

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: LUMARK

Report Number: P195282

Luminaire Tested: **NAV-AF-06-D-UNV-SLR-7060**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195282
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24264)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-06-D-UNV-SLR-7060
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 5700K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND SPILL LIGHT
ELIMINATOR RIGHT OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 31815 lumens
Efficiency: N/A
Efficacy: 95.5 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B3 - U0 - G5

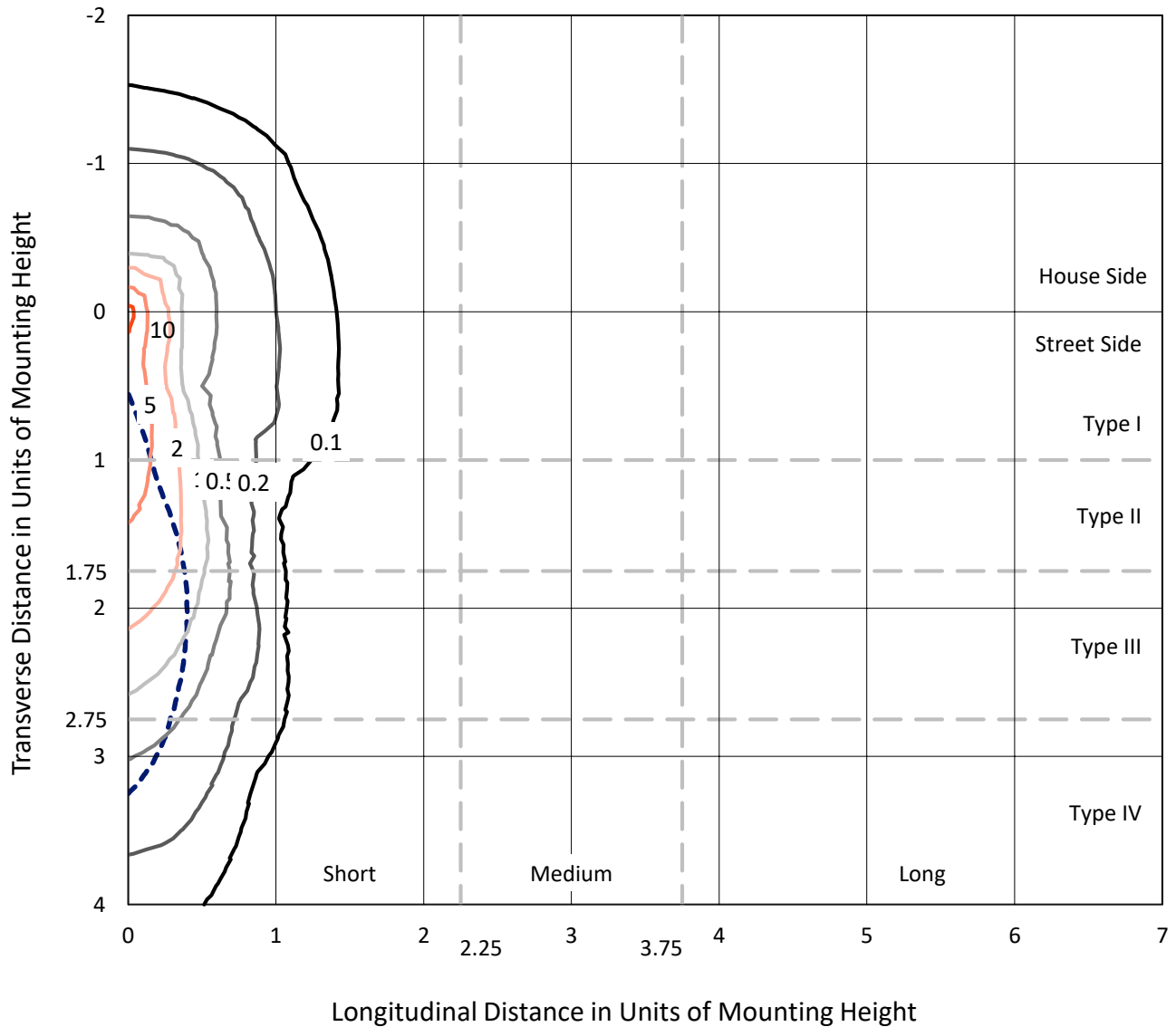
Input Watts (W): 333
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

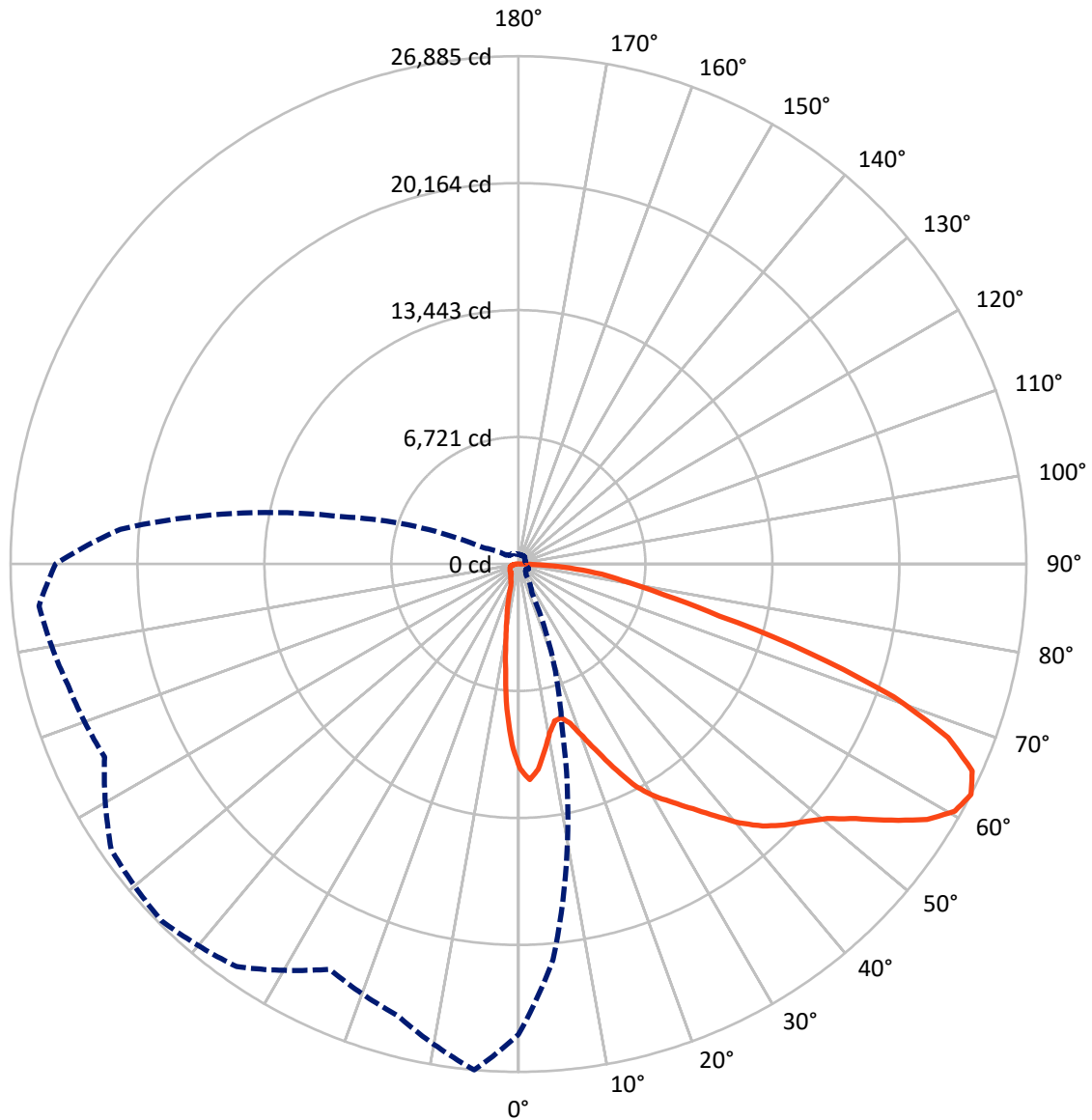
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 12.1 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 355-Deg Lateral - - - Horizontal Cone Through 62.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	5636.1	0.0	5636.1
	% Fixture	17.7	0.0	17.7
Street Side	Lumens	26178.9	0.0	26178.9
	% Fixture	82.3	0.0	82.3
Total	Lumens	31815.0	0.0	31815.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	788.8	2.5
10°-20°	1440.7	4.5
20°-30°	2072.2	6.5
30°-40°	3173.7	10.0
40°-50°	4640.1	14.6
50°-60°	6751.4	21.2
60°-70°	7822.3	24.6
70°-80°	4077.7	12.8
80°-90°	1048.2	3.3
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°-90°	31815.0	100.0
0°-180°	31815.0	100.0



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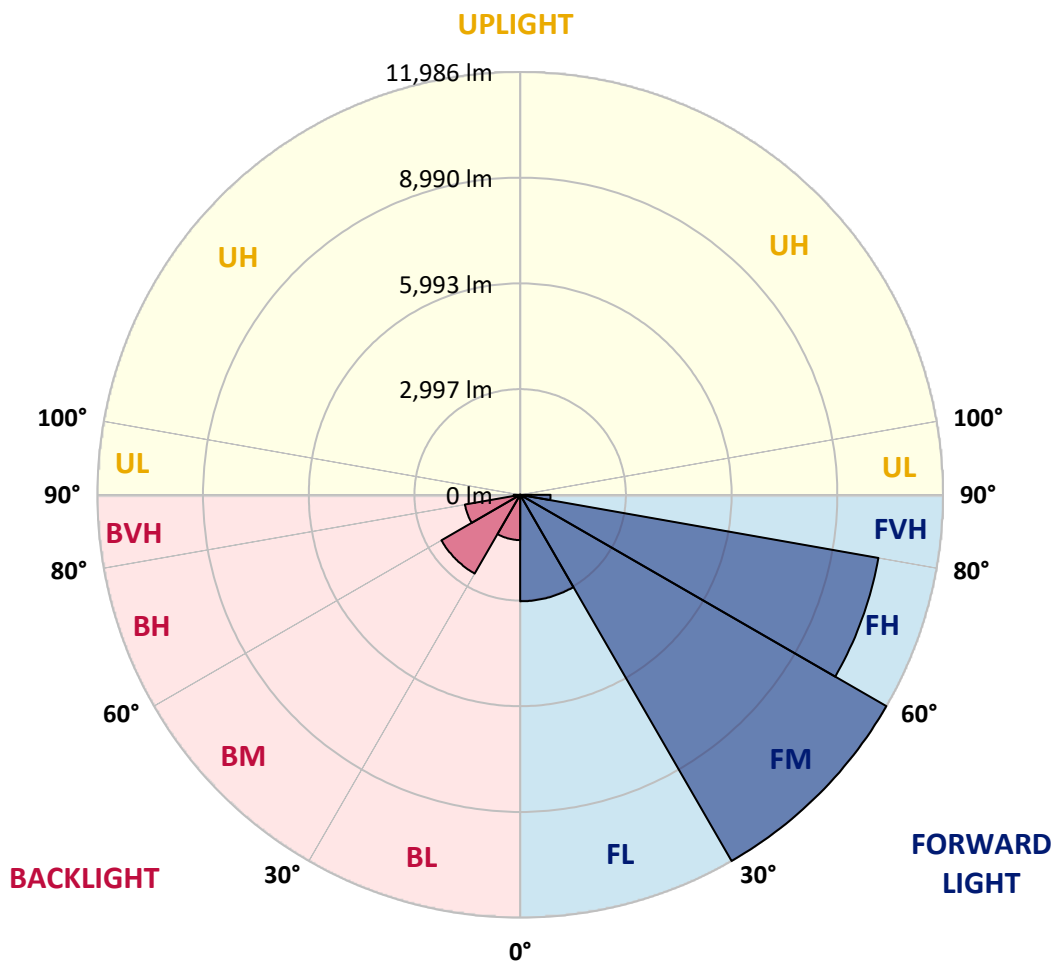
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	3019.4	9.5			
FM	(30°-60°)	11986.4	37.7			
