

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: P884090

Luminaire Tested: **NAV-SB4D-727-U-T4FT-HSS**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P884090
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-25)
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB4D-727-U-T4FT-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 70 CRI, 2700K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE IV
FORWARD THROW OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 28297 lumens
Efficiency: N/A
Efficacy: 96.4 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G5

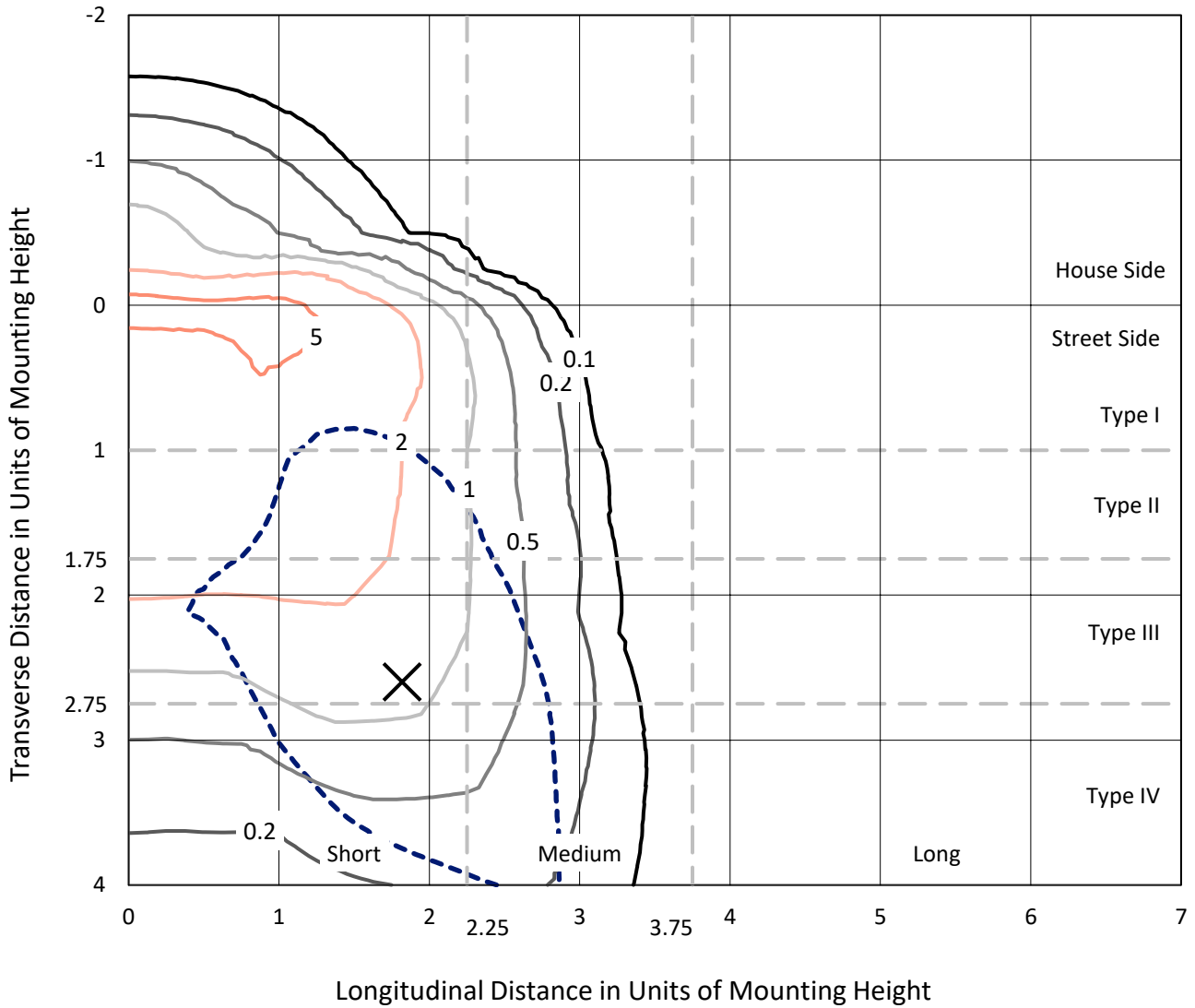
Input Watts (W): 293.6
Input Voltage (V): 120.0
Input Current (Ain): 2.469
Voltage Rise (V): NR
Power Factor: 0.999
Total Harmonic Distortion (THDi): 3.108
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

