

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: P735586

Luminaire Tested: **4APN6-24-B2750-W2D-4000K**

Issue Date: 1/5/2024



**Test Information**

Test Method: LM-79-08  
Report Number: P735586  
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-4000K  
Description: 4FT 2400 AMBIENT LUMEN OUTPUT APN WITH BIO UP LEDS AT 4000K CCT

Light Source: -  
Ballast/Driver: -

**Summary**

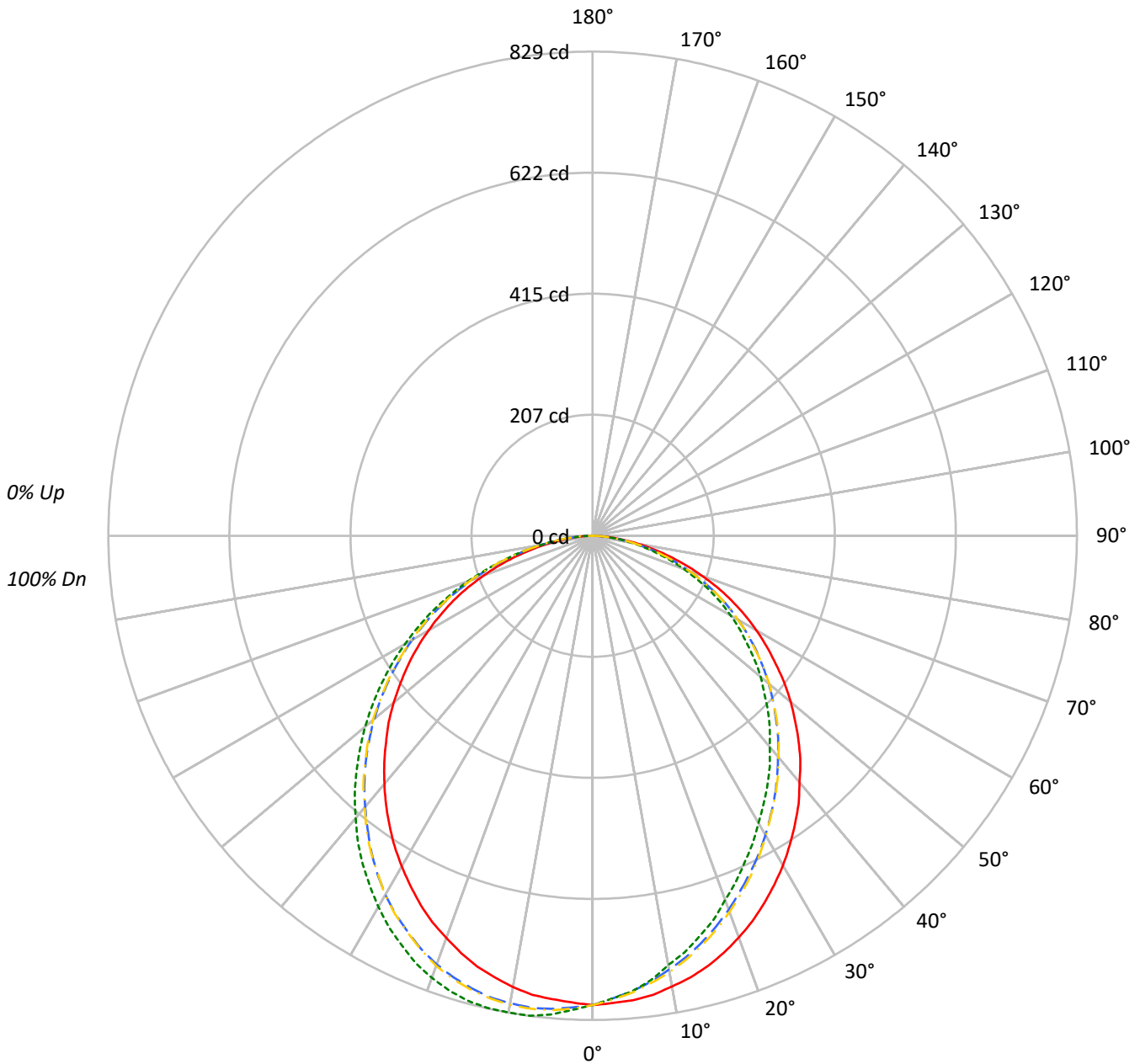
Lumens per Lamp: N/A  
Luminaire Lumens: 2155.0 lumens  
Efficiency: N/A  
Efficacy: 90.5 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.21 / 1.33  
Luminous Opening: Rectangular (W 0.29' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 23.8  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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°	7413	7413	7413	7413
5°	7392	7248	7375	7619
10°	7340	6992	7350	7766
15°	7284	6772	7294	7874
20°	7185	6515	7193	7907
25°	7069	6274	7096	7874
30°	6943	6052	6962	7814
35°	6797	5876	6828	7730
40°	6634	5681	6678	7597
45°	6511	5539	6524	7459
50°	6354	5388	6379	7293
55°	6156	5191	6199	7092
60°	5971	5032	5988	6844
65°	5733	4822	5733	6549
70°	5344	4464	5322	6105
75°	4862	4050	4795	5479
80°	4203	3480	4059	4686
85°	3271	2604	3080	3853