FH	(60°-80°)	10310.8	32.4			G4/12000
FVH	(80°-90°)	862.3	2.7			G5
BL	(0°-30°)	1282.3	4.0	B3/2500		
BM	(30°-60°)	2578.7	8.1	B3/5000		
BH	(60°-80°)	1589.2	5.0	B3/2500		G3/2500
BVH	(80°-90°)	185.9	0.6			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G5

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	10846.4	10846.4	10846.4	10846.4	10846.4	10846.4	10846.4	10846.4	10846.4	10846.4	10846.4
2.5°	11197.0	11040.1	10678.0	10359.6	9962.9	9665.3	9303.1	9111.7	8971.0	8876.4	8800.3
5°	10458.8	10080.5	9388.5	8781.8	8126.7	7653.8	7100.2	6798.0	6611.2	6509.7	6463.5
7.5°	9363.1	8862.6	7967.5	7153.3	6334.4	5743.8	5324.0	4876.5	4638.9	4484.3	4433.6
10°	8405.8	7840.7	6772.6	5856.9	5224.8	4805.0	4445.1	4034.5	3730.0	3464.7	3365.6
12.5°	7849.9	7192.5	5974.5	5146.4	4615.8	4166.0	3785.4	3342.5	3021.9	2745.0	2638.9
15°	7732.2	6998.7	5640.0	4694.2	4043.7	3501.7	3044.9	2562.8	2249.1	2020.7	1946.9
17.5°	8087.5	7183.2	5499.3	4281.3	3497.0	2835.0	2272.2	1755.4	1494.8	1370.2	1340.2
20°	8818.7	7589.2	5432.4	3910.0	2966.5	2182.2	1570.9	1192.6	1063.4	1026.5	1024.2
22.5°	9780.6	8249.0	5506.2	3605.5	2468.2	1610.1	1151.1	980.4	927.3	906.6	906.6
25°	10867.1	9141.7	5702.3	3372.5	2029.9	1252.6	991.9	899.6	855.8	835.0	837.4
27.5°	12195.8	10228.2	5969.9	3157.9	1716.2	1098.0	927.3	848.9	805.1	784.3	786.6
30°	13197.0	11162.4	6200.6	2961.9	1554.8	1035.7	892.7	818.9	770.5	740.5	738.2
32.5°	14133.5	11985.9	6387.4	2821.2	1462.5	925.0	807.4	752.0	710.5	675.9	669.0
35°	15169.2	12761.0	6475.1	2816.5	1402.5	835.0	738.2	671.3	629.7	590.5	583.6
37.5°	16343.4	13709.1	6548.9	2844.2	1370.2	777.4	705.9	641.3	606.7	567.5	558.2
