

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: P735594

Luminaire Tested: **4APN6-24-B2750-W2D-CP250-3000K**

Issue Date: 1/5/2024



**Test Information**

Test Method: LM-79-08  
Report Number: P735594  
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-CP250-3000K  
Description: 4FT 2400 AMBIENT LUMEN OUTPUT APN WITH BIO UP LEDS AT 3000K CCT, AND CP250 LENS  
  
Light Source: -  
Ballast/Driver: -

**Summary**

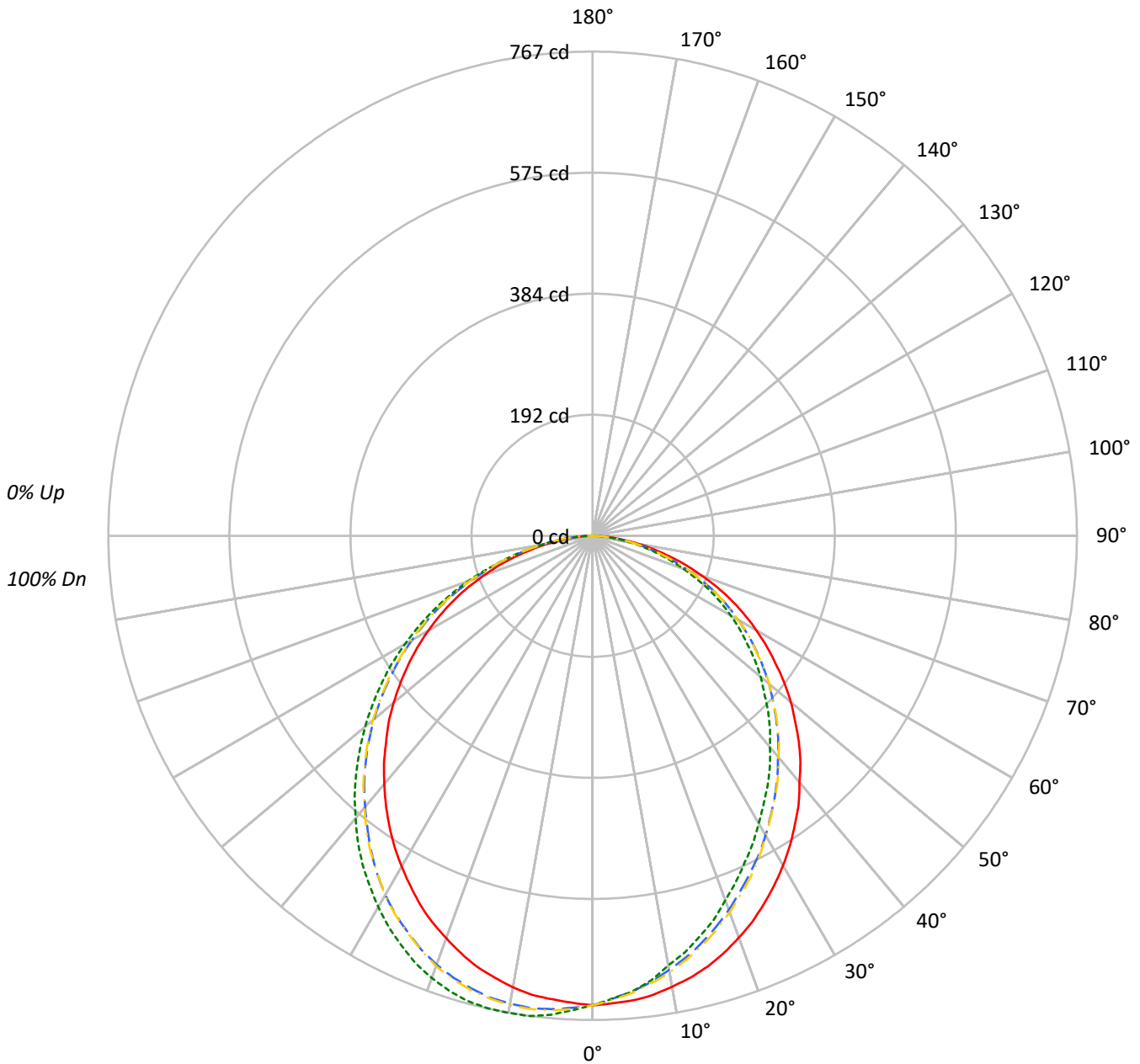
Lumens per Lamp: N/A  
Luminaire Lumens: 1995.0 lumens  
Efficiency: N/A  
Efficacy: 83.8 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.21 / 1.33  
Luminous Opening: Rectangular (W 0.29' x L: 4' x H: 0')  
CIE Type: Direct

