

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: P884150

Luminaire Tested: **NAV-SB4D-827-U-T4FT-HSS**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P884150
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-827-U-T4FT-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 80 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: 25370 lumens
Efficiency: N/A
Efficacy: 86.4 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G4

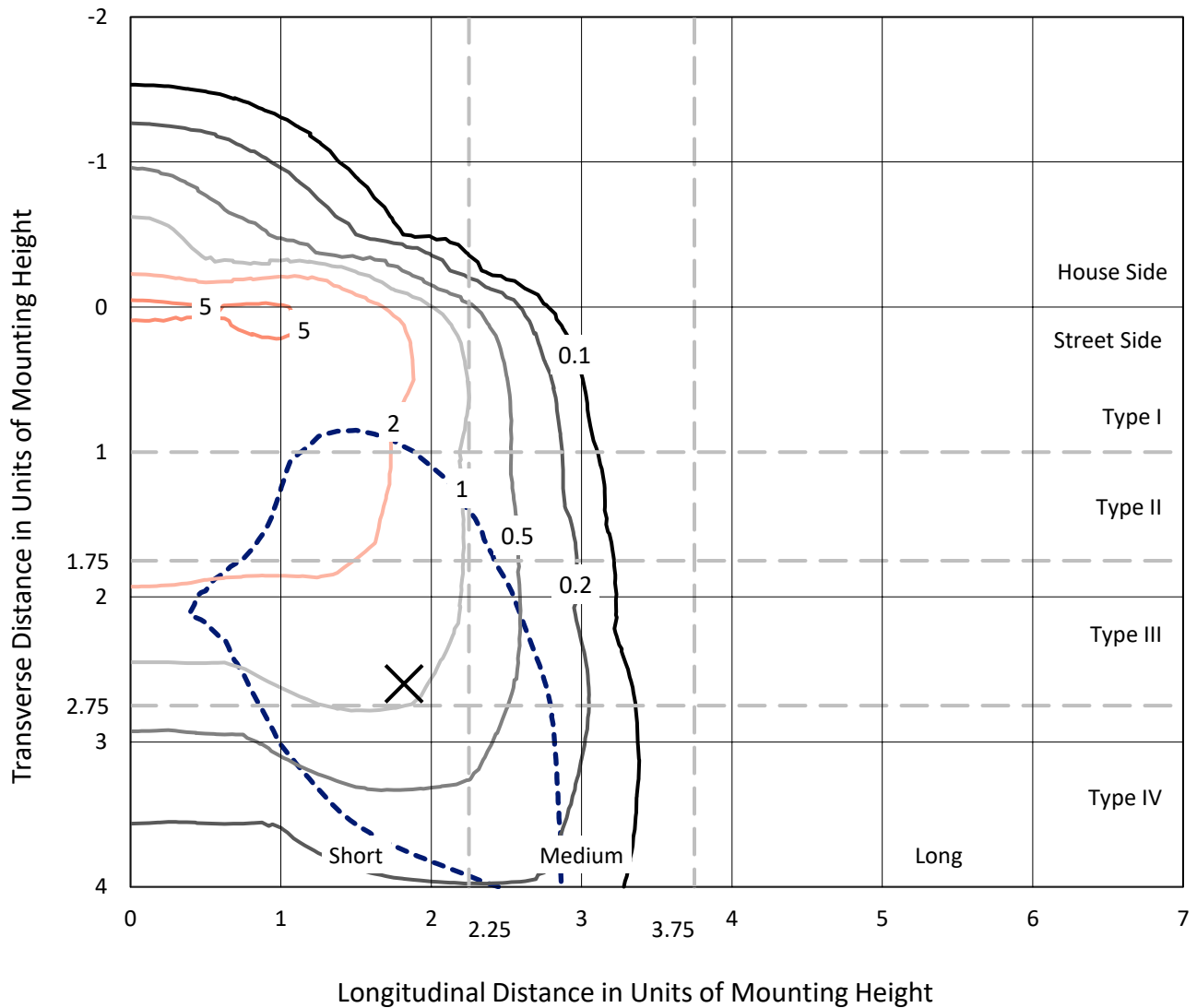
Input Watts (W): 293.6
Input Voltage (V): 120.0
Input Current (Ain): 2.469
Voltage Rise (V): NR
Power Factor: 0.999
Total Harmonic Distortion (THDi): 3.108
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

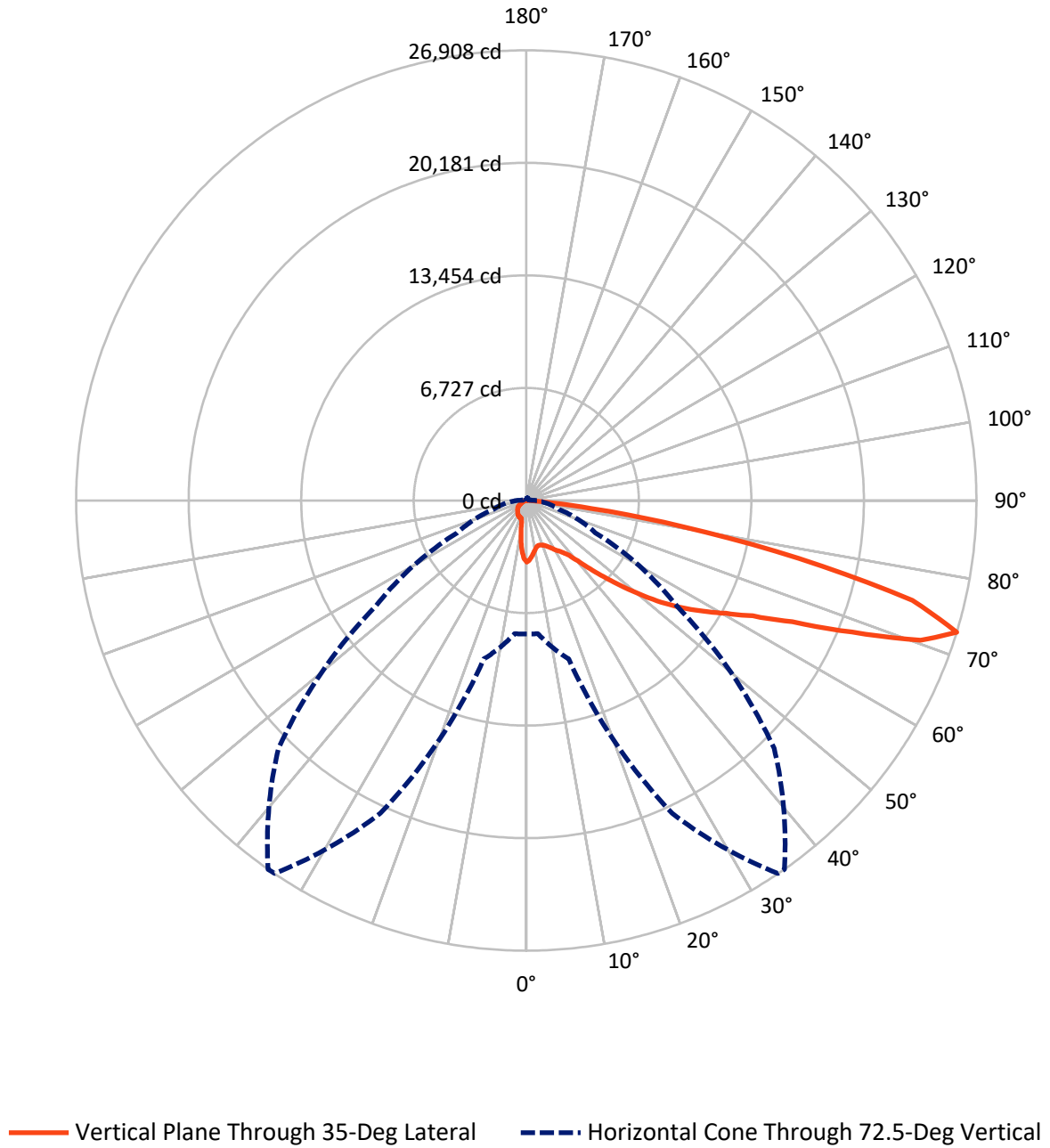
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.9 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	2855.3	0.0	2855.3
	% Fixture	11.3	0.0	11.3
Street Side	Lumens	22514.7	0.0	22514.7
	% Fixture	88.7	0.0	88.7
Total	Lumens	25370.0	0.0	25370.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	302.1	1.2
10°-20°	706.8	2.8
20°-30°	1148.2	4.5
30°-40°	1915.8	7.6
40°-50°	3624.8	14.3
50°-60°	5759.8	22.7
60°-70°	7125.3	28.1
70°-80°	4429.1	17.5
80°-90°	358.0	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°	25370.0	100.0
0°-180°	25370.0	100.0

Coefficient of Utilization



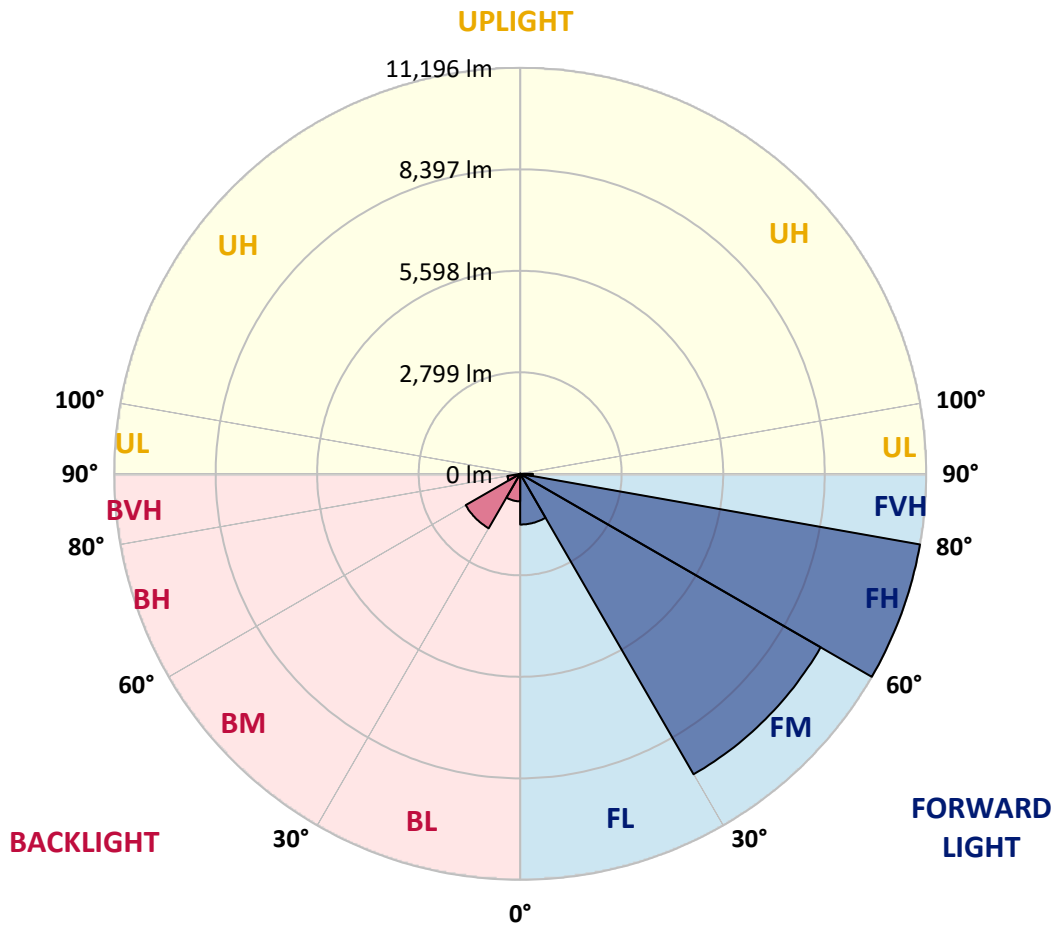
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1398.5	5.5			
FM (30°-60°)	9567.0	37.7			
FH (60°-80°)	11196.1	44.1			G4/12000