40°	17565.9	14636.4	6606.5	2867.3	1365.6	738.2	680.5	622.8	588.2	546.7	537.5
42.5°	18615.5	15457.6	6685.0	2858.1	1333.3	731.2	664.3	606.7	574.4	532.9	521.3
45°	19455.2	16110.4	6807.2	2855.8	1284.9	747.4	659.7	602.1	562.8	519.0	509.8
47.5°	20237.2	16846.2	7065.6	2846.5	1231.8	742.8	685.1	597.4	558.2	514.4	507.5
50°	21132.2	17835.8	7506.2	2777.3	1158.0	710.5	731.2	592.8	546.7	507.5	500.6
52.5°	22377.8	19284.5	8159.0	2652.8	1056.5	675.9	738.2	590.5	528.2	493.6	484.4
55°	23842.6	20836.9	8862.6	2472.8	922.7	615.9	701.3	581.3	509.8	472.9	459.0
57.5°	24975.2	21983.4	9353.9	2214.5	791.2	581.3	625.1	560.5	486.7	449.8	438.3
60°	25293.6	22034.1	9441.6	1905.4	724.3	558.2	537.5	611.3	468.3	429.1	417.5
62.5°	24913.0	21026.1	8869.5	1688.5	701.3	535.2	489.0	583.6	449.8	410.6	399.1
65°	23785.0	19323.7	7589.2	1656.3	724.3	514.4	463.7	466.0	431.4	392.1	380.6
67.5°	21150.6	16818.6	5979.1	1677.0	752.0	493.6	445.2	424.4	410.6	376.0	362.2
70°	17201.5	13540.7	4710.4	1713.9	777.4	466.0	422.1	396.8	385.2	348.3	341.4
72.5°	13250.0	10837.1	3716.2	1688.5	802.8	438.3	389.8	369.1	355.2	320.6	313.7
75°	9409.3	8611.1	2731.2	1448.6	735.9	399.1	352.9	334.5	322.9	286.0	283.7
77.5°	6781.9	6449.7	1900.8	1088.8	581.3	350.6	311.4	295.3	288.3	246.8	246.8
80°	5409.3	4908.8	1137.2	710.5	424.4	290.7	260.7	253.7	246.8	205.3	207.6
82.5°	3886.9	3404.8	726.6	442.9	311.4	221.4	203.0	200.7	189.2	152.2	152.2
85°	1993.0	1739.3	466.0	297.6	219.1	143.0	133.8	129.2	122.3	94.6	94.6
87.5°	387.5	532.9	258.4	145.3	106.1	50.7	50.7	43.8	50.7	34.6	36.9
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):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	10846.4	10846.4	10846.4	10846.4	10846.4	10846.4	10846.4	10846.4	10846.4	10846.4	10846.4
