

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: P195524

Luminaire Tested: **NAV-AF-02-D-UNV-AFL-7050-1200-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P195524  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24283)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-AF-02-D-UNV-AFL-7050-1200-HSS  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(2) 70 CRI, 5000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND AUTOMOTIVE FRONTLINE OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 11216 lumens  
Efficiency: N/A  
Efficacy: 86.9 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type II - Short - Full Cutoff  
BUG Rating: B1 - U0 - G1

Input Watts (W): 129  
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

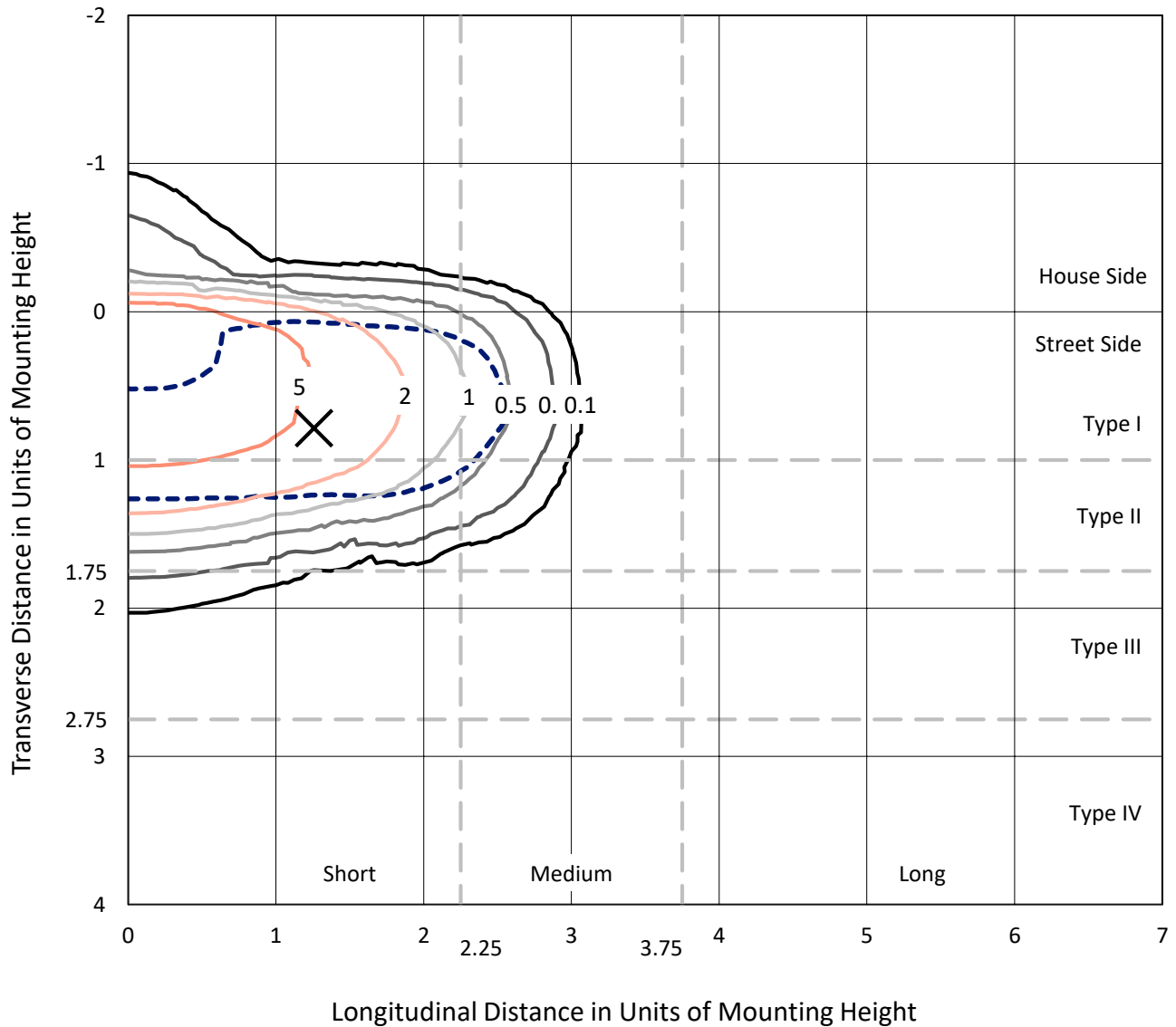


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### Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd  
 - - - 1/2 Max cd