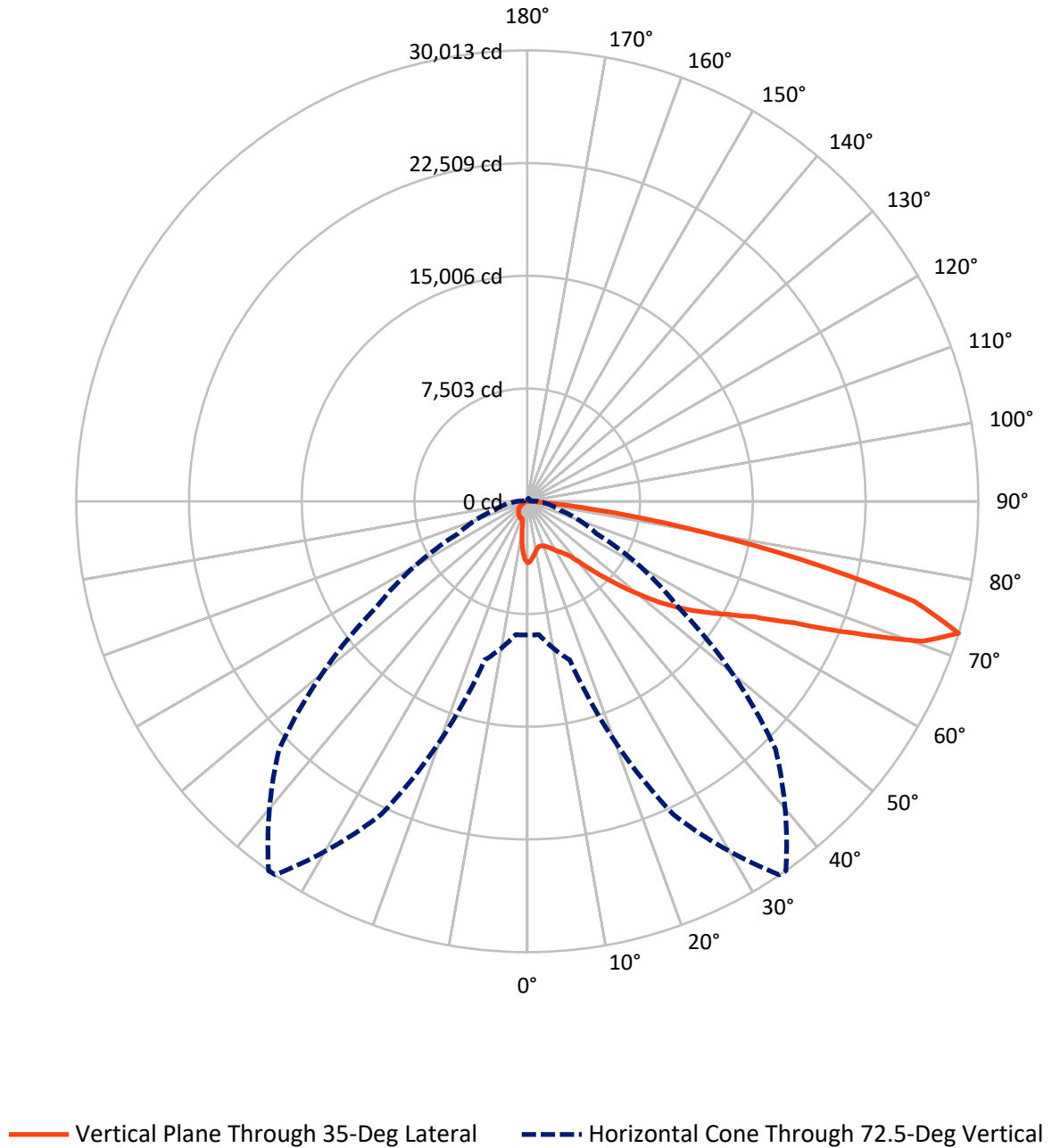
✕ Max cd
 - - - 1/2 Max cd



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

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Luminous Intensity Polar Plot



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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3184.7	0.0	3184.7
	% Fixture	11.3	0.0	11.3
Street Side	Lumens	25112.3	0.0	25112.3
	% Fixture	88.7	0.0	88.7
Total	Lumens	28297.0	0.0	28297.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	337.0	1.2
10°-20°	788.4	2.8
20°-30°	1280.7	4.5
30°-40°	2136.9	7.6
40°-50°	4043.0	14.3
50°-60°	6424.3	22.7
60°-70°	7947.3	28.1
70°-80°	4940.1	17.5
80°-90°	399.2	1.4
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°	28297.0	100.0
0°-180°	28297.0	100.0