2.5°	8945.6	8899.5	8867.2	8851.0	9084.0	9180.9	9291.6	9450.8	9559.2	9513.1	9660.7
5°	6680.4	6712.7	6786.5	6901.8	7227.1	7381.6	7480.8	7612.3	7706.9	7612.3	7769.2
7.5°	4567.4	4615.8	4772.7	5010.3	5402.4	5575.4	5610.0	5612.3	5591.6	5437.0	5543.1
10°	3363.3	3266.4	3301.0	3471.7	3822.3	3976.8	3993.0	3951.5	3944.6	3882.3	4002.2
12.5°	2606.6	2472.8	2394.4	2422.1	2685.1	2811.9	2832.7	2855.8	2950.3	2980.3	3128.0
15°	1944.6	1875.4	1817.7	1792.3	1965.4	2064.5	2076.1	2131.4	2230.6	2258.3	2385.2
17.5°	1367.9	1386.4	1416.3	1427.9	1552.4	1617.0	1598.6	1598.6	1614.7	1607.8	1679.3
20°	1045.0	1081.9	1139.5	1194.9	1307.9	1344.8	1298.7	1241.0	1204.1	1185.7	1201.8
22.5°	922.7	948.1	985.0	1056.5	1151.1	1169.5	1109.5	1063.4	1028.8	1010.4	1012.7
25°	855.8	881.2	911.2	968.8	1049.6	1058.8	1003.4	973.5	945.8	927.3	922.7
27.5°	798.1	814.3	832.7	869.6	952.7	957.3	920.4	901.9	883.5	869.6	865.0
30°	745.1	752.0	758.9	795.8	858.1	865.0	846.6	837.4	830.4	821.2	821.2
32.5°	675.9	685.1	696.6	728.9	788.9	798.1	786.6	779.7	768.1	763.5	756.6
35°	592.8	615.9	641.3	680.5	745.1	749.7	735.9	715.1	687.4	680.5	675.9
37.5°	558.2	562.8	595.1	641.3	708.2	712.8	694.3	659.7	639.0	641.3	645.9
40°	535.2	542.1	560.5	606.7	673.6	680.5	664.3	639.0	618.2	620.5	627.4
42.5°	516.7	525.9	537.5	567.5	634.4	648.2	643.6	620.5	599.8	604.4	613.6
45°	507.5	514.4	514.4	535.2	599.8	620.5	622.8	604.4	588.2	592.8	604.4
47.5°	502.9	502.9	496.0	512.1	576.7	597.4	602.1	592.8	583.6	588.2	599.8
50°	496.0	486.7	479.8	493.6	558.2	576.7	581.3	574.4	579.0	588.2	595.1
52.5°	475.2	466.0	466.0	475.2	539.8	558.2	560.5	555.9	565.2	576.7	588.2