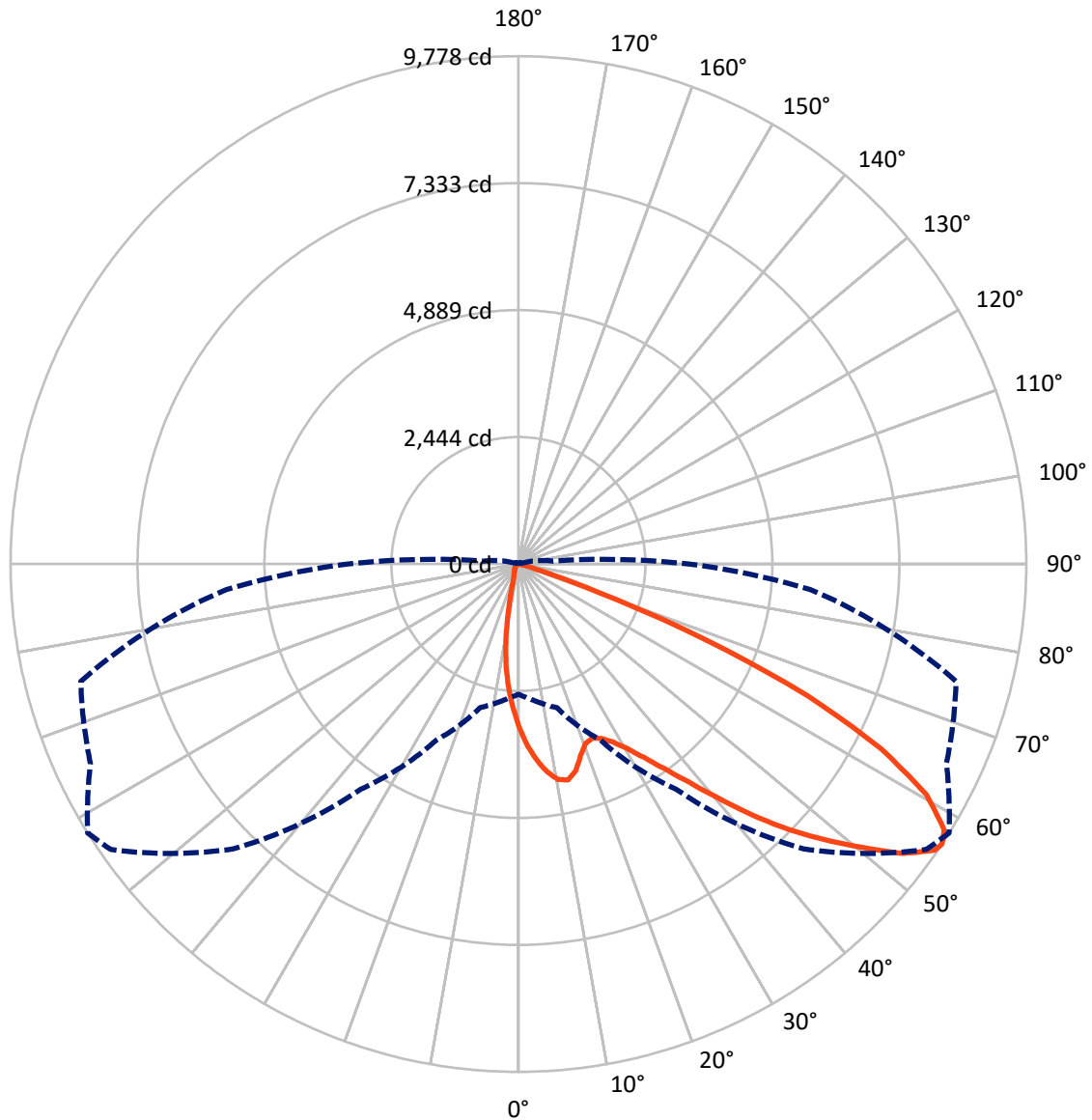


Based on 20 foot mounting height. Maximum calculated value = 9.9 fc  
 Type II - Short - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral      - - - Horizontal Cone Through 56-Deg Vertical

