

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: P967329

Luminaire Tested: **NAV-SB4D-827-U-T2U-HSS**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P967329
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-289-17)
Test Lab: INNOVATION CENTER
Issue Date: 1/21/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB4D-827-U-T2U-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 80 CRI, 2700K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE II U
OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 27780.6 lumens
Efficiency: N/A
Efficacy: 94.6 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Short
BUG Rating: B3 - U0 - G4

Input Watts (W): 293.6
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



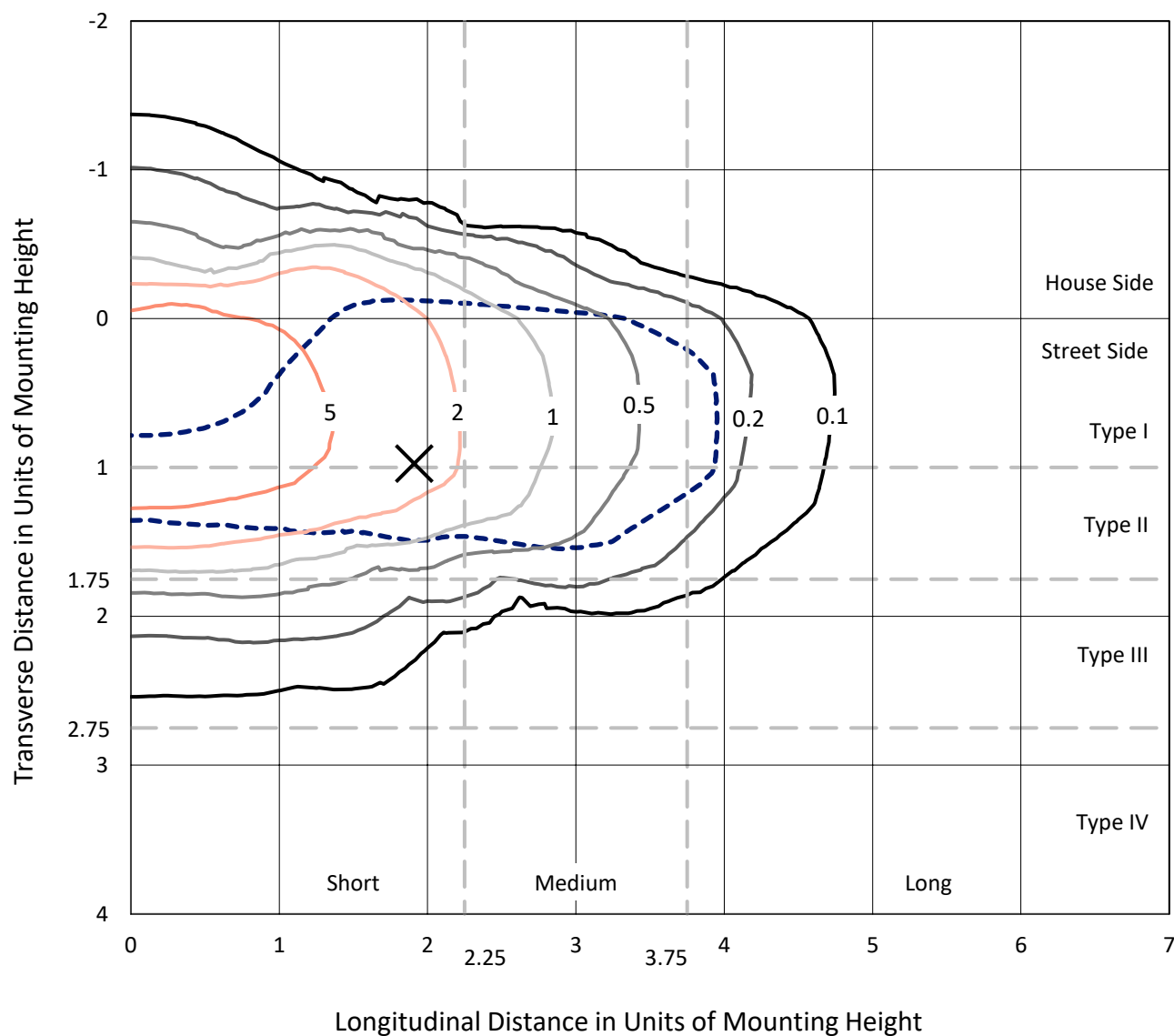
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Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