55°	449.8	449.8	452.1	461.4	530.6	544.4	542.1	537.5	546.7	560.5	572.1
57.5°	426.7	424.4	436.0	447.5	519.0	528.2	523.6	523.6	530.6	542.1	553.6
60°	412.9	401.4	410.6	429.1	507.5	516.7	509.8	507.5	519.0	528.2	537.5
62.5°	399.1	387.5	394.5	412.9	491.3	498.3	493.6	493.6	505.2	512.1	521.3
65°	378.3	373.7	378.3	396.8	477.5	479.8	479.8	482.1	491.3	496.0	505.2
67.5°	359.9	359.9	362.2	380.6	466.0	461.4	461.4	472.9	475.2	479.8	489.0
70°	336.8	341.4	341.4	364.5	456.7	440.6	442.9	452.1	456.7	461.4	463.7
72.5°	311.4	313.7	318.3	348.3	442.9	419.8	422.1	429.1	431.4	438.3	440.6
75°	283.7	286.0	293.0	332.2	433.7	399.1	394.5	399.1	403.7	408.3	406.0
77.5°	251.4	256.0	263.0	322.9	403.7	394.5	359.9	364.5	369.1	369.1	366.8
80°	212.2	219.1	230.7	309.1	341.4	380.6	320.6	322.9	325.3	325.3	320.6
82.5°	159.2	173.0	189.2	256.0	267.6	325.3	276.8	281.4	274.5	269.9	267.6
85°	103.8	115.3	138.4	177.6	196.1	256.0	228.4	230.7	216.8	214.5	214.5
87.5°	41.5	43.8	62.3	90.0	117.6	159.2	163.8	168.4	156.9	156.9	161.5
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):

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	10846.4	10846.4	10846.4	10846.4	10846.4	10846.4	10846.4	10846.4	10846.4	10846.4	10846.4
2.5°	9884.4	10115.1	10380.4	10650.3	10871.7	11157.8	11434.6	11729.9	11879.8	11967.5	12214.3
5°	8013.7	8329.7	8705.7	9127.8	9478.5	10078.2	10724.1	11443.8	11789.8	12131.2	12777.1
7.5°	5732.3	6041.4	6479.7	7026.4	7524.6	8315.9	9167.0	10140.5	10620.3	11173.9	12232.7
10°	4256.0	4583.5	4980.3	5443.9	5935.3	6758.8	7713.8	8807.2	9335.4	9960.6	11164.7
12.5°	3450.9	3833.8	4244.4	4659.6	5081.8	5635.4	6636.5	7852.2	8419.7	9049.4	10255.8
15°	2692.0	3102.6	3545.5	3997.6	4417.4	5035.6	6057.5	7494.7	8142.8	8751.8	9739.1