Coefficient of Utilization



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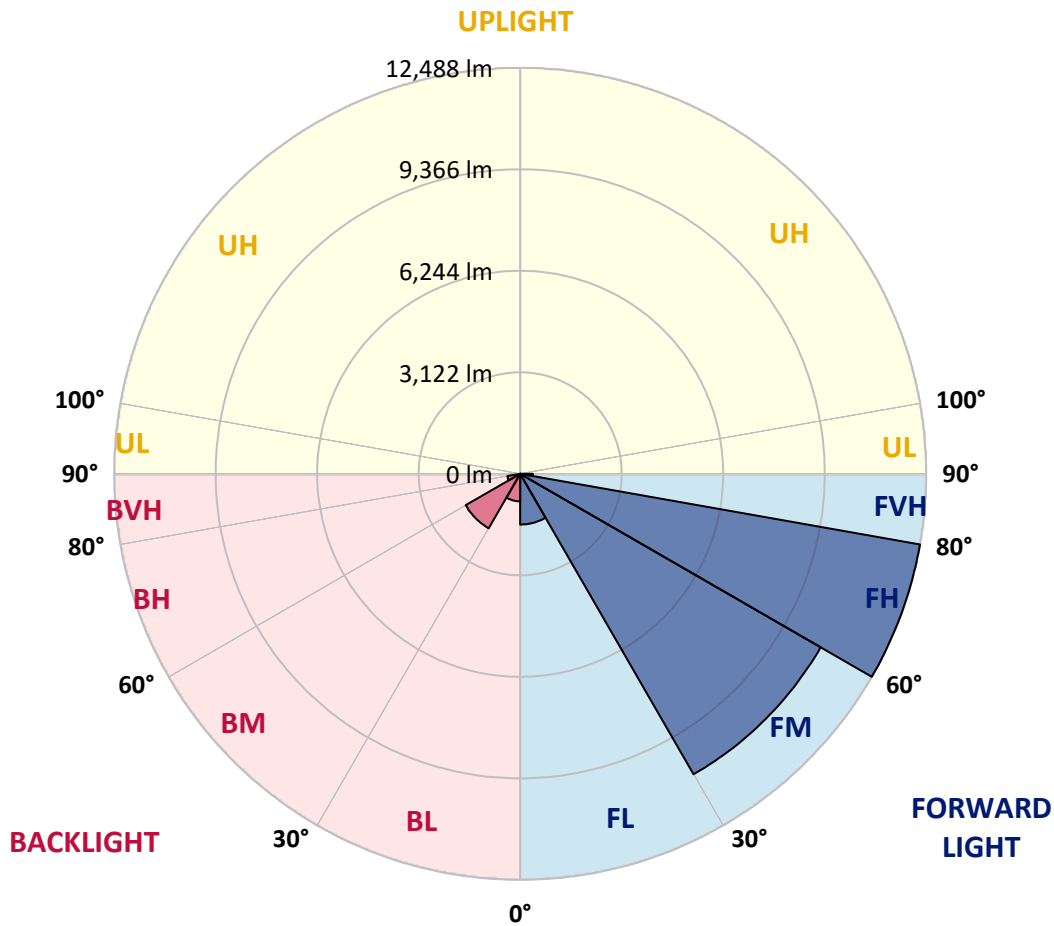
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1559.9	5.5			
FM (30°-60°)	10670.8	37.7			
FH (60°-80°)	12487.8	44.1			G5
FVH (80°-90°)	393.8	1.4			G3/500
BL (0°-30°)	846.2	3.0	B2/1000		
BM (30°-60°)	1933.4	6.8	B2/2500		
BH (60°-80°)	399.6	1.4	B1/500		G1/500
BVH (80°-90°)	5.4	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G5