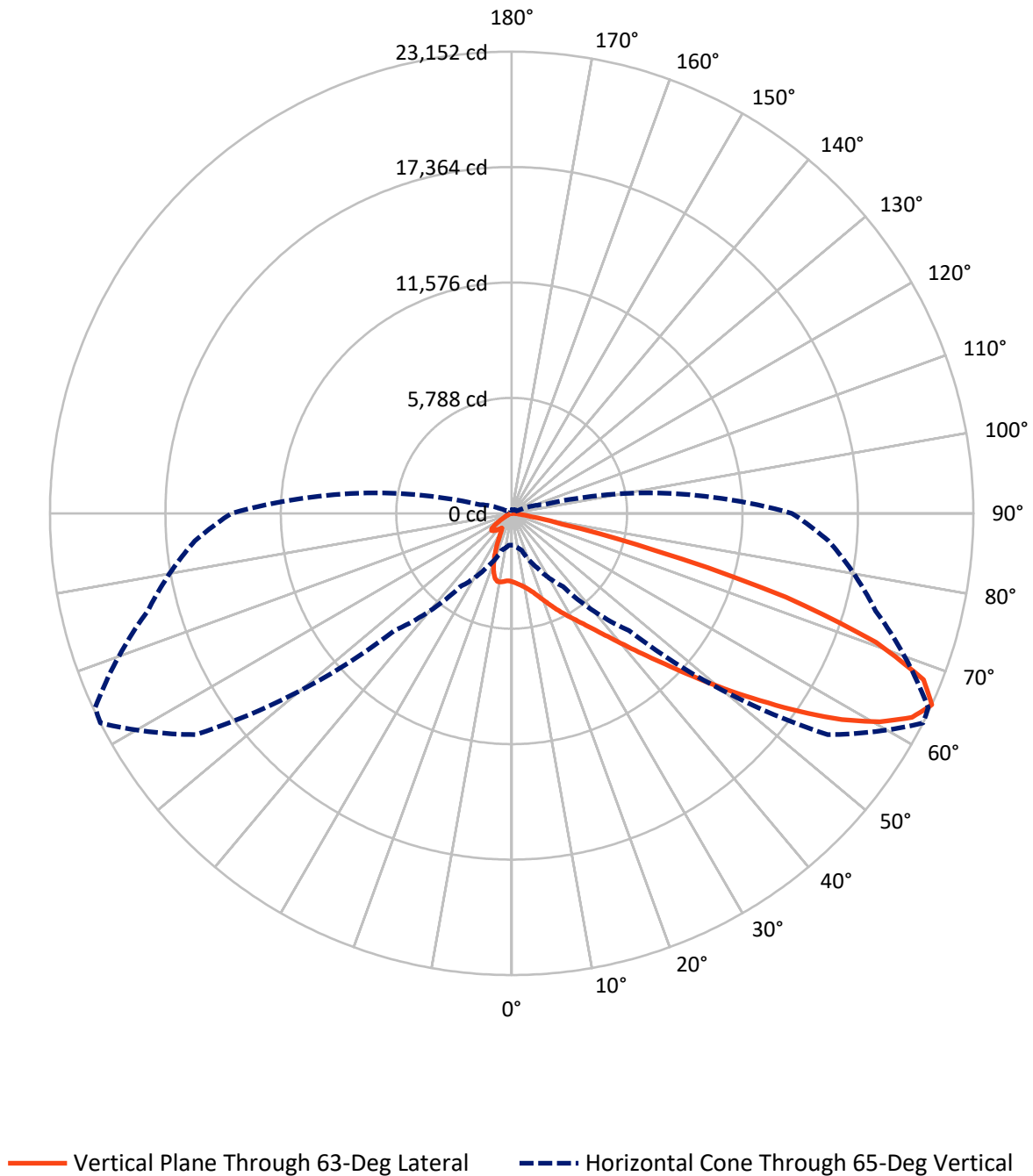


Based on 25 foot mounting height. Maximum calculated value = 9.4 fc

Type II - Short - N/A

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Luminous Intensity Polar Plot