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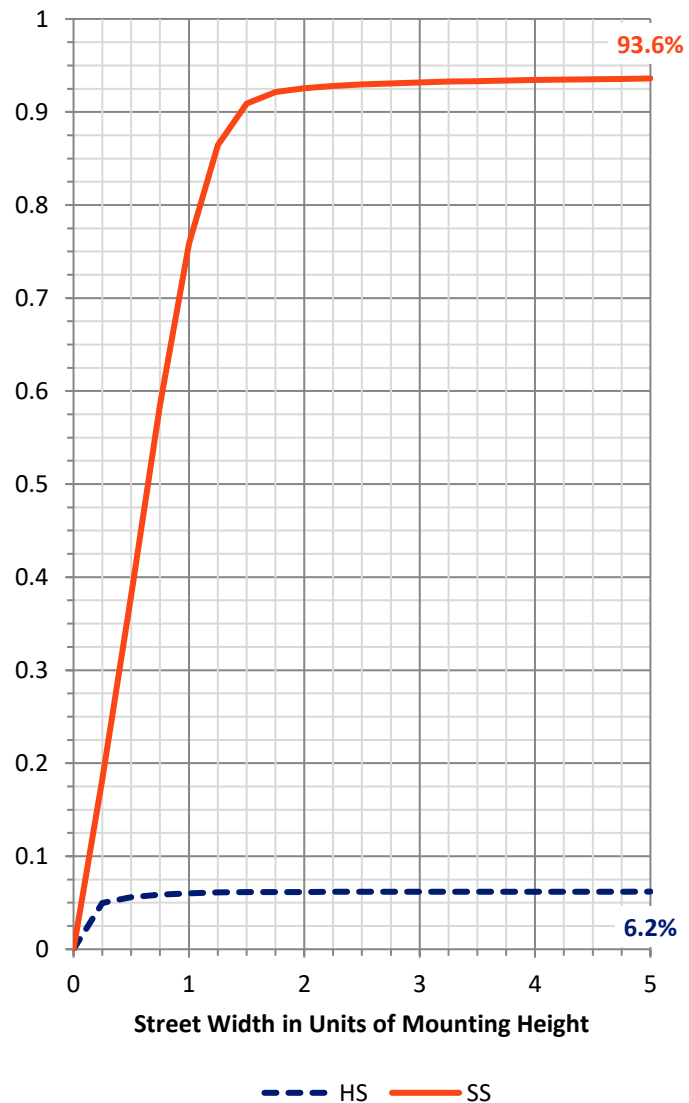
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	700.1	0.0	700.1
	% Fixture	6.2	0.0	6.2
<b>Street Side</b>	Lumens	10515.9	0.0	10515.9
	% Fixture	93.8	0.0	93.8
<b>Total</b>	Lumens	11216.0	0.0	11216.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	270.9	2.4
10°-20°	630.3	5.6
20°-30°	1060.6	9.5
30°-40°	1816.2	16.2
40°-50°	2740.7	24.4
50°-60°	2848.9	25.4
60°-70°	1599.3	14.3
70°-80°	219.2	2.0
80°-90°	29.7	0.3
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°	11216.0	100.0
0°-180°	11216.0	100.0