17.5°	1905.4	2292.9	2791.2	3340.2	3949.2	4680.4	5933.0	7651.5	8438.1	9074.8	9736.8
20°	1298.7	1566.3	2064.5	2715.1	3467.1	4394.4	5979.1	8202.8	9185.5	9884.4	10135.9
22.5°	1038.0	1164.9	1501.7	2163.7	3051.8	4186.8	6168.3	8959.4	10258.1	11109.3	10862.5
25°	943.5	1015.0	1190.3	1709.3	2682.8	4048.4	6537.3	9958.3	11460.0	12322.7	11736.8
27.5°	885.8	948.1	1061.1	1404.8	2364.4	3958.4	7005.6	11134.7	12814.0	13522.2	12647.9
30°	848.9	911.2	1015.0	1261.8	2124.5	3824.6	7416.2	12209.7	13895.9	14354.9	13139.3
32.5°	777.4	825.8	911.2	1130.3	1944.6	3667.7	7771.5	13171.6	14917.8	15070.0	13729.8
35°	703.6	754.3	839.7	1024.2	1838.5	3545.5	7958.3	14025.1	15930.5	15785.1	14315.7
37.5°	675.9	717.4	795.8	948.1	1780.8	3464.7	8029.8	14864.7	17016.9	16576.3	14724.0
40°	657.4	694.3	763.5	897.3	1764.7	3388.6	8013.7	15662.9	18071.1	17395.2	15044.7
42.5°	643.6	675.9	740.5	862.7	1720.8	3317.1	7960.6	16352.6	18915.4	18101.1	15351.5
45°	632.1	666.7	731.2	881.2	1640.1	3238.7	7928.3	16982.3	19563.6	18696.3	15762.1
47.5°	627.4	666.7	733.5	876.6	1552.4	3151.0	8043.7	17681.3	20128.8	19196.8	16308.8
50°	620.5	664.3	784.3	835.0	1432.5	3042.6	8433.5	18514.0	20721.6	19759.7	17016.9
52.5°	609.0	662.0	837.4	802.8	1277.9	2892.7	9065.6	19690.5	21745.8	20855.4	18064.2
55°	595.1	666.7	800.4	752.0	1114.2	2698.9	9697.6	21302.9	23406.7	22622.4	19568.2
57.5°	579.0	659.7	756.6	705.9	978.1	2454.4	10177.4	22624.7	24776.9	24444.7	21415.9
60°	567.5	675.9	680.5	678.2	890.4	2221.4	10223.5	22539.3	25171.3	25628.1	23224.4
62.5°	553.6	689.7	620.5	657.4	846.6	2004.6	9653.8	21143.7	24504.7	25475.8	24698.4