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	75.9	3.5
10°-20°	215.5	10.0
20°-30°	320.3	14.9
30°-40°	377.6	17.5
40°-50°	384.4	17.8
50°-60°	342.5	15.9
60°-70°	258.0	12.0
70°-80°	143.5	6.7
80°-90°	37.3	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°	611.7	28.4
0°-40°	989.3	45.9
0°-60°	1716.2	79.6
0°-90°	2155.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2155.0	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	804	804	804	804	804	
5°	798	783	796	823	798	76
15°	763	709	764	824	763	215
25°	694	616	697	774	694	320
35°	604	522	606	686	604	378
45°	499	424	500	572	499	385
55°	383	323	385	441	383	343
65°	263	221	263	300	263	259
75°	136	114	134	154	136	145
85°	31	25	29	36	31	37
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°	803.5	803.5	803.5	803.5	803.5	803.5	803.5	803.5	803.5	803.5	803.5
2.5°	800.8	800.8	801.7	798.1	793.5	791.7	790.8	789.9	791.7	792.6	791.7
5°	798.1	796.3	794.4	789.9	784.5	780.8	778.9	778.1	779.9	782.6	779.9
7.5°	792.6	789.0	785.3	778.9	772.7	767.1	764.4	762.6	764.4	767.1	765.3
10°	783.5	778.9	773.5	766.3	757.2	750.8	748.1	745.4	746.3	746.3	746.3
12.5°	774.4	768.1	761.7	752.6	742.6	735.3	730.8	727.2	728.9	729.9	729.9
15°	762.6	754.5	745.4	735.3	725.4	717.1	711.7	708.1	709.0	709.0	709.9
17.5°	748.1	739.0	729.9	718.1	706.2	697.1	690.9	686.3	688.0	689.0	689.9
20°	731.8	721.7	711.7	699.0	686.3	676.2	669.9	664.4	663.6	663.6	664.4
22.5°	714.4	703.5	691.7	678.1	664.4	653.5	647.1	641.7	640.9	640.9	641.7
25°	694.4	682.6	670.8	657.2	642.6	631.8	623.5	618.1	617.2	616.3	618.1
27.5°	673.5	661.7	649.9	636.3	620.8	609.9	601.7	596.3	594.4	593.6	595.4
30°	651.7	638.0	625.4	610.8	597.1	586.3	578.1	571.7	570.0	568.1	570.0
32.5°	628.1	614.4	600.8	586.3	572.7	561.7	553.5	547.2	545.4	544.4	546.3
35°	603.5	589.9	577.2	562.6	549.0	538.2	529.9	524.5	522.7	521.7	522.7
37.5°	579.0	565.4	552.7	538.2	524.5	513.6	505.4	500.0	499.0	498.1	499.0
40°	550.8	539.0	526.3	512.6	499.0	488.2	481.8	475.4	473.6	471.7	474.5
42.5°	526.3	514.5	501.8	489.0	475.4	464.5	457.2	451.8	450.0	449.0	450.0
45°	499.0	486.3	473.6	461.8	449.0	439.0	431.8	426.3	425.4	424.5	425.4
47.5°	470.0	459.1	448.1	436.3	423.6	413.6	407.2	401.8	400.0	398.1	400.0
50°	442.7	431.8	420.9	409.9	398.1	389.0	382.7	377.2	376.3	375.4	376.3
52.5°	413.6	402.7	392.7	381.8	371.7	362.6	356.4	351.8	350.8	350.0	350.8
55°	382.7	373.6	364.5	355.4	345.4	337.2	331.8	326.3	324.5	322.7	324.5
