

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: P963111

Luminaire Tested: **NAV-SB2D-827-U-T2R-HSS**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P963111
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-289-4)
Test Lab: INNOVATION CENTER
Issue Date: 1/21/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB2D-827-U-T2R-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(2) 80 CRI, 2700K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE II
ROADWAY OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 15357.5 lumens
Efficiency: N/A
Efficacy: 104.0 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B1 - U0 - G2

Input Watts (W): 147.6
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: 24 FT

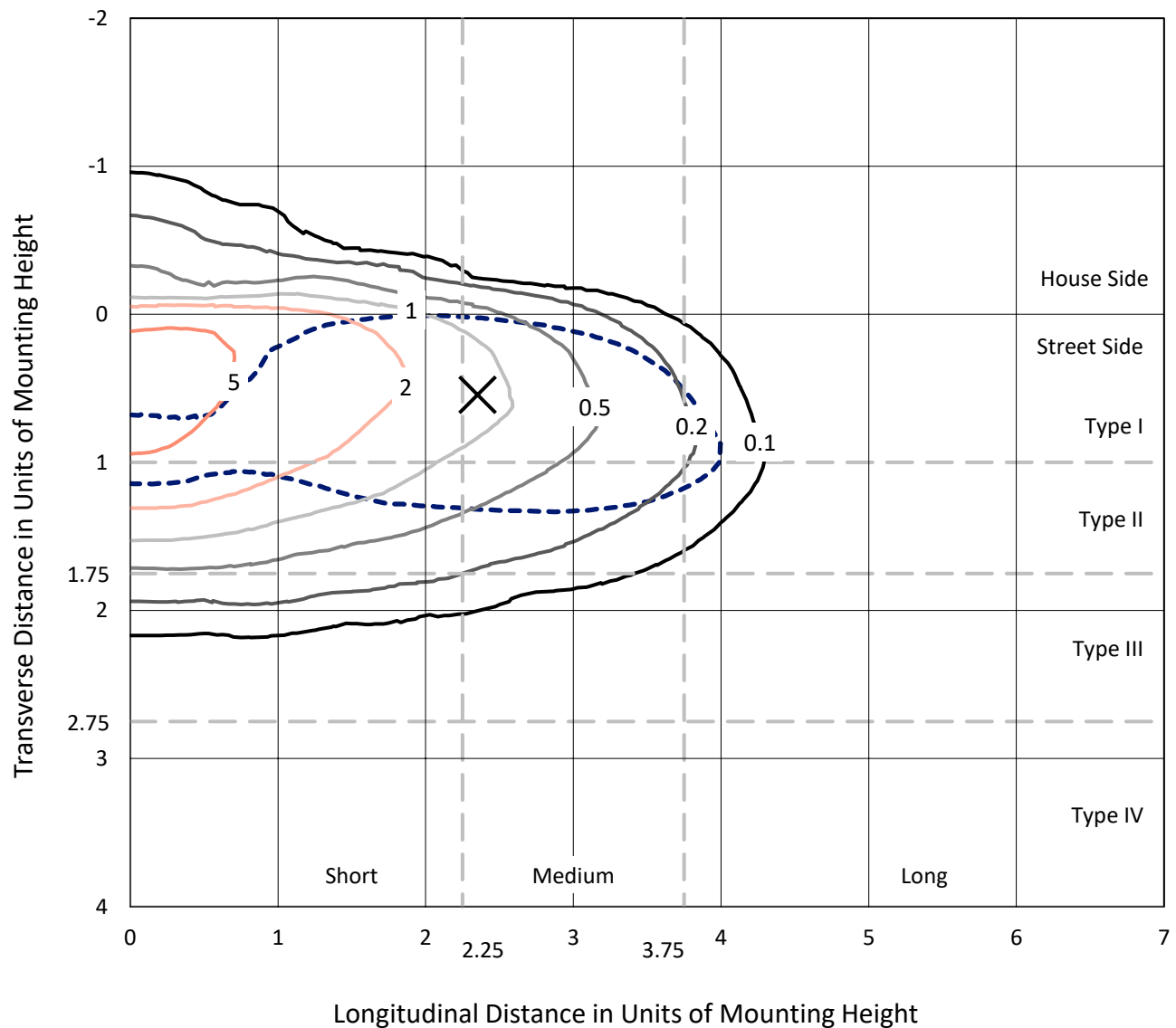


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Iso-Footcandle Lines of Horizontal Illumination