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°	6862	6862	6862	6862
5°	6842	6710	6827	7054
10°	6795	6473	6803	7189
15°	6743	6270	6752	7290
20°	6651	6031	6659	7320
25°	6545	5808	6570	7290
30°	6427	5604	6445	7234
35°	6293	5440	6321	7155
40°	6141	5260	6182	7034
45°	6027	5128	6039	6906
50°	5882	4988	5905	6752
55°	5697	4805	5738	6564
60°	5526	4659	5543	6335
65°	5307	4464	5307	6062
70°	4947	4133	4926	5651
75°	4499	3750	4438	5073
80°	3889	3220	3756	4336
85°	3038	2403	2848	3567



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	70.3	3.5
10°-20°	199.5	10.0
20°-30°	296.6	14.9
30°-40°	349.5	17.5
40°-50°	355.9	17.8
50°-60°	317.0	15.9
60°-70°	238.9	12.0
70°-80°	132.8	6.7
80°-90°	34.5	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°	566.3	28.4
0°-40°	915.8	45.9
0°-60°	1588.8	79.6
0°-90°	1995.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1995.0	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	744	744	744	744	744	
5°	739	724	737	762	739	70
15°	706	656	707	763	706	199
25°	643	570	645	716	643	296
35°	559	483	561	635	559	350
45°	462	393	463	529	462	356
55°	354	299	357	408	354	317
65°	243	204	243	278	243	240
75°	126	105	124	142	126	134
85°	29	23	27	34	29	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°	743.8	743.8	743.8	743.8	743.8	743.8	743.8	743.8	743.8	743.8	743.8
2.5°	741.3	741.3	742.1	738.8	734.6	732.9	732.1	731.2	732.9	733.7	732.9
5°	738.8	737.1	735.4	731.2	726.2	722.8	721.1	720.3	722.0	724.5	722.0
7.5°	733.7	730.4	727.0	721.1	715.3	710.2	707.7	706.0	707.7	710.2	708.5
10°	725.3	721.1	716.1	709.4	701.0	695.1	692.6	690.0	690.9	690.9	690.9
12.5°	716.9	711.1	705.2	696.8	687.4	680.7	676.5	673.2	674.8	675.7	675.7
15°	706.0	698.5	690.0	680.7	671.5	663.9	658.9	655.5	656.4	656.4	657.2
17.5°	692.6	684.1	675.7	664.8	653.8	645.4	639.6	635.3	637.0	637.9	638.7
20°	677.4	668.1	658.9	647.1	635.3	626.0	620.1	615.1	614.3	614.3	615.1
22.5°	661.4	651.3	640.4	627.7	615.1	605.0	599.1	594.1	593.3	593.3	594.1
25°	642.9	631.9	621.0	608.4	594.9	584.9	577.2	572.2	571.3	570.5	572.2
27.5°	623.5	612.6	601.7	589.1	574.7	564.6	557.0	552.0	550.3	549.5	551.2
30°	603.3	590.7	578.9	565.4	552.8	542.8	535.2	529.3	527.7	526.0	527.7
32.5°	581.5	568.8	556.2	542.8	530.2	520.0	512.4	506.6	504.9	504.0	505.7
35°	558.7	546.1	534.4	520.8	508.2	498.2	490.6	485.6	483.9	483.0	483.9
37.5°	536.0	523.4	511.6	498.2	485.6	475.5	467.8	462.8	461.9	461.1	461.9
40°	509.9	499.0	487.2	474.6	461.9	451.9	446.0	440.1	438.4	436.7	439.3
42.5°	487.2	476.3	464.5	452.7	440.1	430.0	423.3	418.3	416.6	415.7	416.6
45°	461.9	450.2	438.4	427.5	415.7	406.4	399.7	394.6	393.8	393.0	393.8
47.5°	435.1	425.0	414.9	403.9	392.1	382.9	377.0	372.0	370.3	368.6	370.3
50°	409.8	399.7	389.6	379.5	368.6	360.2	354.2	349.2	348.3	347.5	348.3
52.5°	382.9	372.8	363.6	353.4	344.1	335.7	329.9	325.7	324.8	324.0	324.8
55°	354.2	345.8	337.4	329.0	319.8	312.2	307.2	302.0	300.4	298.7	300.4
57.5°	327.3	319.8	311.4	302.9	294.5	287.8	282.7	278.5	277.7	276.8	277.7
60°	299.5	292.8	285.2	277.7	269.3	262.6	258.4	255.0	253.3	252.5	253.3
62.5°	271.8	265.1	259.2	251.6	244.0	238.9	234.7	231.4	229.7	228.9	229.7
65°	243.1	237.3	231.4	224.7	218.8	213.7	209.5	206.2	205.3	204.5	204.5
67.5°	213.7	208.7	203.7	197.8	191.0	185.9	181.7	179.2	178.4	177.5	178.4
70°	183.4	179.2	174.2	169.1	164.1	159.9	157.4	154.9	154.0	153.2	153.2
72.5°	154.9	151.5	147.3	143.1	138.9	134.6	132.1	130.4	129.6	128.7	128.7
75°	126.2	122.8	120.3	117.0	112.8	110.2	107.7	106.0	105.2	105.2	105.2
77.5°	99.3	96.8	94.3	90.9	88.4	85.9	84.2	83.4	82.4	82.4	82.4
80°	73.2	71.5	69.8	68.1	65.6	63.1	62.3	61.4	60.6	60.6	60.6
82.5°	49.7	48.8	47.1	45.5	43.8	42.9	42.1	41.3	41.3	41.3	41.3
85°	28.7	27.8	26.9	26.0	25.2	25.2	24.4	23.5	22.7	22.7	22.7
87.5°	11.8	11.8	11.8	10.9	10.1	10.1	10.1	10.1	10.1	10.1	10.1
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):**