65°	535.2	602.1	588.2	639.0	846.6	1889.2	8327.4	18820.8	22661.6	24036.4	25498.9
67.5°	516.7	546.7	565.2	613.6	865.0	1780.8	6691.9	15875.1	19755.1	21713.5	24599.2
70°	491.3	516.7	539.8	590.5	855.8	1704.7	5266.3	12724.1	16258.0	18500.2	22110.3
72.5°	468.3	486.7	509.8	555.9	855.8	1670.1	4230.6	9981.3	12412.7	14301.9	18315.6
75°	433.7	449.8	470.6	521.3	839.7	1527.1	3176.4	7997.5	9081.7	10265.1	14451.8
77.5°	399.1	410.6	426.7	477.5	756.6	1275.6	2246.8	6193.6	6728.8	7383.9	11266.2
80°	355.2	364.5	376.0	426.7	627.4	989.6	1462.5	4844.2	5031.0	5347.1	7411.6
82.5°	304.5	318.3	320.6	366.8	505.2	717.4	869.6	3319.4	3317.1	3780.8	5229.4
85°	249.1	256.0	260.7	288.3	373.7	477.5	572.1	1813.1	1617.0	2265.2	4542.0
87.5°	186.8	179.9	186.8	193.8	246.8	281.4	306.8	334.5	200.7	410.6	2641.2
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):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	10846.4	10846.4	10846.4	10846.4	10846.4	10846.4	10846.4	10846.4
2.5°	12345.8	12481.9	12401.1	12304.2	12062.0	11706.8	11434.6	11197.0
5°	13224.6	13476.1	13365.3	13005.5	12378.1	11665.3	10915.6	10458.8
7.5°	13113.9	13612.2	13568.3	12968.6	12068.9	11019.4	9965.2	9363.1
10°	12228.1	12927.1	13047.0	12433.4	11480.7	10306.6	9086.3	8405.8
12.5°	11263.9	11852.1	12096.6	11863.6	10966.3	9773.7	8530.4	7849.9
15°	10456.5	10754.1	10996.3	11146.2	10590.3	9584.6	8433.5	7732.2
17.5°	9859.1	9801.4	10004.4	10364.3	10387.3	9836.0	8871.8	8087.5
20°	9570.7	9118.6	9236.3	9741.4	10332.0	10475.0	9746.0	8818.7
22.5°	9554.6	8848.7	8871.8	9416.2	10491.1	11346.9	10837.1	9780.6
25°	9803.7	8818.7	8839.5	9381.6	10772.6	12225.8	12098.9	10867.1
27.5°	10228.2	8947.9	8934.1	9533.8	11148.6	12959.4	13372.3	12195.8
