

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: P270359

Luminaire Tested: **NAV-AF-02-D-UNV-SL3-7027-1200-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P270359  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24263)  
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-SL3-7027-1200-HSS  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(2) 70 CRI, 2700K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III  
SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 9855 lumens  
Efficiency: N/A  
Efficacy: 76.4 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type III - Medium - Non-Cutoff  
BUG Rating: B1 - U0 - G2

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

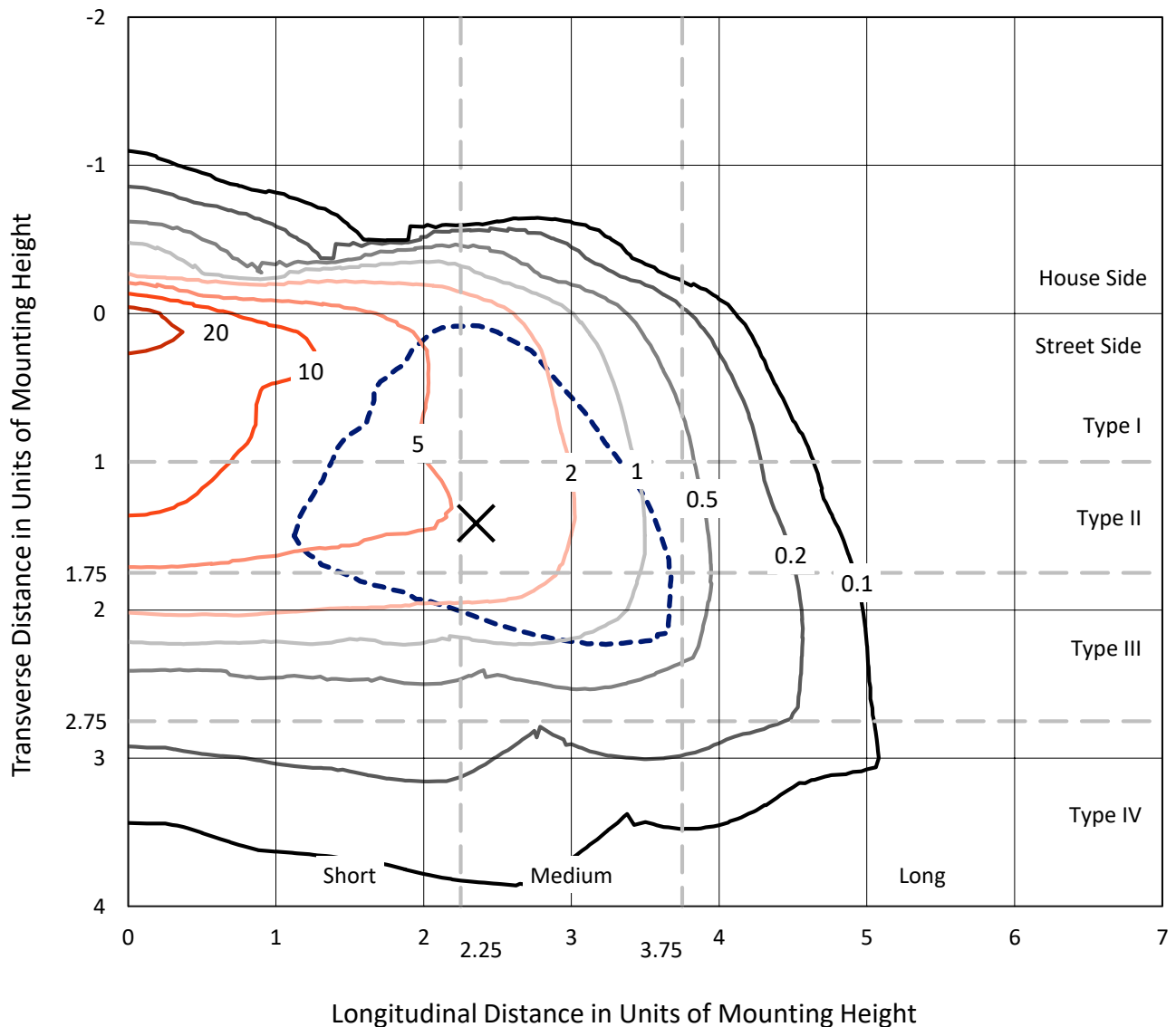


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### Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd  
 - - - 1/2 Max cd

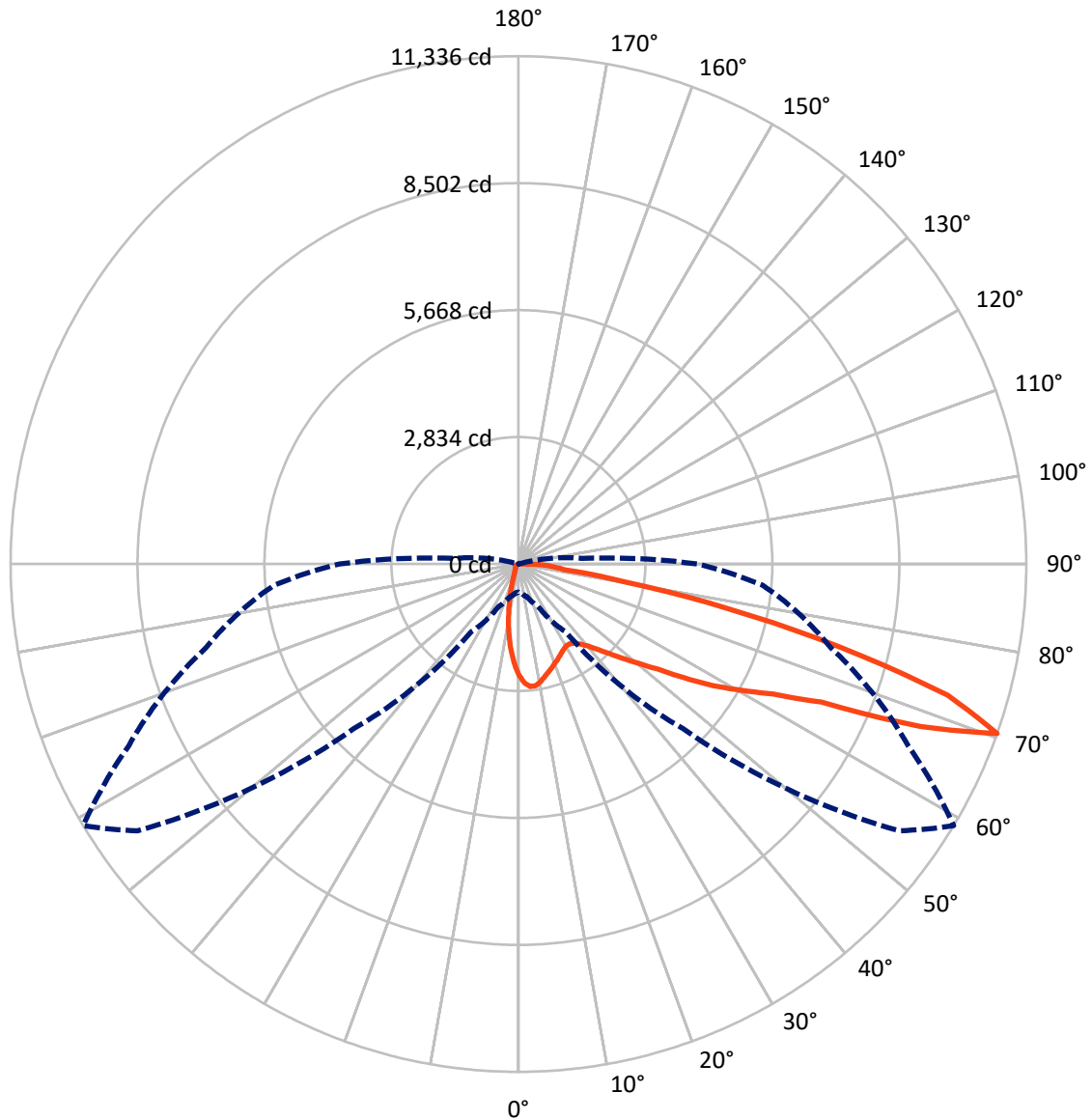


Based on 10 foot mounting height. Maximum calculated value = 26.5 fc  
 Type III - Medium - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral      - - - Horizontal Cone Through 70-Deg Vertical

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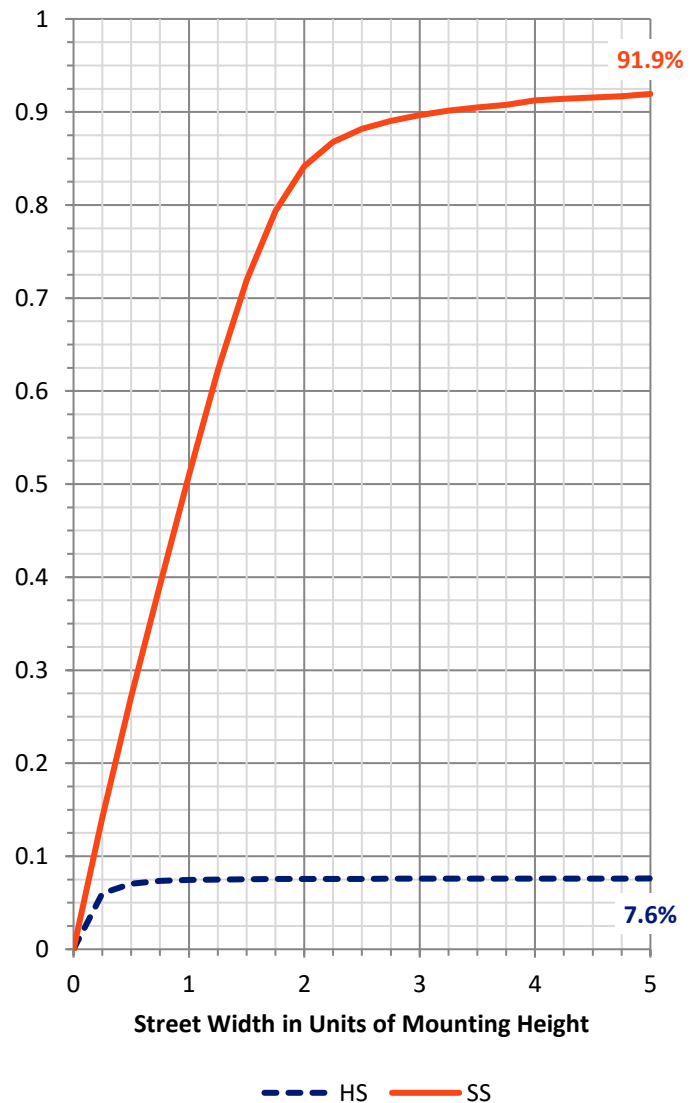
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	757.6	0.0	757.6