FVH (80°-90°)	353.1	1.4			G3/500
BL (0°-30°)	758.7	3.0	B2/1000		
BM (30°-60°)	1733.4	6.8	B2/2500		
BH (60°-80°)	358.3	1.4	B1/500		G1/500
BVH (80°-90°)	4.9	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-G4

Type IV Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	34°	35°	45°	55°	65°	75°	85°
0°	3677.0	3677.0	3677.0	3677.0	3677.0	3677.0	3677.0	3677.0	3677.0	3677.0	3677.0
2.5°	3513.4	3543.1	3548.7	3558.0	3558.0	3569.1	3587.7	3613.8	3656.5	3678.8	3693.7
5°	3238.3	3260.6	3288.4	3310.8	3353.5	3359.1	3431.6	3502.2	3600.7	3675.1	3727.2
7.5°	2961.3	2987.3	3024.5	3078.4	3134.2	3150.9	3260.6	3379.5	3535.7	3675.1	3762.5
10°	2766.1	2767.9	2801.4	2855.3	2944.5	2965.0	3098.8	3268.0	3463.2	3652.8	3795.9
12.5°	2656.4	2669.4	2684.3	2725.2	2810.7	2823.7	2966.9	3165.8	3390.7	3639.8	3835.0
15°	2656.4	2665.7	2675.0	2695.4	2764.2	2775.4	2901.8	3100.7	3353.5	3645.4	3898.2
17.5°	2684.3	2699.2	2691.7	2715.9	2788.4	2795.8	2907.4	3082.1	3351.7	3680.7	3994.8
20°	2751.2	2762.4	2747.5	2762.4	2834.9	2849.7	2965.0	3117.4	3383.3	3742.0	4115.7
22.5°	2857.2	2862.8	2827.4	2838.6	2912.9	2931.5	3065.4	3217.8	3459.5	3840.5	4277.4
25°	2991.0	3002.2	2948.3	2961.3	3031.9	3054.2	3208.5	3368.4	3580.3	3976.3	4483.7
27.5°	3145.3	3150.9	3104.4	3102.6	3193.6	3225.2	3381.4	3554.3	3742.0	4147.3	4744.0
30°	3321.9	3338.6	3294.0	3286.6	3401.8	3427.9	3582.2	3782.9	3980.0	4403.8	5113.9
32.5°	3461.3	3474.3	3448.3	3466.9	3584.0	3604.5	3825.7	4106.4	4353.6	4768.2	5617.7
35°	3662.1	3669.5	3610.0	3643.5	3777.3	3829.4	4158.4	4560.0	4823.9	5225.5	6275.7