57.5°	353.5	345.4	336.3	327.2	318.2	310.9	305.4	300.8	300.0	299.0	300.0
60°	323.6	316.3	308.1	300.0	290.9	283.6	279.1	275.4	273.6	272.7	273.6
62.5°	293.6	286.3	280.0	271.7	263.6	258.1	253.5	250.0	248.1	247.3	248.1
65°	262.6	256.4	250.0	242.7	236.3	230.8	226.3	222.7	221.7	220.9	220.9
67.5°	230.8	225.4	220.0	213.6	206.4	200.8	196.3	193.6	192.7	191.8	192.7
70°	198.1	193.6	188.2	182.7	177.3	172.7	170.0	167.3	166.3	165.5	165.5
72.5°	167.3	163.6	159.1	154.5	150.0	145.4	142.7	140.9	140.0	139.1	139.1
75°	136.4	132.7	130.0	126.4	121.9	119.0	116.3	114.5	113.6	113.6	113.6
77.5°	107.2	104.5	101.8	98.2	95.4	92.7	90.9	90.0	89.1	89.1	89.1
80°	79.1	77.3	75.4	73.6	70.9	68.2	67.3	66.3	65.5	65.5	65.5
82.5°	53.7	52.7	50.9	49.1	47.3	46.3	45.5	44.6	44.6	44.6	44.6
85°	30.9	30.0	29.1	28.1	27.3	27.3	26.4	25.4	24.6	24.6	24.6
87.5°	12.8	12.8	12.8	11.8	10.9	10.9	10.9	10.9	10.9	10.9	10.9
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°	803.5	803.5	803.5	803.5	803.5	803.5	803.5	803.5	803.5	803.5	803.5
2.5°	789.9	791.7	793.5	796.3	799.0	801.7	800.8	799.9	803.5	808.0	809.0
5°	778.1	779.9	782.6	787.2	791.7	795.4	796.3	796.3	803.5	809.9	811.7
7.5°	763.6	766.3	769.8	774.4	780.8	786.3	789.0	792.6	799.9	808.0	811.7
10°	745.4	749.9	755.3	761.7	768.1	774.4	779.9	784.5	793.5	802.6	808.0
12.5°	728.9	733.5	739.0	746.3	754.5	762.6	768.1	774.4	785.3	796.3	802.6
15°	710.8	715.3	721.7	728.9	738.0	747.1	755.3	763.6	774.4	786.3	793.5
17.5°	690.9	695.4	701.7	710.8	720.8	730.8	739.9	749.0	761.7	774.4	782.6
20°	666.3	672.7	680.8	689.9	701.7	713.6	722.7	732.6	746.3	759.9	769.0
22.5°	642.6	649.0	658.1	669.0	681.8	694.4	705.4	716.3	730.8	744.4	754.5
25°	619.9	627.2	636.3	647.1	659.0	671.7	684.5	697.1	711.7	726.2	736.3
27.5°	597.1	603.5	612.6	623.5	637.2	649.9	662.6	675.4	690.9	706.2	717.1
30°	571.7	579.0	587.2	598.1	612.6	627.2	639.9	653.5	669.0	684.5	695.4
32.5°	548.1	554.5	562.6	573.5	588.0	602.7	616.3	630.8	645.4	660.8	671.7
35°	524.5	530.8	539.0	550.0	564.5	579.0	592.6	606.2	620.8	635.3	646.3
37.5°	500.8	507.2	515.4	526.3	539.9	554.5	567.2	580.8	595.4	609.9	619.9
40°	476.3	482.6	489.0	500.0	513.6	528.1	540.9	554.5	569.0	583.5	593.6
42.5°	451.8	458.1	466.3	477.2	489.9	502.7	515.4	528.1	541.7	555.4	565.4
45°	427.2	432.6	440.9	450.8	463.6	475.4	488.2	500.0	513.6	526.3	536.3
47.5°	401.8	407.2	413.6	423.6	436.3	449.0	461.8	473.6	485.3	498.1	507.2
50°	377.2	382.7	389.9	399.0	410.9	422.7	433.6	444.4	456.3	468.1	476.3