	% Fixture	7.7	0.0	7.7
<b>Street Side</b>	Lumens	9097.5	0.0	9097.5
	% Fixture	92.3	0.0	92.3
<b>Total</b>	Lumens	9855.0	0.0	9855.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	204.9	2.1
10°-20°	429.8	4.4
20°-30°	581.8	5.9
30°-40°	839.6	8.5
40°-50°	1394.4	14.1
50°-60°	2133.0	21.6
60°-70°	2652.9	26.9
70°-80°	1466.5	14.9
80°-90°	152.0	1.5
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°	9855.0	100.0
0°-180°	9855.0	100.0



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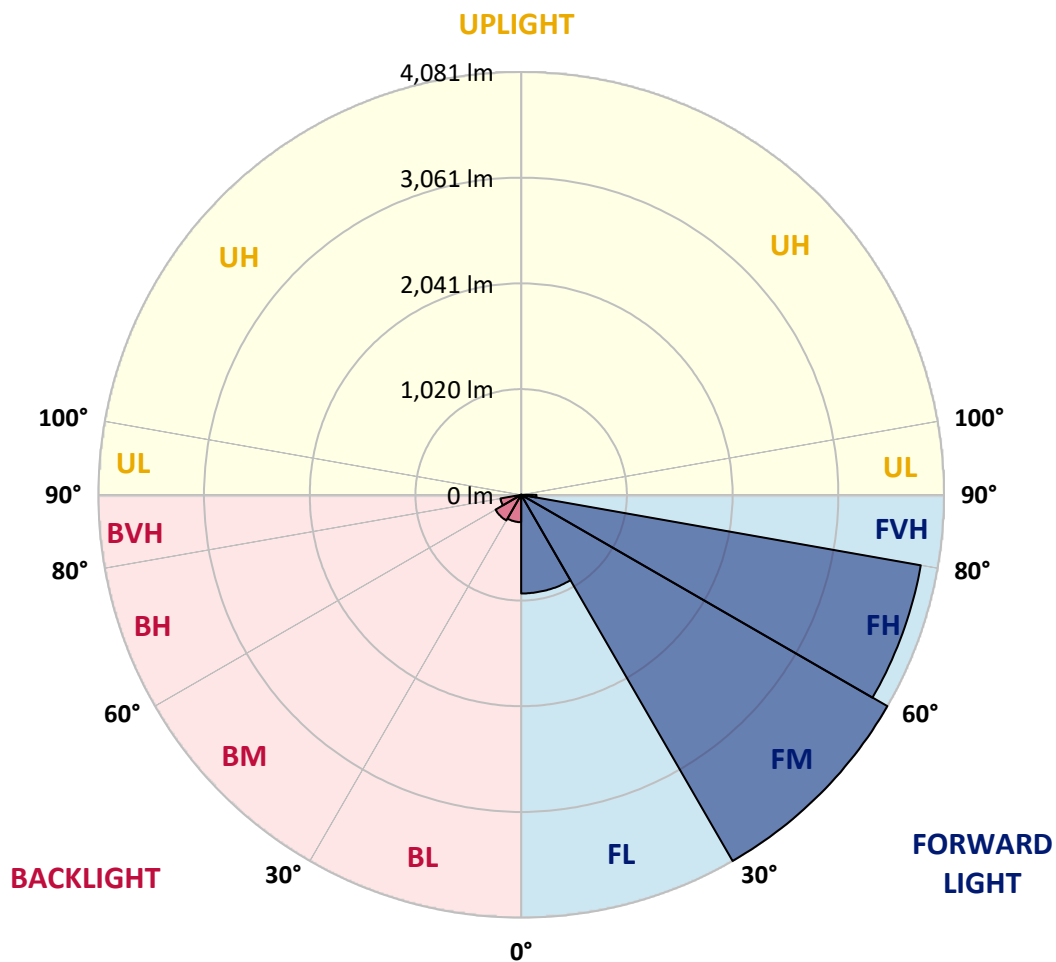
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	952.5	9.7			
FM (30°-60°)	4081.1	41.4			
FH (60°-80°)	3916.2	39.7			G2/5000
FVH (80°-90°)	147.7	1.5			G2/225
BL (0°-30°)	264.0	2.7	B1/500		
BM (30°-60°)	286.0	2.9	B1/1000		
BH (60°-80°)	203.2	2.1	B1/500		G1/500
BVH (80°-90°)	4.4	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-G2**

Type III Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	2492.0	2492.0	2492.0	2492.0	2492.0	2492.0	2492.0	2492.0	2492.0	2492.0	2492.0
2.5°	2816.8	2812.5	2793.8	2790.0	2769.2	2727.7	2679.4	2660.1	2620.5	2558.2	2489.1
5°	2863.6	2866.0	2867.4	2859.2	2856.3	2822.0	2768.5	2745.5	2692.7	2590.2	2463.7
7.5°	2688.3	2694.1	2712.8	2721.0	2756.7	2770.1	2758.9	2744.1	2702.5	2581.2	2403.5