	110°	120°	130°	140°	150°	160°	170°	180°	190°	200°	210°
0°	743.8	743.8	743.8	743.8	743.8	743.8	743.8	743.8	743.8	743.8	743.8
2.5°	731.2	732.9	734.6	737.1	739.6	742.1	741.3	740.5	743.8	748.1	749.0
5°	720.3	722.0	724.5	728.7	732.9	736.3	737.1	737.1	743.8	749.8	751.5
7.5°	706.9	709.4	712.7	716.9	722.8	727.9	730.4	733.7	740.5	748.1	751.5
10°	690.0	694.3	699.3	705.2	711.1	716.9	722.0	726.2	734.6	743.0	748.1
12.5°	674.8	679.0	684.1	690.9	698.5	706.0	711.1	716.9	727.0	737.1	743.0
15°	658.0	662.2	668.1	674.8	683.2	691.7	699.3	706.9	716.9	727.9	734.6
17.5°	639.6	643.8	649.6	658.0	667.3	676.5	684.9	693.4	705.2	716.9	724.5
20°	616.8	622.7	630.2	638.7	649.6	660.6	669.0	678.2	690.9	703.5	711.9
22.5°	594.9	600.8	609.2	619.3	631.1	642.9	653.0	663.1	676.5	689.1	698.5
25°	573.8	580.7	589.1	599.1	610.1	621.8	633.6	645.4	658.9	672.3	681.6
27.5°	552.8	558.7	567.1	577.2	589.9	601.7	613.4	625.2	639.6	653.8	663.9
30°	529.3	536.0	543.6	553.7	567.1	580.7	592.4	605.0	619.3	633.6	643.8
32.5°	507.4	513.3	520.8	531.0	544.4	557.9	570.5	584.0	597.5	611.7	621.8
35°	485.6	491.4	499.0	509.1	522.5	536.0	548.6	561.2	574.7	588.2	598.3
37.5°	463.6	469.5	477.2	487.2	499.8	513.3	525.1	537.7	551.2	564.6	573.8
40°	440.9	446.8	452.7	462.8	475.5	488.9	500.7	513.3	526.8	540.2	549.5
42.5°	418.3	424.1	431.7	441.8	453.5	465.3	477.2	488.9	501.5	514.1	523.4
45°	395.5	400.5	408.1	417.4	429.2	440.1	451.9	462.8	475.5	487.2	496.5
47.5°	372.0	377.0	382.9	392.1	403.9	415.7	427.5	438.4	449.3	461.1	469.5
50°	349.2	354.2	361.0	369.4	380.4	391.3	401.4	411.4	422.5	433.4	440.9
52.5°	325.7	330.7	336.6	345.0	354.2	364.4	373.6	383.7	393.8	403.9	411.4
55°	302.0	305.5	310.5	318.1	328.2	338.3	347.5	356.7	366.1	374.5	382.0
57.5°	278.5	282.7	288.6	295.3	303.7	312.2	320.6	329.0	337.4	345.8	352.5
60°	255.0	258.4	262.6	268.4	276.8	284.4	292.8	300.4	308.0	315.6	321.5
62.5°	230.5	233.9	238.1	244.0	250.8	257.5	265.1	271.8	278.5	285.2	291.1
65°	205.3	208.7	212.9	217.9	223.8	229.7	236.4	243.1	248.2	253.3	259.2
67.5°	179.2	182.6	186.8	191.0	196.1	202.0	207.9	213.7	218.8	223.8	228.0
70°	154.0	156.5	160.7	164.1	168.3	172.5	177.5	182.6	185.9	190.1	195.3
72.5°	129.6	132.1	135.4	138.9	141.4	144.8	149.8	154.0	158.2	163.3	165.8
75°	106.0	107.7	110.2	112.8	115.3	117.8	121.2	124.5	127.9	130.4	133.8
77.5°	82.4	84.2	86.7	88.4	90.1	91.8	94.3	96.8	99.3	101.0	104.4
80°	60.6	62.3	63.9	65.6	67.3	69.0	69.8	70.7	74.0	76.5	78.2
82.5°	41.3	42.1	42.9	44.6	45.5	46.3	47.1	47.1	48.8	50.5	53.0
85°	23.5	24.4	25.2	25.2	25.2	25.2	26.0	26.9	27.8	29.5	31.2
87.5°	9.2	9.2	10.1	10.1	10.1	10.1	10.1	10.1	10.9	12.6	13.4
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):**