37.5°	4388.9	4388.9	4136.1	3970.7	4098.9	4145.4	4613.9	5130.6	5403.9	5838.9	7104.8
40°	5394.6	5377.9	5008.0	4669.6	4652.9	4744.0	5262.6	5850.1	6153.1	6575.0	8038.0
42.5°	6467.2	6441.2	5937.4	5602.8	5547.0	5578.6	6011.8	6736.8	7045.3	7472.9	9041.8
45°	7419.0	7411.6	6950.5	6500.7	6400.3	6500.7	6946.8	7774.0	7995.3	8445.1	10043.8
47.5°	8216.5	8216.5	7880.0	7586.3	7534.2	7593.7	8212.8	8924.7	8904.3	9480.5	11019.7
50°	9134.8	9127.3	8807.6	8681.2	8735.1	8818.8	9670.2	10136.7	9844.9	10497.4	11891.6
52.5°	9778.0	9822.6	9712.9	9692.5	9967.6	10112.6	11149.9	11322.7	10687.0	11462.2	12544.1
55°	10287.3	10339.4	10465.8	10608.9	11138.7	11328.3	12583.1	12447.4	11391.5	12298.7	12919.6
57.5°	11008.6	10934.2	11129.4	11412.0	12268.9	12497.6	13971.7	13508.8	11958.5	12977.2	12960.5
60°	11884.1	11895.3	11928.8	12285.7	13397.3	13691.0	15339.9	14512.7	12322.8	13393.6	12506.9
62.5°	12936.3	12953.0	13021.8	13570.2	14912.3	15189.3	16797.3	15334.3	12490.2	13276.5	11335.8
65°	12863.8	12934.4	13702.2	15577.8	17215.6	17488.8	18498.2	15910.6	12237.3	12205.7	9229.6
67.5°	11718.7	11833.9	13118.5	17975.9	20688.0	20992.9	20554.2	16024.0	11146.1	9491.7	6021.1
70°	10216.7	10257.6	11802.3	20132.2	24708.9	25017.5	22394.5	14776.6	8458.1	5294.2	2697.3
72.5°	7978.5	7987.8	9800.3	20632.3	26891.3	26908.0	20950.1	10969.5	4548.8	2033.7	936.9
75°	5699.5	5643.7	6563.9	16732.2	23658.6	23848.2	15706.1	5145.5	1738.1	961.1	466.6
77.5°	3056.1	3117.4	3714.1	9923.0	16343.7	16667.2	8569.7	1483.4	884.9	654.3	308.6