10°	2503.1	2514.3	2534.4	2547.8	2591.6	2627.4	2672.6	2676.4	2667.4	2551.5	2335.9
12.5°	2344.0	2354.5	2376.7	2403.5	2448.2	2494.2	2561.8	2585.6	2615.3	2532.1	2287.5
15°	2207.2	2210.2	2231.7	2265.3	2323.9	2387.2	2467.5	2502.4	2560.3	2524.6	2250.3
17.5°	2087.5	2088.3	2102.5	2132.9	2204.4	2287.5	2381.1	2427.3	2500.9	2514.3	2217.6
20°	2008.8	2008.0	2008.8	2025.0	2088.3	2187.2	2300.9	2349.2	2443.7	2501.7	2184.1
22.5°	1982.0	1978.2	1961.2	1955.3	1995.3	2082.4	2218.5	2281.5	2392.4	2497.9	2159.6
25°	2014.7	2012.5	1976.0	1941.9	1945.5	1999.8	2134.5	2211.6	2352.2	2511.3	2153.7
27.5°	2120.3	2115.8	2060.1	1993.2	1950.8	1960.5	2071.9	2153.0	2320.2	2544.0	2162.0
30°	2258.6	2259.2	2199.8	2118.8	2019.2	1964.1	2038.6	2115.1	2298.8	2593.0	2179.7
32.5°	2412.5	2411.7	2369.3	2275.6	2148.6	2032.5	2053.3	2118.1	2301.6	2665.2	2214.0
35°	2571.6	2563.4	2549.2	2466.7	2318.0	2152.2	2121.0	2168.6	2332.9	2760.4	2272.0
37.5°	2755.1	2752.1	2766.3	2679.4	2527.7	2328.4	2240.0	2272.0	2411.7	2900.8	2365.5
40°	3047.3	3031.1	3037.7	2919.4	2764.1	2565.6	2406.5	2414.6	2537.4	3086.8	2513.5
42.5°	3604.2	3538.1	3413.9	3192.2	3024.2	2828.8	2624.3	2610.1	2714.9	3312.1	2708.3
45°	4269.6	4193.6	3880.7	3493.4	3284.6	3111.3	2893.4	2855.5	2933.5	3580.4	2959.6
47.5°	4824.8	4743.1	4328.3	3807.8	3549.2	3402.7	3191.6	3146.9	3195.4	3891.8	3261.4