	220°	230°	240°	250°	260°	270°	280°	290°	300°	310°	320°
0°	743.8	743.8	743.8	743.8	743.8	743.8	743.8	743.8	743.8	743.8	743.8
2.5°	748.1	749.0	750.6	751.5	752.3	752.3	753.2	754.0	752.3	750.6	749.8
5°	752.3	753.2	755.7	758.2	759.9	761.6	760.7	759.9	758.2	755.7	754.0
7.5°	753.2	755.7	758.2	761.6	764.1	767.4	765.8	764.1	760.7	757.4	754.8
10°	750.6	754.0	758.2	762.4	764.9	767.4	765.8	764.1	760.7	756.5	753.2
12.5°	747.3	751.5	756.5	760.7	763.2	766.6	764.1	761.6	757.4	753.2	749.0
15°	739.6	744.7	750.6	755.7	759.9	763.2	760.7	759.0	754.0	748.1	742.1
17.5°	730.4	737.1	743.0	749.0	752.3	755.7	754.0	752.3	746.4	739.6	732.9
20°	719.5	726.2	732.1	737.9	742.1	745.5	743.0	740.5	734.6	728.7	722.0
22.5°	706.0	712.7	719.5	725.3	729.5	732.9	729.5	725.3	719.5	713.6	706.9
25°	689.1	696.8	704.3	710.2	712.7	716.1	712.7	709.4	703.5	697.6	690.0
27.5°	672.3	679.9	687.4	693.4	695.9	699.3	695.9	692.6	686.6	680.7	673.2
30°	653.0	660.6	668.1	674.0	676.5	679.0	675.7	672.3	667.3	661.4	653.8
32.5°	631.1	638.7	644.6	650.5	653.8	657.2	653.8	651.3	645.4	637.9	630.2
35°	607.5	615.1	622.7	628.5	631.9	635.3	631.1	626.9	621.8	615.9	609.2
37.5°	581.5	589.9	598.3	605.0	607.5	610.9	607.5	603.3	598.3	592.4	584.9
40°	557.0	564.6	572.2	578.9	581.5	584.0	580.7	577.2	571.3	565.4	557.9
42.5°	531.9	539.4	546.1	552.0	554.5	557.9	554.5	550.3	546.1	541.1	534.4
45°	504.9	512.4	518.3	524.2	526.8	529.3	526.0	521.7	517.5	513.3	506.6
47.5°	477.2	483.9	489.8	495.6	497.3	499.8	496.5	494.0	489.8	485.6	479.7
50°	448.5	455.2	461.1	466.1	467.8	470.4	467.0	463.6	460.3	456.9	451.9
52.5°	419.1	425.0	430.9	435.9	437.6	439.3	435.9	432.5	429.2	425.8	420.8
55°	388.8	394.6	400.5	404.7	406.4	408.1	404.7	402.2	398.8	396.3	391.3
57.5°	358.4	364.4	369.4	373.6	375.3	377.0	373.6	370.3	367.8	365.2	361.0
60°	327.3	333.2	337.4	340.8	342.5	343.3	339.9	337.4	335.7	334.1	329.9
62.5°	297.0	301.2	305.5	308.0	309.7	310.5	308.0	306.3	304.7	302.9	299.5