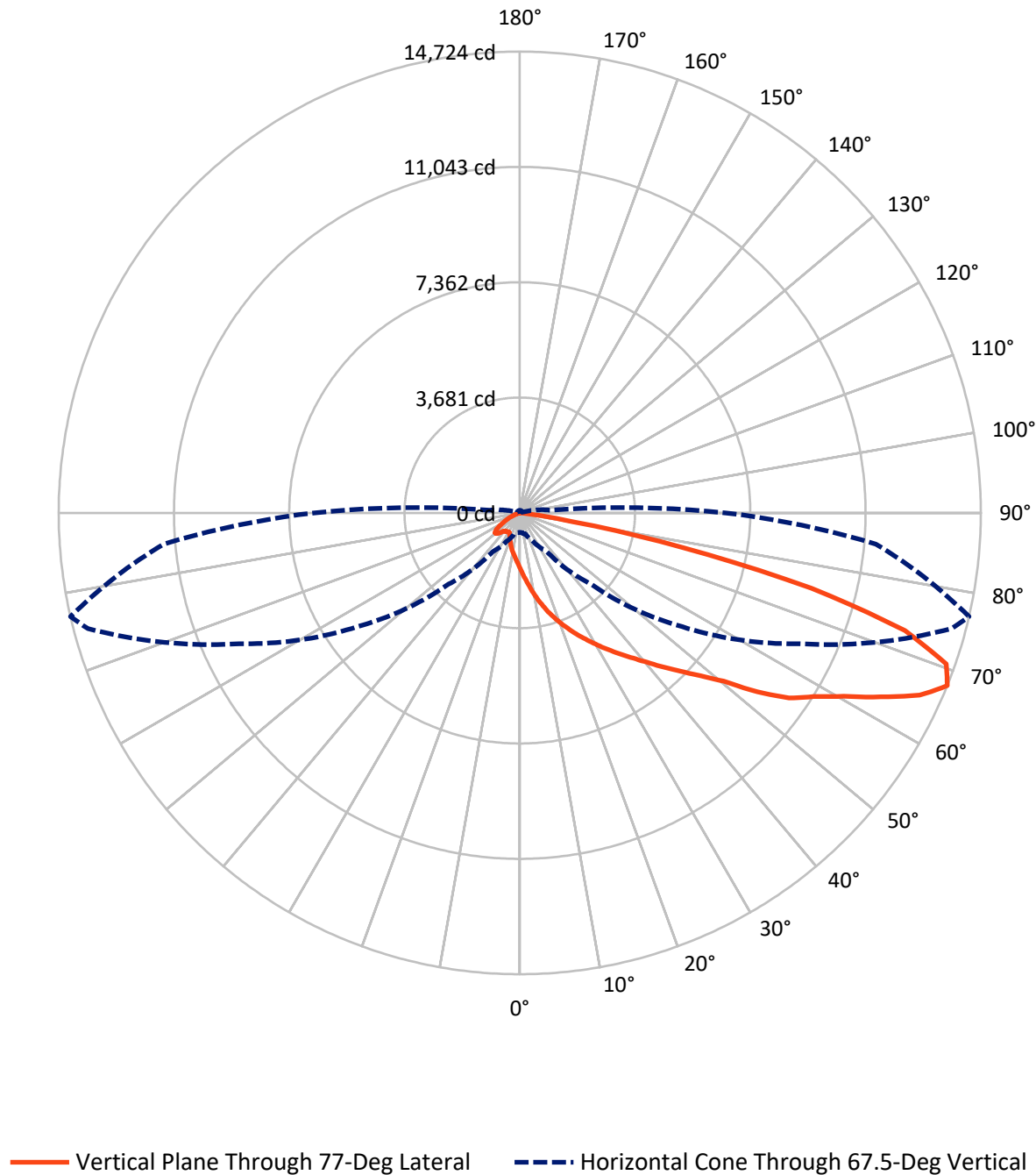
× Max cd
- - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 6.6 fc
Type II - Medium - N/A

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Luminous Intensity Polar Plot



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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1129.9	0.0	1129.9
	% Fixture	7.4	0.0	7.4
Street Side	Lumens	14227.7	0.0	14227.7
	% Fixture	92.6	0.0	92.6
Total	Lumens	15357.5	0.0	15357.5
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	180.8	1.2
10°-20°	633.0	4.1
20°-30°	1221.5	8.0
30°-40°	2120.6	13.8
40°-50°	3078.9	20.0
50°-60°	3535.8	23.0
60°-70°	3069.7	20.0
70°-80°	1445.9	9.4
80°-90°	71.5	0.5
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°	15357.5	100.0
0°-180°	15357.5	100.0