Type IV Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	34°	35°	45°	55°	65°	75°	85°
0°	4101.2	4101.2	4101.2	4101.2	4101.2	4101.2	4101.2	4101.2	4101.2	4101.2	4101.2
2.5°	3918.7	3951.9	3958.1	3968.5	3968.5	3980.9	4001.7	4030.7	4078.4	4103.3	4119.8
5°	3611.9	3636.7	3667.8	3692.7	3740.4	3746.6	3827.5	3906.3	4016.2	4099.1	4157.2
7.5°	3302.9	3332.0	3373.4	3433.5	3495.8	3514.4	3636.7	3769.4	3943.6	4099.1	4196.6
10°	3085.2	3087.3	3124.6	3184.7	3284.3	3307.1	3456.4	3645.0	3862.7	4074.2	4233.9
12.5°	2962.9	2977.4	2994.0	3039.6	3135.0	3149.5	3309.1	3531.0	3781.9	4059.7	4277.4
15°	2962.9	2973.3	2983.6	3006.4	3083.1	3095.6	3236.6	3458.4	3740.4	4065.9	4347.9
17.5°	2994.0	3010.6	3002.3	3029.2	3110.1	3118.4	3242.8	3437.7	3738.3	4105.3	4455.7
20°	3068.6	3081.1	3064.5	3081.1	3161.9	3178.5	3307.1	3477.1	3773.6	4173.8	4590.5
22.5°	3186.8	3193.0	3153.6	3166.1	3249.0	3269.8	3419.0	3589.1	3858.6	4283.6	4770.9
25°	3336.1	3348.5	3288.4	3302.9	3381.7	3406.6	3578.7	3757.0	3993.4	4435.0	5001.0
27.5°	3508.2	3514.4	3462.6	3460.5	3562.1	3597.3	3771.5	3964.3	4173.8	4625.8	5291.3
30°	3705.2	3723.8	3674.1	3665.8	3794.3	3823.3	3995.4	4219.4	4439.1	4911.9	5703.9
32.5°	3860.7	3875.2	3846.2	3866.9	3997.5	4020.3	4267.1	4580.1	4855.9	5318.3	6265.8
35°	4084.6	4092.9	4026.5	4063.9	4213.1	4271.2	4638.2	5086.0	5380.5	5828.3	6999.8
37.5°	4895.3	4895.3	4613.3	4428.8	4571.8	4623.7	5146.2	5722.6	6027.4	6512.5	7924.5
40°	6017.0	5998.3	5585.7	5208.4	5189.7	5291.3	5869.8	6525.0	6863.0	7333.6	8965.4
42.5°	7213.4	7184.3	6622.4	6249.2	6187.0	6222.3	6705.4	7514.0	7858.2	8335.1	10085.0
45°	8274.9	8266.6	7752.4	7250.7	7138.7	7250.7	7748.3	8671.0	8917.7	9419.5	11202.6
47.5°	9164.4	9164.4	8789.1	8461.5	8403.5	8469.8	9160.3	9954.4	9931.6	10574.3	12291.1
50°	10188.7	10180.4	9823.8	9682.8	9742.9	9836.2	10785.8	11306.2	10980.7	11708.5	13263.5
52.5°	10906.1	10955.8	10833.5	10810.7	11117.6	11279.3	12436.2	12629.1	11920.0	12784.6	13991.3
55°	11474.2	11532.2	11673.2	11832.9	12423.8	12635.3	14034.8	13883.5	12705.8	13717.6	14410.1
57.5°	12278.7	12195.7	12413.4	12728.6	13684.4	13939.5	15583.7	15067.4	13338.2	14474.4	14455.7
60°	13255.2	13267.7	13305.0	13703.1	14943.0	15270.6	17109.7	16187.0	13744.6	14938.8	13949.8
62.5°	14428.8	14447.4	14524.2	15135.8	16632.8	16941.7	18735.2	17103.5	13931.2	14808.2	12643.6
65°	14347.9	14426.7	15283.0	17375.1	19201.8	19506.5	20632.4	17746.2	13649.2	13613.9	10294.4
67.5°	13070.7	13199.3	14632.0	20049.8	23074.9	23414.9	22925.6	17872.7	12432.1	10586.8	6715.7
70°	11395.4	11441.0	13164.0	22454.9	27559.6	27903.8	24978.2	16481.5	9434.0	5905.0	3008.5
72.5°	8899.0	8909.4	10931.0	23012.7	29993.8	30012.5	23367.2	12235.1	5073.6	2268.3	1045.0
75°	6357.0	6294.8	7321.2	18662.7	26388.2	26599.6	17518.2	5739.2	1938.6	1071.9	520.4
77.5°	3408.7	3477.1	4142.7	11067.8	18229.3	18590.1	9558.4	1654.6	986.9	729.8	344.2
80°	1053.3	1111.3	1698.1	5067.4	10325.5	10543.2	3543.4	736.1	688.4	520.4	226.0
82.5°	331.7	344.2	792.0	2129.4	4285.7	4385.2	1026.3	416.8	470.7	344.2	132.7
