4	683.0	685.5	682.2	678.7	673.7	667.7	660.0
32.5°	637.2	644.7	650.7	656.7	660.0	663.4	660.0	657.5	651.5	643.9	636.2
35°	613.3	621.0	628.7	634.5	638.0	641.4	637.2	632.9	627.7	621.8	615.0
37.5°	587.0	595.5	604.0	610.8	613.3	616.7	613.3	609.0	604.0	598.0	590.4
40°	562.3	570.0	577.7	584.5	587.0	589.5	586.2	582.7	576.8	570.8	563.2
42.5°	536.9	544.5	551.3	557.3	559.8	563.2	559.8	555.5	551.3	546.2	539.5
45°	509.7	517.3	523.3	529.2	531.8	534.3	531.0	526.7	522.5	518.2	511.4
47.5°	481.7	488.5	494.5	500.3	502.0	504.6	501.2	498.7	494.5	490.2	484.2
50°	452.8	459.6	465.5	470.6	472.3	474.8	471.5	468.1	464.7	461.3	456.2
52.5°	423.0	429.0	435.0	440.0	441.8	443.5	440.0	436.6	433.3	429.8	424.8
55°	392.5	398.4	404.3	408.6	410.3	412.0	408.6	406.1	402.6	400.1	395.0
57.5°	361.9	367.8	372.9	377.1	378.9	380.6	377.1	373.8	371.3	368.6	364.4
60°	330.4	336.4	340.6	344.1	345.8	346.6	343.2	340.6	338.9	337.3	333.0
62.5°	299.9	304.1	308.4	310.9	312.6	313.4	310.9	309.2	307.6	305.8	302.4
65°	267.6	272.7	276.1	278.6	279.4	280.3	277.8	276.1	274.4	272.7	270.1
67.5°	235.3	239.6	242.1	244.6	245.5	245.5	245.5	244.6	242.9	240.4	237.9
70°	203.0	206.4	208.9	210.7	211.5	211.5	209.9	208.1	208.1	207.2	205.6
72.5°	169.9	172.4	174.2	175.9	175.9	175.9	175.9	176.7	175.9	174.2	171.6
75°	138.5	141.0	142.7	143.6	143.6	143.6	143.6	144.4	143.6	142.7	141.0
77.5°	108.7	110.4	111.2	112.2	112.2	112.2	113.0	113.9	113.0	112.2	111.2
80°	80.7	81.5	82.4	83.2	82.4	82.4	83.2	85.0	84.1	83.2	82.4
82.5°	55.2	56.0	56.9	56.9	57.7	58.7	58.7	58.7	58.7	57.7	56.9
85°	33.2	34.0	34.0	34.0	34.0	34.0	34.8	35.7	35.7	34.8	34.8
87.5°	15.3	16.2	15.3	14.5	13.6	13.6	15.3	17.0	17.0	16.2	16.2
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):

	330°	340°	350°	360°
0°	750.9	750.9	750.9	750.9
2.5°	757.7	756.9	752.6	748.4
5°	760.3	757.7	751.8	745.9
7.5°	760.3	756.9	748.4	740.7
10°	756.1	750.9	741.6	732.2
12.5°	750.9	745.0	733.9	723.7
15°	743.3	736.5	724.6	712.7
17.5°	732.2	723.7	711.9	699.1
20°	721.2	711.9	697.4	683.9
22.5°	705.9	697.4	682.2	667.7
25°	688.9	679.6	664.3	649.0
27.5°	671.1	660.0	644.7	629.5
30°	650.7	639.7	624.4	609.0
32.5°	628.7	618.4	603.2	587.0
35°	606.5	595.5	580.2	564.0
37.5°	581.9	571.7	556.4	541.1
40°	555.5	545.3	530.1	514.8
42.5°	531.0	521.6	506.3	491.8
45°	503.8	494.5	480.0	466.3
47.5°	475.7	466.3	452.8	439.2
50°	448.5	439.2	426.5	413.7
52.5°	418.0	410.3	398.4	386.5
55°	388.3	380.6	368.6	357.6
57.5°	358.5	351.6	340.6	330.4
60°	327.1	320.3	311.8	302.4
62.5°	297.3	291.4	282.9	274.4
65°	265.9	260.8	253.1	245.5
67.5°	233.6	229.4	222.6	215.7
70°	201.4	196.2	191.1	185.2
72.5°	169.1	166.5	161.4	156.4
75°	138.5	135.9	131.7	127.4
77.5°	109.6	107.0	103.7	100.2
80°	80.7	79.0	76.5	73.9
82.5°	56.0	54.4	52.7	50.2
85°	34.0	32.3	30.5	28.9
87.5°	15.3	14.5	12.7	11.9
90°	0.0	0.0	0.0	0.0



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













(END OF REPORT)