Coefficient of Utilization



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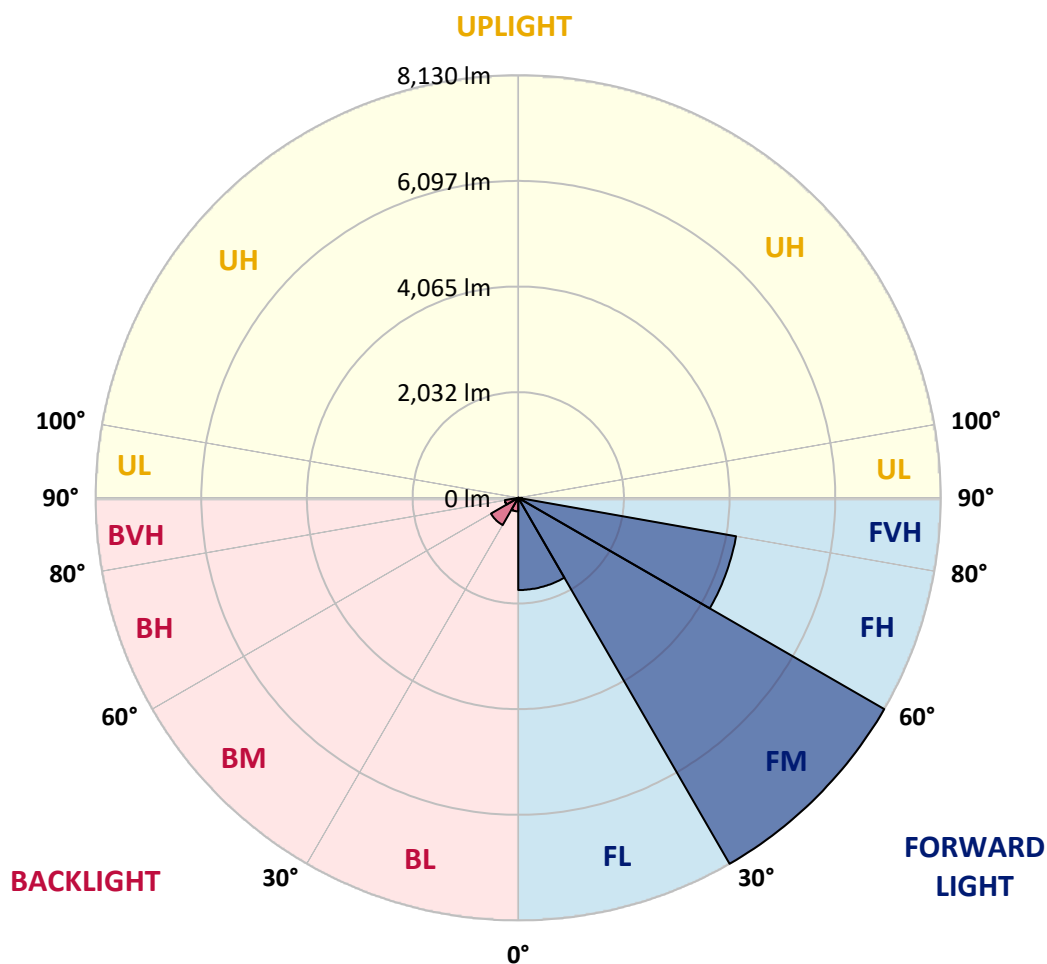
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1773.6	11.5			
FM	(30°-60°)	8129.9	52.9			
FH	(60°-80°)	4254.0	27.7			G2/5000
FVH	(80°-90°)	70.2	0.5			G1/100
BL	(0°-30°)	261.6	1.7	B1/500		
BM	(30°-60°)	605.4	3.9	B1/1000		
BH	(60°-80°)	261.6	1.7	B1/500		G1/500
BVH	(80°-90°)	1.3	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 II Medium