50°	5014.5	4969.2	4604.8	4069.5	3816.0	3729.9	3565.6	3491.2	3503.1	4228.0	3613.8
52.5°	4927.5	4911.8	4668.0	4248.8	4062.9	4091.2	3975.1	3897.0	3883.7	4595.2	4003.3
55°	4743.9	4736.5	4617.5	4348.3	4280.8	4421.9	4549.8	4482.2	4355.8	4985.5	4325.2
57.5°	4481.5	4509.8	4595.2	4540.2	4548.3	4771.3	5083.6	5118.5	4929.7	5296.1	4563.8
60°	3780.3	3856.2	4247.9	4746.0	5127.4	5352.7	5655.3	5720.8	5415.9	5508.9	4839.8
62.5°	2794.5	2903.1	3461.3	4376.6	5446.5	6458.3	6415.9	6386.8	5879.9	5793.6	5341.6
65°	1641.6	1768.7	2240.7	3419.8	4965.4	7169.0	7835.7	7434.4	6586.8	6385.3	6140.8
67.5°	817.7	818.5	1032.0	1805.1	3669.5	6673.1	9908.5	9676.5	8090.0	7257.3	6455.9
70°	629.0	646.1	763.5	1049.0	1855.5	5197.4	10383.6	11335.9	9600.6	7218.7	5477.7
72.5°	533.1	544.3	679.5	912.9	1387.3	2853.2	8988.9	10020.1	9161.4	6099.1	4037.6
75°	383.5	392.5	601.4	828.1	1277.2	1415.5	6166.1	7431.4	6873.8	4290.3	2222.0
77.5°	95.2	94.4	209.7	672.0	1142.6	1179.0	3538.1	4765.4	3943.9	1756.7	571.0
80°	42.4	41.0	47.6	141.3	1063.1	1112.9	1556.0	2406.5	1512.8	284.8	174.7
82.5°	29.7	28.2	29.7	52.0	355.4	1032.6	940.4	1043.0	553.9	97.3	74.3
85°	9.6	9.0	16.3	43.8	99.6	595.4	917.3	779.1	411.9	41.6	49.8
87.5°	1.4	1.4	6.0	23.7	28.9	198.4	538.3	539.7	185.1	24.6	22.3