80°	944.3	996.4	1522.5	4543.2	9257.5	9452.7	3176.9	659.9	617.2	466.6	202.6
82.5°	297.4	308.6	710.1	1909.1	3842.4	3931.6	920.2	373.6	422.0	308.6	119.0
85°	85.5	87.4	316.0	712.0	949.9	968.5	258.4	145.0	241.7	191.5	61.3
87.5°	9.3	29.7	119.0	119.0	83.7	81.8	27.9	31.6	68.8	24.2	11.2
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):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	3677.0	3677.0	3677.0	3677.0	3677.0	3677.0	3677.0	3677.0	3677.0	3677.0	3677.0
2.5°	3684.4	3686.3	3662.1	3621.2	3576.6	3539.4	3492.9	3455.8	3429.7	3422.3	3435.3
5°	3710.4	3697.4	3628.6	3504.1	3355.4	3227.1	3084.0	2970.6	2896.2	2864.6	2875.8
7.5°	3749.5	3712.3	3561.7	3316.3	3031.9	2779.1	2522.6	2323.7	2197.3	2134.1	2143.3
10°	3782.9	3708.6	3450.2	3044.9	2609.9	2227.0	1881.2	1641.4	1507.6	1444.4	1446.2
12.5°	3814.5	3706.7	3305.2	2723.3	2134.1	1665.6	1344.0	1225.0	1187.9	1174.8	1171.1
15°	3874.0	3712.3	3123.0	2355.3	1660.0	1258.5	1141.4	1139.5	1147.0	1143.2	1141.4
17.5°	3955.8	3717.9	2916.7	1964.9	1280.8	1109.8	1104.2	1120.9	1132.1	1126.5	1124.7
20°	4061.8	3740.2	2697.3	1578.2	1100.5	1072.6	1085.6	1100.5	1109.8	1100.5	1098.6
22.5°	4210.5	3779.2	2457.5	1267.8	1042.9	1050.3	1061.4	1078.2	1087.5	1074.5	1072.6
25°	4392.7	3840.5	2221.4	1102.3	1015.0	1024.3	1041.0	1059.6	1070.7	1057.7	1055.9
27.5°	4628.7	3939.1	2003.9	1065.2	987.1	992.7	1016.8	1044.7	1059.6	1042.9	1042.9
30°	4970.8	4100.8	1816.2	1081.9	970.4	957.3	990.8	1029.8	1046.6	1031.7	1029.8
32.5°	5424.4	4329.4	1700.9	1107.9	962.9	916.5	948.1	998.2	1026.1	1016.8	1016.8