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	77°	85°
0°	1771.0	1771.0	1771.0	1771.0	1771.0	1771.0	1771.0	1771.0	1771.0	1771.0	1771.0
2.5°	2451.9	2467.2	2445.2	2403.2	2340.3	2299.3	2199.1	2104.7	1999.9	1966.5	1861.5
5°	2988.8	3002.1	2977.3	2931.6	2847.7	2767.5	2635.9	2438.5	2233.5	2167.7	1981.7
7.5°	3386.5	3394.1	3384.6	3342.6	3262.5	3171.9	3025.0	2791.4	2487.2	2414.7	2129.5
10°	3672.6	3697.4	3694.5	3678.3	3624.9	3551.4	3395.0	3129.0	2771.4	2677.9	2296.4
12.5°	3862.3	3890.0	3906.2	3942.5	3939.6	3892.8	3755.5	3474.2	3054.6	2944.9	2484.3
15°	3917.7	3947.2	4009.2	4093.1	4167.5	4191.3	4095.1	3812.8	3366.4	3226.3	2676.9
17.5°	3886.2	3932.0	4006.3	4139.0	4302.0	4409.8	4399.3	4139.9	3649.7	3489.4	2865.8
20°	3955.8	3999.7	4057.9	4169.4	4359.2	4554.7	4632.9	4452.7	3931.0	3763.2	3064.1
22.5°	4341.1	4333.5	4339.1	4357.3	4470.7	4664.4	4825.5	4736.8	4209.5	4037.8	3274.0
25°	4951.5	4917.1	4858.9	4760.7	4732.1	4825.5	4993.4	4988.6	4503.2	4319.1	3488.5
27.5°	5651.4	5645.7	5509.3	5272.8	5139.2	5103.1	5183.1	5233.8	4794.0	4597.6	3704.0
30°	6321.8	6337.1	6153.1	5889.9	5644.8	5502.6	5430.1	5466.4	5089.7	4898.1	3926.3
32.5°	6905.5	6921.7	6721.4	6413.4	6110.1	5938.4	5785.9	5696.2	5412.0	5203.2	4170.4
35°	7398.6	7414.7	7184.9	6844.4	6521.2	6365.7	6193.0	5948.0	5736.3	5541.8	4442.1
37.5°	7839.1	7834.4	7526.3	7183.0	6865.4	6742.4	6651.8	6257.9	6070.0	5882.2	4743.5
40°	8099.4	8119.5	7856.3	7477.7	7169.7	7080.0	7074.2	6642.3	6455.3	6273.2	5073.4
42.5°	8175.8	8211.1	8020.3	7709.4	7430.0	7332.7	7482.4	7058.0	6903.6	6726.2	5446.3
45°	8038.5	8072.8	7986.0	7770.4	7607.3	7544.4	7833.4	7489.2	7382.4	7206.9	5866.9
47.5°	7637.9	7680.8	7701.7	7656.0	7654.1	7718.0	8148.1	7943.0	7950.7	7771.4	6354.3
50°	6862.6	6935.0	7127.6	7289.8	7540.6	7855.3	8454.2	8435.1	8591.6	8437.1	6989.4
52.5°	5453.0	5556.0	6219.8	6663.2	7226.9	7829.6	8790.9	9224.8	9716.0	9489.9	7884.9
55°	4382.1	4382.1	4921.8	5751.6	6614.6	7659.8	8937.7	9737.9	10481.8	10428.3	8515.3
57.5°	3572.4	3615.4	3959.6	4693.0	5728.6	7255.5	9028.3	10060.2	11098.7	11059.6	9131.3
60°	2204.9	2297.3	2947.8	3671.7	4720.6	6535.5	8971.1	10386.3	11847.4	11878.8	9873.3
62.5°	1241.7	1276.0	1565.9	2641.6	3670.6	5567.5	8533.4	10568.5	12804.8	12938.4	10638.2
65°	857.3	874.5	986.0	1644.1	2544.4	4432.6	7678.0	10455.0	13764.2	14034.1	11286.6
67.5°	622.8	631.3	700.9	1004.2	1509.6	3213.9	6337.1	9882.8	14272.5	14723.6	11410.6
70°	478.8	484.4	535.0	659.9	891.6	1983.6	4602.4	8745.1	13904.4	14443.3	10775.4
72.5°	389.1	394.8	433.9	488.3	591.3	1173.0	2789.4	7101.9	12279.4	12861.1	9173.3
75°	328.1	335.7	370.9	406.3	463.5	753.4	1308.4	4945.7	9234.3	9615.8	6379.1
77.5°	182.1	167.9	301.3	336.6	391.0	476.8	612.2	2910.6	5171.7	5277.6	2830.4
80°	113.5	117.3	239.3	270.8	300.4	240.4	280.3	1120.5	1792.9	1703.2	548.4