**Coefficient of Utilization**



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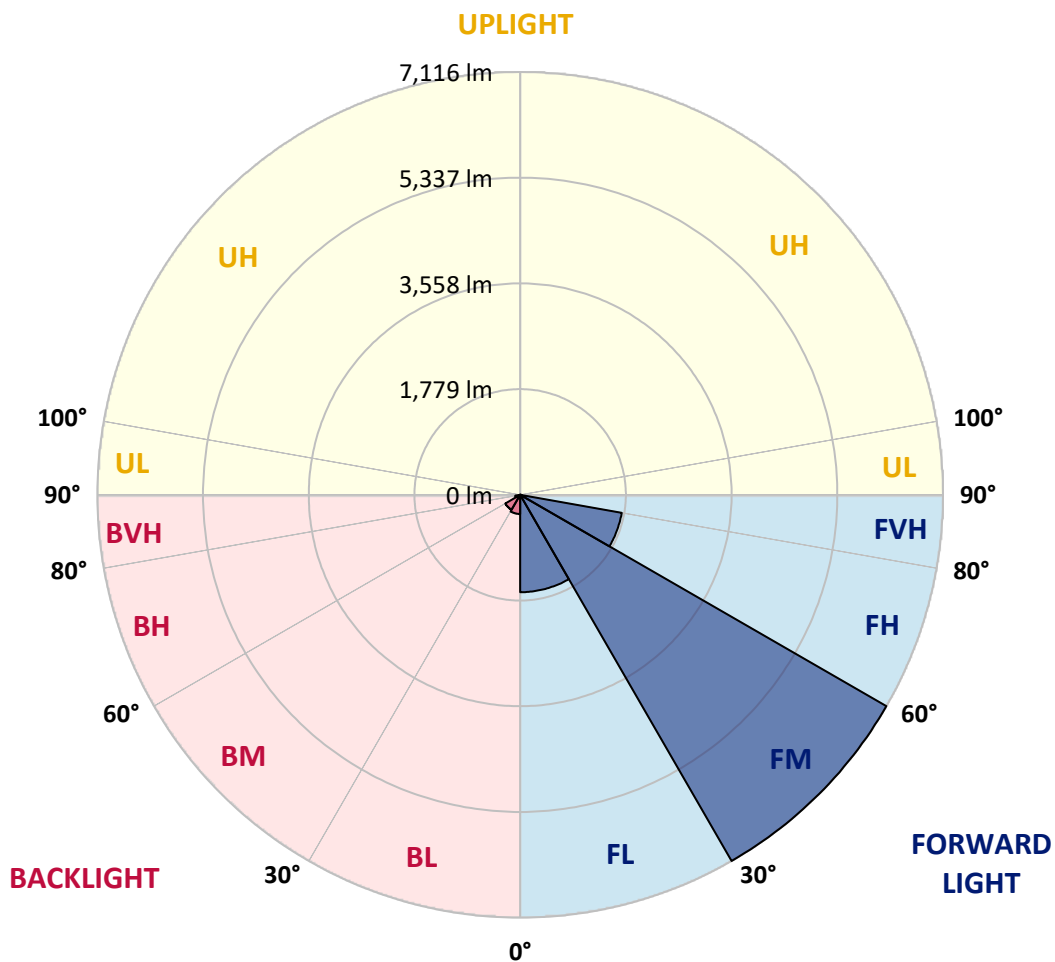
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1638.9	14.6			
FM (30°-60°)	7115.9	63.4			
FH (60°-80°)	1735.5	15.5			G1/1800
FVH (80°-90°)	25.6	0.2			G1/100
BL (0°-30°)	323.0	2.9	B1/500		
BM (30°-60°)	290.0	2.6	B1/1000		
BH (60°-80°)	83.0	0.7	B0/110		G0/110
BVH (80°-90°)	4.1	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G1**