52.5°	351.8	357.2	363.6	372.7	382.7	393.6	403.5	414.5	425.4	436.3	444.4
55°	326.3	330.0	335.4	343.6	354.5	365.4	375.4	385.4	395.4	404.5	412.6
57.5°	300.8	305.4	311.8	319.0	328.1	337.2	346.3	355.4	364.5	373.6	380.8
60°	275.4	279.1	283.6	289.9	299.0	307.2	316.3	324.5	332.7	340.9	347.3
62.5°	249.0	252.7	257.2	263.6	270.9	278.1	286.3	293.6	300.8	308.1	314.5
65°	221.7	225.4	230.0	235.4	241.8	248.1	255.4	262.6	268.2	273.6	280.0
67.5°	193.6	197.3	201.8	206.4	211.8	218.2	224.5	230.8	236.3	241.8	246.3
70°	166.3	169.0	173.6	177.3	181.8	186.3	191.8	197.3	200.8	205.4	210.9
72.5°	140.0	142.7	146.3	150.0	152.7	156.4	161.8	166.3	170.9	176.4	179.1
75°	114.5	116.3	119.0	121.9	124.6	127.3	130.9	134.5	138.2	140.9	144.6
77.5°	89.1	90.9	93.6	95.4	97.3	99.1	101.8	104.5	107.2	109.1	112.8
80°	65.5	67.3	69.0	70.9	72.7	74.6	75.4	76.4	80.0	82.7	84.5
82.5°	44.6	45.5	46.3	48.2	49.1	50.0	50.9	50.9	52.7	54.5	57.2
85°	25.4	26.4	27.3	27.3	27.3	27.3	28.1	29.1	30.0	31.8	33.7
87.5°	10.0	10.0	10.9	10.9	10.9	10.9	10.9	10.9	11.8	13.6	14.5
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°	803.5	803.5	803.5	803.5	803.5	803.5	803.5	803.5	803.5	803.5	803.5
2.5°	808.0	809.0	810.8	811.7	812.6	812.6	813.6	814.4	812.6	810.8	809.9
5°	812.6	813.6	816.3	819.0	820.8	822.7	821.7	820.8	819.0	816.3	814.4
7.5°	813.6	816.3	819.0	822.7	825.4	828.9	827.2	825.4	821.7	818.1	815.3
10°	810.8	814.4	819.0	823.5	826.2	828.9	827.2	825.4	821.7	817.1	813.6
12.5°	807.2	811.7	817.1	821.7	824.4	828.1	825.4	822.7	818.1	813.6	809.0
15°	799.0	804.5	810.8	816.3	820.8	824.4	821.7	819.8	814.4	808.0	801.7
17.5°	789.0	796.3	802.6	809.0	812.6	816.3	814.4	812.6	806.2	799.0	791.7
20°	777.2	784.5	790.8	797.1	801.7	805.3	802.6	799.9	793.5	787.2	779.9
22.5°	762.6	769.8	777.2	783.5	788.0	791.7	788.0	783.5	777.2	770.8	763.6
25°	744.4	752.6	760.8	767.1	769.8	773.5	769.8	766.3	759.9	753.5	745.4
27.5°	726.2	734.5	742.6	749.0	751.7	755.3	751.7	748.1	741.7	735.3	727.2
30°	705.4	713.6	721.7	728.1	730.8	733.5	729.9	726.2	720.8	714.4	706.2
32.5°	681.8	689.9	696.3	702.6	706.2	709.9	706.2	703.5	697.1	689.0	680.8
35°	656.2	664.4	672.7	678.9	682.6	686.3	681.8	677.2	671.7	665.3	658.1
37.5°	628.1	637.2	646.3	653.5	656.2	659.9	656.2	651.7	646.3	639.9	631.8
40°	601.7	609.9	618.1	625.4	628.1	630.8	627.2	623.5	617.2	610.8	602.7
42.5°	574.5	582.6	589.9	596.3	599.0	602.7	599.0	594.4	589.9	584.5	577.2