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):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2492.0	2492.0	2492.0	2492.0	2492.0	2492.0	2492.0	2492.0	2492.0	2492.0	2492.0
2.5°	2454.1	2410.2	2348.4	2286.7	2231.0	2173.8	2127.7	2106.2	2096.5	2083.1	2054.2
5°	2397.5	2318.0	2182.7	2049.7	1925.4	1806.5	1704.8	1646.8	1584.3	1581.2	1550.8
7.5°	2306.8	2193.9	1980.6	1773.9	1584.3	1402.9	1246.8	1145.6	1076.4	1033.4	1003.6
10°	2205.8	2060.8	1778.3	1487.7	1229.6	987.2	786.6	655.8	576.2	536.0	512.9
12.5°	2125.5	1943.4	1579.0	1213.3	890.0	611.8	425.3	330.0	287.6	271.4	263.9
15°	2056.3	1835.5	1392.5	968.0	594.0	351.6	246.0	214.9	208.1	208.1	207.4
17.5°	1986.4	1731.5	1211.0	727.1	374.0	230.4	194.0	189.6	190.4	192.5	192.5
20°	1920.2	1632.6	1036.4	518.1	245.3	184.4	176.2	174.7	177.0	179.9	179.1
22.5°	1866.8	1545.7	872.9	356.1	188.9	167.3	162.1	159.9	161.3	163.5	162.9
25°	1828.9	1471.2	722.6	248.3	164.3	152.4	146.5	143.5	142.0	143.5	142.7
27.5°	1805.9	1408.8	581.4	186.6	147.2	137.5	130.2	124.1	120.5	120.5	118.9
30°	1791.0	1350.1	455.7	154.7	133.0	122.7	112.3	104.1	98.2	96.7	95.8
32.5°	1790.2	1299.5	340.5	136.8	119.7	107.7	95.2	84.8	78.1	76.5	75.8
35°	1808.7	1258.6	250.5	123.3	107.7	93.7	79.5	68.5	62.4	62.4	61.8
37.5°	1857.1	1234.8	189.6	112.9	98.2	81.7	67.0	56.6	51.4	52.8	52.8