Type II Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	3175.6	3175.6	3175.6	3175.6	3175.6	3175.6	3175.6	3175.6	3175.6	3175.6	3175.6
2.5°	3820.8	3797.7	3773.7	3729.2	3688.2	3624.8	3537.6	3516.2	3447.7	3334.8	3229.5
5°	4150.3	4146.0	4129.7	4093.8	4049.3	3972.3	3873.9	3808.0	3701.9	3523.9	3321.1
7.5°	3955.2	3991.1	4050.1	4134.0	4190.5	4182.8	4107.5	4050.1	3944.9	3701.9	3410.9
10°	3333.9	3340.7	3422.0	3598.3	3877.3	4137.4	4235.8	4220.4	4123.7	3857.6	3489.6
12.5°	3114.8	3119.1	3137.9	3194.4	3375.8	3738.7	4184.5	4264.9	4257.2	4006.5	3573.5
15°	3131.9	3134.5	3139.6	3157.6	3209.0	3391.2	3924.3	4128.9	4342.8	4147.7	3655.6
17.5°	3267.2	3265.4	3249.2	3232.1	3248.3	3308.2	3659.1	3874.7	4324.8	4266.6	3723.3
20°	3530.7	3539.3	3484.5	3408.3	3369.0	3371.5	3528.1	3689.9	4223.8	4359.1	3773.7
22.5°	3901.2	3907.2	3817.4	3685.6	3570.1	3511.9	3555.5	3641.1	4107.5	4444.6	3814.8
25°	4343.7	4343.7	4217.9	4030.5	3851.6	3724.1	3686.5	3719.0	4063.0	4541.3	3855.9
27.5°	4821.1	4838.3	4674.0	4428.4	4192.2	4005.6	3887.6	3881.6	4097.2	4662.8	3902.1
30°	5340.6	5356.0	5160.9	4860.5	4580.7	4341.9	4160.5	4121.2	4228.1	4826.3	3969.7
32.5°	5857.4	5870.3	5654.6	5348.3	5022.2	4741.6	4502.8	4440.3	4463.5	5065.0	4069.0
35°	6514.6	6517.2	6244.2	5879.7	5531.4	5201.9	4899.9	4838.3	4812.6	5366.2	4211.9
37.5°	7037.5	7016.9	6844.1	6499.2	6099.6	5755.6	5400.5	5320.0	5258.4	5789.8	4433.5
40°	7160.7	7160.7	7135.0	7031.5	6714.0	6382.8	6038.8	5919.0	5783.0	6288.7	4731.3
42.5°	6839.8	6860.3	7029.8	7254.8	7257.4	7045.2	6708.9	6607.9	6368.3	6856.9	5056.5
45°	6121.8	6127.8	6534.3	7141.9	7554.3	7675.8	7427.7	7288.2	6956.2	7447.4	5354.3
47.5°	5863.4	5882.2	6055.1	6797.9	7576.6	8186.7	8117.4	7925.7	7500.4	7986.5	5632.4
50°	5466.4	5489.5	5700.8	6291.3	7376.3	8514.4	8777.2	8571.8	7995.9	8435.7	5770.1
52.5°	4516.5	4552.4	4851.1	5621.2	6875.7	8528.1	9381.3	9258.1	8503.3	8676.2	5753.9
55°	3108.0	3134.5	3482.8	4388.1	5866.0	8109.7	9641.4	9726.2	8956.0	8730.1	5675.2
56°	2507.3	2606.5	2861.5	3738.7	5290.9	7753.7	9581.5	9777.5	9090.3	8721.5	5640.9
57.5°	1657.5	1676.4	1954.5	2709.2	4248.7	6981.0	9311.1	9668.0	9263.2	8677.9	5616.1
60°	779.6	788.1	888.2	1250.2	2299.3	5087.3	8432.3	9024.5	9326.5	8586.3	5615.3
62.5°	508.3	510.0	522.0	596.4	940.4	2770.8	6990.4	7842.7	8802.0	8576.1	5599.0
65°	418.4	422.7	408.2	417.6	492.0	1044.8	4930.7	6114.1	7570.6	8334.7	5415.9
67.5°	368.8	369.7	350.0	338.9	360.3	458.7	2484.2	3856.7	5662.3	7082.0	4460.9
70°	336.3	335.4	313.2	287.5	288.4	304.6	809.5	1601.9	3132.8	4205.0	2561.2
72.5°	298.6	300.4	287.5	251.6	239.6	215.6	304.6	432.1	1066.2	1350.3	675.2
75°	261.9	258.4	245.6	222.5	200.2	144.6	153.2	184.0	278.1	275.5	145.5
77.5°	198.5	195.1	201.1	190.0	156.6	101.0	83.9	95.8	125.8	117.2	59.0
80°	151.5	149.8	136.9	162.6	142.9	76.2	57.3	59.0	68.5	62.5	29.1