45°	545.4	553.5	559.9	566.3	569.0	571.7	568.1	563.6	559.0	554.5	547.2
47.5°	515.4	522.7	529.1	535.3	537.2	539.9	536.3	533.6	529.1	524.5	518.1
50°	484.5	491.7	498.1	503.5	505.4	508.1	504.5	500.8	497.3	493.6	488.2
52.5°	452.7	459.1	465.4	470.8	472.7	474.5	470.8	467.2	463.6	459.9	454.5
55°	420.0	426.3	432.6	437.2	439.0	440.9	437.2	434.5	430.8	428.1	422.7
57.5°	387.2	393.6	399.0	403.5	405.4	407.2	403.5	400.0	397.3	394.4	389.9
60°	353.5	359.9	364.5	368.2	370.0	370.9	367.2	364.5	362.6	360.9	356.4
62.5°	320.9	325.4	330.0	332.7	334.5	335.4	332.7	330.8	329.1	327.2	323.6
65°	286.3	291.7	295.4	298.1	299.0	300.0	297.3	295.4	293.6	291.7	289.0
67.5°	251.8	256.4	259.1	261.8	262.6	262.6	262.6	261.8	259.9	257.2	254.5
70°	217.2	220.9	223.6	225.4	226.3	226.3	224.5	222.7	222.7	221.7	220.0
72.5°	181.8	184.5	186.3	188.2	188.2	188.2	188.2	189.1	188.2	186.3	183.6
75°	148.1	150.9	152.7	153.7	153.7	153.7	153.7	154.5	153.7	152.7	150.9
77.5°	116.3	118.2	119.0	120.0	120.0	120.0	120.9	121.9	120.9	120.0	119.0
80°	86.4	87.2	88.2	89.1	88.2	88.2	89.1	90.9	90.0	89.1	88.2
82.5°	59.1	60.0	60.9	60.9	61.8	62.8	62.8	62.8	62.8	61.8	60.9
85°	35.5	36.4	36.4	36.4	36.4	36.4	37.2	38.2	38.2	37.2	37.2
87.5°	16.3	17.3	16.3	15.5	14.5	14.5	16.3	18.2	18.2	17.3	17.3
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°	803.5	803.5	803.5	803.5
2.5°	810.8	809.9	805.3	800.8
5°	813.6	810.8	804.5	798.1
7.5°	813.6	809.9	800.8	792.6
10°	809.0	803.5	793.5	783.5
12.5°	803.5	797.1	785.3	774.4
15°	795.4	788.0	775.4	762.6
17.5°	783.5	774.4	761.7	748.1
20°	771.7	761.7	746.3	731.8
22.5°	755.3	746.3	729.9	714.4
25°	737.2	727.2	710.8	694.4
27.5°	718.1	706.2	689.9	673.5
30°	696.3	684.5	668.1	651.7
32.5°	672.7	661.7	645.4	628.1
35°	649.0	637.2	620.8	603.5
37.5°	622.7	611.7	595.4	579.0
40°	594.4	583.5	567.2	550.8
42.5°	568.1	558.1	541.7	526.3
45°	539.0	529.1	513.6	499.0
47.5°	509.0	499.0	484.5	470.0
50°	479.9	470.0	456.3	442.7
52.5°	447.3	439.0	426.3	413.6
55°	415.4	407.2	394.4	382.7
57.5°	383.6	376.3	364.5	353.5
60°	350.0	342.7	333.6	323.6
62.5°	318.2	311.8	302.7	293.6
65°	284.5	279.1	270.9	262.6
67.5°	250.0	245.4	238.2	230.8
70°	215.5	209.9	204.5	198.1
72.5°	180.9	178.1	172.7	167.3
75°	148.1	145.4	140.9	136.4
77.5°	117.3	114.5	110.9	107.2
80°	86.4	84.5	81.8	79.1
82.5°	60.0	58.2	56.4	53.7
85°	36.4	34.5	32.7	30.9
87.5°	16.3	15.5	13.6	12.8
90°	0.0	0.0	0.0	0.0



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















(END OF REPORT)