85°	95.4	97.4	352.5	794.1	1059.5	1080.2	288.2	161.7	269.5	213.6	68.4
87.5°	10.4	33.2	132.7	132.7	93.3	91.2	31.1	35.2	76.7	27.0	12.4
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°	4101.2	4101.2	4101.2	4101.2	4101.2	4101.2	4101.2	4101.2	4101.2	4101.2	4101.2
2.5°	4109.5	4111.6	4084.6	4039.0	3989.2	3947.8	3895.9	3854.4	3825.4	3817.1	3831.6
5°	4138.5	4124.0	4047.3	3908.4	3742.5	3599.4	3439.8	3313.3	3230.4	3195.1	3207.5
7.5°	4182.0	4140.6	3972.6	3698.9	3381.7	3099.7	2813.6	2591.7	2450.8	2380.3	2390.6
10°	4219.4	4136.4	3848.2	3396.2	2911.1	2483.9	2098.3	1830.8	1681.5	1611.0	1613.1
12.5°	4254.6	4134.4	3686.5	3037.5	2380.3	1857.8	1499.1	1366.4	1324.9	1310.4	1306.2
15°	4321.0	4140.6	3483.3	2627.0	1851.5	1403.7	1273.1	1271.0	1279.3	1275.1	1273.1
17.5°	4412.2	4146.8	3253.2	2191.6	1428.6	1237.8	1231.6	1250.3	1262.7	1256.5	1254.4
20°	4530.4	4171.7	3008.5	1760.3	1227.5	1196.4	1210.9	1227.5	1237.8	1227.5	1225.4
22.5°	4696.2	4215.2	2741.0	1414.1	1163.2	1171.5	1183.9	1202.6	1212.9	1198.4	1196.4
25°	4899.4	4283.6	2477.7	1229.5	1132.1	1142.4	1161.1	1181.8	1194.3	1179.8	1177.7
27.5°	5162.8	4393.5	2235.1	1188.1	1101.0	1107.2	1134.1	1165.3	1181.8	1163.2	1163.2
30°	5544.3	4573.9	2025.7	1206.7	1082.3	1067.8	1105.1	1148.7	1167.3	1150.7	1148.7
32.5°	6050.2	4828.9	1897.2	1235.7	1074.0	1022.2	1057.4	1113.4	1144.5	1134.1	1134.1
35°	6713.7	5216.7	1847.4	1268.9	1067.8	974.5	999.4	1059.5	1113.4	1123.8	1123.8
37.5°	7518.1	5755.8	1861.9	1283.4	1049.1	935.1	947.5	999.4	1069.9	1103.0	1111.3
40°	8432.5	6384.0	1944.8	1268.9	1028.4	901.9	904.0	943.4	1005.6	1055.4	1071.9
42.5°	9375.9	7118.0	2098.3	1215.0	1009.7	872.9	866.7	893.6	935.1	970.4	984.9
45°	10273.7	7872.7	2249.6	1140.4	986.9	843.9	829.4	839.7	848.0	862.5	870.8
47.5°	11057.4	8403.5	2206.1	1071.9	955.8	810.7	785.8	781.7	756.8	754.7	752.6
50°	11598.6	8519.6	1959.4	1003.5	910.2	773.4	734.0	709.1	665.6	644.8	646.9
52.5°	11770.7	8061.4	1600.7	935.1	835.6	723.6	667.6	628.2	574.3	555.7	553.6
55°	11542.6	7163.6	1279.3	852.2	731.9	657.3	595.1	543.2	499.7	476.9	476.9
57.5°	10984.9	6021.2	1011.8	754.7	622.0	582.6	520.4	468.6	431.3	408.5	404.3
60°	10060.1	4781.3	800.3	638.6	530.8	501.8	437.5	404.3	371.1	344.2	338.0
62.5°	8656.4	3412.8	628.2	505.9	443.7	410.5	373.2	348.3	308.9	271.6	265.4
65°	6755.1	2087.9	485.2	371.1	356.6	340.0	317.2	294.4	246.7	209.4	203.2
67.5°	4260.8	989.0	346.3	279.9	282.0	273.7	263.3	244.7	209.4	176.2	172.1
70°	1876.4	479.0	228.1	213.6	209.4	209.4	217.7	211.5	178.3	147.2	141.0
72.5°	638.6	257.1	170.0	161.7	151.4	149.3	182.5	176.2	143.1	114.0	107.8
75°	333.8	172.1	124.4	116.1	91.2	109.9	145.1	136.8	101.6	74.6	68.4
77.5°	217.7	122.3	85.0	74.6	51.8	72.6	107.8	95.4	60.1	37.3	33.2
80°	136.8	80.9	49.8	35.2	24.9	39.4	58.1	41.5	22.8	8.3	6.2
82.5°	72.6	41.5	18.7	12.4	10.4	12.4	14.5	10.4	4.1	0.0	0.0
85°	29.0	14.5	6.2	4.1	2.1	0.0	4.1	2.1	0.0	0.0	0.0
87.5°	10.4	2.1	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)