82.5°	109.5	108.7	103.5	100.1	90.7	55.6	43.6	46.2	51.3	43.6	21.4
85°	41.9	41.9	81.3	68.5	62.5	37.7	30.8	33.4	39.4	31.7	14.5
87.5°	6.8	6.8	54.8	45.4	28.2	18.8	19.7	21.4	23.1	18.8	11.1
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):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	3175.6	3175.6	3175.6	3175.6	3175.6	3175.6	3175.6	3175.6	3175.6	3175.6	3175.6
2.5°	3167.0	3109.7	2983.9	2862.4	2756.3	2639.9	2580.9	2512.4	2486.7	2435.4	2440.5
5°	3199.5	3079.7	2827.3	2561.2	2317.3	2069.1	1892.9	1726.8	1634.4	1542.9	1542.9
7.5°	3232.9	3049.8	2659.6	2234.3	1823.5	1398.3	1097.0	855.7	721.4	631.5	629.0
10°	3256.0	3011.3	2468.8	1855.2	1249.4	720.5	434.7	342.3	308.9	294.4	293.5
12.5°	3286.0	2972.8	2251.4	1408.5	694.0	342.3	271.3	256.7	250.7	247.3	247.3
15°	3311.6	2918.0	1987.8	947.3	364.5	256.7	233.6	228.5	227.6	226.8	227.6
17.5°	3317.6	2840.1	1672.1	554.5	264.4	224.2	213.9	209.7	209.7	208.8	208.8
20°	3303.9	2737.5	1322.9	342.3	228.5	206.2	195.1	190.0	189.1	189.1	189.1
22.5°	3275.7	2606.5	978.1	259.3	207.9	190.0	175.4	170.3	170.3	171.1	172.0
25°	3240.6	2451.6	671.7	223.3	192.5	172.9	158.3	153.2	154.9	156.6	157.5
27.5°	3196.1	2266.8	439.8	193.4	172.0	155.7	142.9	139.5	142.9	146.3	148.0
30°	3151.6	2064.0	297.8	167.7	148.9	136.9	129.2	128.4	133.5	141.2	142.1
32.5°	3122.5	1856.1	225.1	150.6	130.9	120.7	117.2	118.9	126.6	135.2	136.9
35°	3120.0	1653.3	191.7	136.9	118.9	109.5	107.8	113.0	121.5	128.4	130.1
37.5°	3160.2	1463.3	173.7	126.6	109.5	100.1	97.6	107.0	114.7	121.5	123.2
40°	3241.5	1293.0	161.7	117.2	101.8	90.7	89.0	96.7	104.4	112.1	114.7
42.5°	3343.3	1133.8	148.0	107.8	93.3	80.4	78.7	84.7	92.4	103.5	105.3
45°	3431.5	985.8	133.5	97.6	83.9	69.3	68.5	75.3	81.3	91.6	93.3
47.5°	3505.9	862.6	119.8	86.4	71.9	61.6	60.8	64.2	67.6	77.0	78.7
50°	3466.5	758.2	106.1	71.0	58.2	53.1	52.2	52.2	56.5	65.9	67.6
52.5°	3369.8	693.1	93.3	59.0	47.9	45.4	42.8	43.6	47.9	52.2	53.1
55°	3292.0	662.3	82.1	52.2	40.2	37.7	35.1	34.2	35.1	33.4	31.7
56°	3273.1	658.9	79.6	50.5	38.5	35.1	31.7	30.0	29.1	25.7	24.8
57.5°	3264.6	658.9	75.3	47.1	35.9	31.7	27.4	24.0	20.5	18.0	18.0
60°	3257.7	663.2	70.2	41.1	30.8	25.7	19.7	14.5	12.0	12.0	12.0
62.5°	3243.2	661.5	64.2	34.2	26.5	19.7	12.0	9.4	8.6	9.4	10.3
65°	3079.7	614.4	56.5	27.4	20.5	13.7	6.8	6.8	7.7	9.4	10.3
67.5°	2481.6	465.5	46.2	21.4	14.5	10.3	6.0	6.0	7.7	9.4	10.3
70°	1363.2	245.6	39.4	15.4	11.1	8.6	6.0	5.1	7.7	9.4	10.3
72.5°	332.9	102.7	35.9	12.0	10.3	7.7	5.1	5.1	7.7	9.4	10.3
75°	82.1	77.0	29.1	9.4	8.6	6.8	5.1	5.1	7.7	9.4	10.3
77.5°	38.5	101.8	19.7	8.6	7.7	6.0	5.1	5.1	7.7	9.4	9.4
80°	23.1	77.0	12.0	7.7	6.8	6.0	5.1	5.1	7.7	9.4	10.3
82.5°	13.7	22.2	8.6	7.7	6.8	5.1	5.1	5.1	7.7	9.4	10.3
85°	12.0	11.1	8.6	7.7	6.8	6.0	5.1	5.1	8.6	10.3	10.3
87.5°	9.4	8.6	7.7	6.8	6.8	6.0	5.1	5.1	7.7	9.4	10.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)