65°	265.1	270.1	273.5	276.0	276.8	277.7	275.2	273.5	271.8	270.1	267.6
67.5°	233.1	237.3	239.8	242.3	243.1	243.1	243.1	242.3	240.6	238.1	235.6
70°	201.1	204.5	207.0	208.7	209.5	209.5	207.9	206.2	206.2	205.3	203.7
72.5°	168.3	170.8	172.5	174.2	174.2	174.2	174.2	175.0	174.2	172.5	170.0
75°	137.1	139.7	141.4	142.3	142.3	142.3	142.3	143.1	142.3	141.4	139.7
77.5°	107.7	109.4	110.2	111.1	111.1	111.1	111.9	112.8	111.9	111.1	110.2
80°	79.9	80.7	81.6	82.4	81.6	81.6	82.4	84.2	83.4	82.4	81.6
82.5°	54.7	55.5	56.4	56.4	57.2	58.1	58.1	58.1	58.1	57.2	56.4
85°	32.9	33.7	33.7	33.7	33.7	33.7	34.5	35.4	35.4	34.5	34.5
87.5°	15.1	16.0	15.1	14.3	13.4	13.4	15.1	16.8	16.8	16.0	16.0
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°	743.8	743.8	743.8	743.8
2.5°	750.6	749.8	745.5	741.3
5°	753.2	750.6	744.7	738.8
7.5°	753.2	749.8	741.3	733.7
10°	749.0	743.8	734.6	725.3
12.5°	743.8	737.9	727.0	716.9
15°	736.3	729.5	717.8	706.0
17.5°	725.3	716.9	705.2	692.6
20°	714.4	705.2	690.9	677.4
22.5°	699.3	690.9	675.7	661.4
25°	682.4	673.2	658.0	642.9
27.5°	664.8	653.8	638.7	623.5
30°	644.6	633.6	618.5	603.3
32.5°	622.7	612.6	597.5	581.5
35°	600.8	589.9	574.7	558.7
37.5°	576.4	566.3	551.2	536.0
40°	550.3	540.2	525.1	509.9
42.5°	526.0	516.6	501.5	487.2
45°	499.0	489.8	475.5	461.9
47.5°	471.3	461.9	448.5	435.1
50°	444.3	435.1	422.5	409.8
52.5°	414.0	406.4	394.6	382.9
55°	384.6	377.0	365.2	354.2
57.5°	355.1	348.3	337.4	327.3
60°	324.0	317.3	308.9	299.5
62.5°	294.5	288.6	280.2	271.8
65°	263.4	258.4	250.8	243.1
67.5°	231.4	227.2	220.5	213.7
70°	199.5	194.4	189.3	183.4
72.5°	167.5	164.9	159.9	154.9
75°	137.1	134.6	130.4	126.2
77.5°	108.6	106.0	102.7	99.3
80°	79.9	78.2	75.7	73.2
82.5°	55.5	53.9	52.2	49.7
85°	33.7	32.0	30.3	28.7
87.5°	15.1	14.3	12.6	11.8
90°	0.0	0.0	0.0	0.0



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















(END OF REPORT)