35°	6019.2	4677.1	1656.3	1137.7	957.3	873.7	896.0	949.9	998.2	1007.5	1007.5
37.5°	6740.5	5160.4	1669.3	1150.7	940.6	838.4	849.5	896.0	959.2	989.0	996.4
40°	7560.3	5723.6	1743.7	1137.7	922.0	808.6	810.5	845.8	901.6	946.2	961.1
42.5°	8406.1	6381.7	1881.2	1089.3	905.3	782.6	777.0	801.2	838.4	870.0	883.0
45°	9211.0	7058.4	2016.9	1022.4	884.9	756.6	743.6	752.9	760.3	773.3	780.8
47.5°	9913.7	7534.2	1977.9	961.1	857.0	726.8	704.5	700.8	678.5	676.7	674.8
50°	10398.9	7638.3	1756.7	899.7	816.1	693.4	658.1	635.8	596.7	578.1	580.0
52.5°	10553.1	7227.5	1435.1	838.4	749.1	648.8	598.6	563.3	514.9	498.2	496.3
55°	10348.7	6422.6	1147.0	764.0	656.2	589.3	533.5	487.0	448.0	427.6	427.6
57.5°	9848.6	5398.3	907.2	676.7	557.7	522.4	466.6	420.1	386.7	366.2	362.5
60°	9019.5	4286.7	717.5	572.6	475.9	449.9	392.2	362.5	332.7	308.6	303.0
62.5°	7761.0	3059.8	563.3	453.6	397.8	368.1	334.6	312.3	277.0	243.5	237.9
65°	6056.4	1871.9	435.0	332.7	319.7	304.9	284.4	264.0	221.2	187.8	182.2
67.5°	3820.1	886.7	310.4	251.0	252.8	245.4	236.1	219.4	187.8	158.0	154.3
70°	1682.3	429.4	204.5	191.5	187.8	187.8	195.2	189.6	159.9	132.0	126.4
72.5°	572.6	230.5	152.4	145.0	135.7	133.8	163.6	158.0	128.3	102.2	96.7
75°	299.3	154.3	111.5	104.1	81.8	98.5	130.1	122.7	91.1	66.9	61.3
77.5°	195.2	109.7	76.2	66.9	46.5	65.1	96.7	85.5	53.9	33.5	29.7
80°	122.7	72.5	44.6	31.6	22.3	35.3	52.1	37.2	20.4	7.4	5.6
82.5°	65.1	37.2	16.7	11.2	9.3	11.2	13.0	9.3	3.7	0.0	0.0
85°	26.0	13.0	5.6	3.7	1.9	0.0	3.7	1.9	0.0	0.0	0.0
87.5°	9.3	1.9	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)