40°	1947.0	1230.4	154.7	104.8	90.0	71.3	54.3	46.2	43.8	46.2	46.2
42.5°	2084.5	1254.2	137.5	98.9	82.6	60.9	45.4	39.3	38.6	41.0	41.0
45°	2263.8	1301.0	127.9	93.7	74.3	50.6	37.9	34.1	33.4	36.4	36.4
47.5°	2480.8	1364.2	118.9	87.8	66.1	41.6	32.0	28.9	28.9	32.0	32.7
50°	2738.0	1449.7	110.0	81.7	59.5	34.9	26.8	24.6	25.3	28.2	28.9
52.5°	3033.9	1554.4	101.9	76.5	52.0	28.2	22.3	20.8	21.6	24.6	25.3
55°	3289.0	1646.0	92.2	71.3	42.4	23.0	18.5	17.8	18.5	22.3	22.3
57.5°	3511.2	1733.6	83.3	63.2	33.4	18.5	14.8	14.8	16.3	20.1	20.8
60°	3806.4	1872.0	75.8	53.4	25.3	14.2	11.9	12.7	14.8	17.8	18.5
62.5°	4329.0	2106.9	66.1	44.6	18.5	11.1	9.6	10.4	13.4	17.1	17.8
65°	4983.3	2329.1	55.1	37.2	14.2	8.2	7.5	9.6	13.4	17.1	17.8
67.5°	4916.3	2025.9	43.1	29.7	10.4	6.6	6.0	9.0	12.7	17.1	17.8
70°	3987.0	1420.0	32.0	20.1	8.2	6.0	6.0	9.0	12.7	16.3	17.1
72.5°	2765.6	790.2	24.6	13.4	7.5	6.0	5.2	8.2	11.9	16.3	17.1
75°	1315.8	242.4	19.4	9.6	6.6	5.2	4.4	8.2	11.9	16.3	17.1
77.5°	252.8	61.8	15.6	8.2	6.0	5.2	4.4	7.5	11.9	15.6	16.3
80°	85.5	27.5	12.7	7.5	6.0	5.2	4.4	7.5	11.1	14.8	15.6
82.5°	46.8	15.6	11.1	6.6	6.0	4.4	3.8	6.6	10.4	14.8	15.6
85°	36.4	11.1	9.0	6.6	6.0	4.4	3.8	6.6	10.4	14.2	14.8
87.5°	18.5	8.2	7.5	6.6	6.0	4.4	3.8	6.0	9.6	13.4	14.8
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)