30°	10687.2	9134.8	9100.2	9778.3	11517.6	13411.5	14276.5	13197.0
32.5°	11259.3	9466.9	9347.0	10135.9	11882.1	13845.2	15049.3	14133.5
35°	11803.7	9953.7	9780.6	10648.0	12271.9	14327.3	15914.3	15169.2
37.5°	12359.6	10680.3	10583.4	11386.1	12823.3	14850.9	16903.9	16343.4
40°	13072.4	11713.7	11667.6	12458.8	13559.1	15423.0	18013.5	17565.9
42.5°	13840.5	12811.7	12772.5	13690.6	14472.6	15997.4	18963.8	18615.5
45°	14622.5	14142.7	14151.9	15005.4	15434.5	16539.4	19711.2	19455.2
47.5°	15545.2	15598.3	15928.2	16368.7	16371.0	17143.8	20373.3	20237.2
50°	16717.1	17356.0	17965.0	18034.2	17316.8	17941.9	21182.9	21132.2
52.5°	18043.4	19383.7	20091.8	19872.7	18239.5	18931.5	22380.1	22377.8
55°	19619.0	21503.6	22170.2	21796.5	19344.5	20221.0	23944.1	23842.6
57.5°	21252.1	23542.8	24080.2	23593.5	20726.2	21722.7	25512.7	24975.2
60°	23016.8	25298.2	25844.9	25113.7	22276.3	23219.8	26550.8	25293.6
62.5°	24172.5	26324.7	26716.8	26015.6	23665.0	24744.6	26885.2	24913.0
65°	24232.5	25641.9	25745.7	25496.6	24255.5	26068.7	26400.8	23785.0
67.5°	22585.4	22668.5	22804.6	23072.2	22993.7	25478.1	24532.4	21150.6
70°	19063.0	17955.8	18403.3	18661.7	19243.0	22661.6	21079.1	17201.5
72.5°	14576.4	12959.4	13466.8	13379.2	14587.9	18587.8	16126.5	13250.0
75°	10491.1	8837.2	8876.4	8881.0	10481.9	14837.1	10996.3	9409.3
77.5°	7130.2	6253.6	6382.8	6302.1	7014.8	11623.7	7916.8	6781.9
80°	4876.5	4853.4	4881.1	4691.9	4678.1	7513.1	5861.5	5409.3
82.5°	3617.0	3342.5	3303.3	3102.6	3584.7	5743.8	4449.7	3886.9
85°	2853.5	1850.0	1607.8	1940.0	3104.9	5284.8	2712.7	1993.0
87.5°	1208.7	726.6	440.6	872.0	1725.5	3873.0	752.0	387.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)