82.5°	6.7	15.3	184.1	195.5	206.0	103.0	105.9	380.5	432.0	396.7	97.3
85°	0.0	0.0	83.9	67.8	71.5	29.5	30.5	88.7	58.2	62.9	19.1
87.5°	0.0	0.0	0.0	1.9	0.0	2.9	5.7	7.6	2.9	3.8	6.7
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°	1771.0	1771.0	1771.0	1771.0	1771.0	1771.0	1771.0	1771.0	1771.0	1771.0	1771.0
2.5°	1794.8	1728.0	1592.6	1460.0	1352.3	1252.1	1180.6	1112.9	1078.6	1076.7	1074.8
5°	1849.2	1709.0	1438.1	1198.7	1006.1	851.7	751.5	680.0	643.7	631.3	629.5
7.5°	1925.5	1714.7	1302.7	969.9	742.9	610.4	553.1	530.2	522.6	514.0	512.1
10°	2021.8	1728.0	1181.6	781.0	585.6	518.8	495.9	486.4	480.6	474.9	473.0
12.5°	2129.5	1740.4	1061.4	648.5	515.0	480.6	464.4	452.9	445.4	438.7	436.8
15°	2234.4	1748.0	936.5	556.0	478.8	451.1	433.9	421.5	411.0	403.4	402.4
17.5°	2338.4	1758.6	819.2	500.7	449.2	421.5	404.4	389.1	380.5	372.0	370.9
20°	2453.7	1756.6	708.6	461.6	419.6	392.0	373.8	359.6	351.0	341.4	340.5
22.5°	2560.6	1747.1	611.3	428.2	389.1	362.4	342.3	328.1	319.5	311.8	310.9
25°	2683.7	1739.5	530.2	397.7	360.5	333.7	311.8	298.5	288.9	282.3	281.4
27.5°	2801.8	1728.0	471.1	370.0	332.8	307.1	286.1	270.8	262.3	257.5	257.5
30°	2918.2	1725.2	449.2	343.3	308.0	282.3	261.3	247.0	240.4	238.4	237.5
32.5°	3058.4	1732.8	458.7	333.7	285.2	259.4	239.3	228.9	222.2	222.2	222.2
35°	3208.1	1730.9	473.0	342.3	269.9	236.5	221.3	214.5	207.9	207.9	207.9
37.5°	3396.0	1733.8	484.4	356.7	264.1	217.4	208.9	200.3	196.5	196.5	196.5
40°	3676.4	1828.2	478.8	369.1	262.3	204.1	187.0	184.1	181.2	181.2	181.2
42.5°	4019.7	2033.2	486.4	370.0	261.3	194.5	171.7	177.4	170.7	169.7	168.8
45°	4395.4	2257.4	535.0	350.0	260.3	189.8	164.0	170.7	160.2	160.2	160.2
47.5°	4768.3	2479.6	584.6	321.3	257.5	188.8	157.3	153.5	150.7	151.6	151.6
50°	5282.3	2660.7	603.6	282.3	250.8	187.0	144.9	146.0	144.0	146.0	146.0
52.5°	5842.2	2698.8	580.8	238.4	231.8	181.2	136.3	140.2	139.2	141.1	141.1
55°	6191.2	2657.8	479.7	198.3	202.1	158.3	127.8	135.4	135.4	135.4	135.4
57.5°	6551.7	2483.4	340.5	161.1	167.9	129.7	120.1	130.7	129.7	128.7	128.7
60°	6811.0	2201.1	224.1	132.5	133.6	106.8	111.6	123.0	122.1	117.3	117.3
62.5°	7004.6	1889.2	144.0	112.5	102.1	96.4	102.1	111.6	107.7	97.3	95.3
65°	6982.7	1457.2	110.6	96.4	83.9	83.9	88.7	97.3	85.8	68.7	66.7
67.5°	6575.5	986.0	91.5	81.1	70.5	69.6	73.4	81.1	73.4	58.2	56.3
70°	5847.8	644.7	73.4	62.9	56.3	51.5	59.1	69.6	62.0	46.7	44.8
72.5°	4746.4	392.9	55.4	45.8	41.0	33.4	46.7	57.2	49.6	34.3	32.4
75°	3070.8	200.3	38.1	29.5	21.9	20.0	34.3	42.9	34.3	21.0	18.1
77.5°	1175.0	83.9	21.0	13.3	11.5	9.5	19.1	25.7	14.3	4.8	3.8
80°	226.0	35.3	10.5	6.7	5.7	3.8	2.9	1.9	0.0	0.0	0.0
82.5°	39.1	11.5	3.8	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	13.3	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	4.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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)