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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4083.5	0.0	4083.5
	% Fixture	14.7	0.0	14.7
Street Side	Lumens	23697.0	0.0	23697.0
	% Fixture	85.3	0.0	85.3
Total	Lumens	27780.6	0.0	27780.6
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	323.0	1.2
10°-20°	896.3	3.2
20°-30°	1560.7	5.6
30°-40°	2813.1	10.1
40°-50°	5579.2	20.1
50°-60°	7599.8	27.4
60°-70°	6066.1	21.8
70°-80°	2745.0	9.9
80°-90°	197.3	0.7
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°	27780.6	100.0
0°-180°	27780.6	100.0

Coefficient of Utilization



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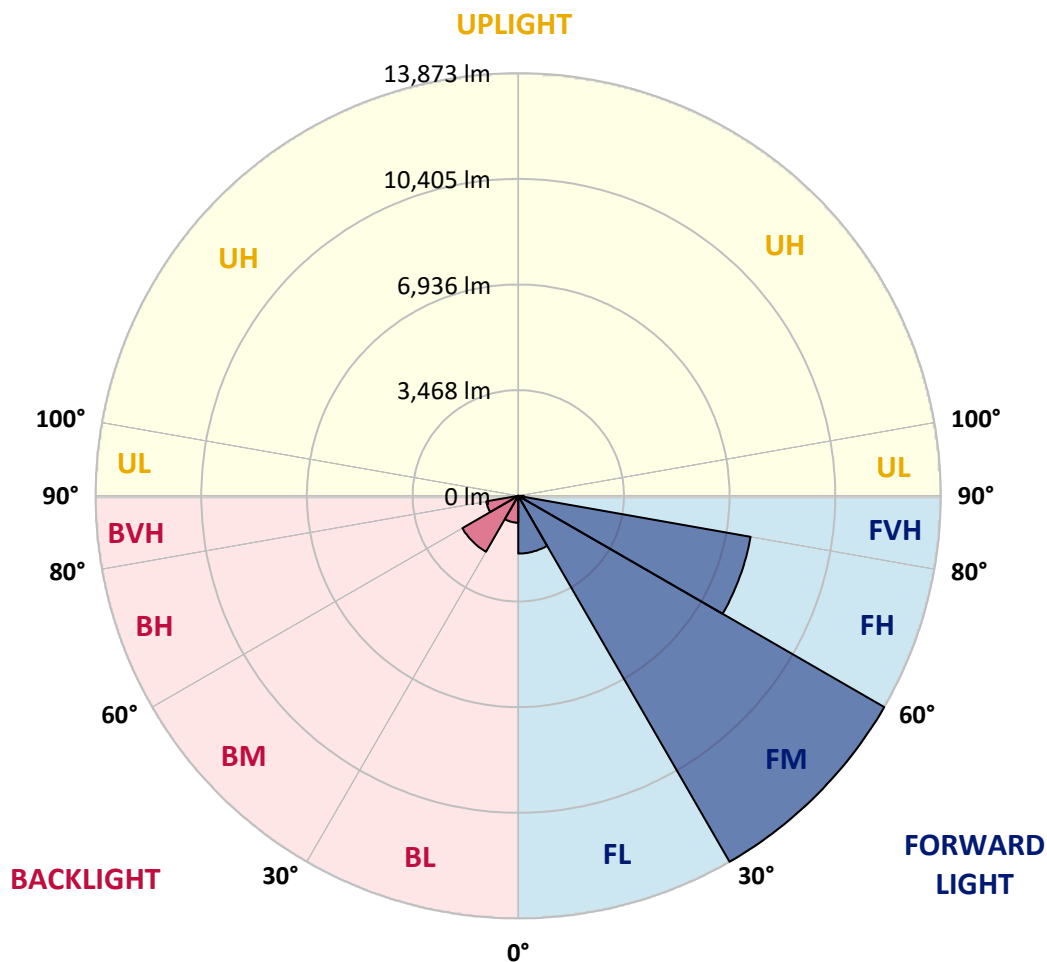
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1896.4	6.8			
FM	(30°-60°)	13872.9	49.9			
FH	(60°-80°)	7745.1	27.9			G4/12000
FVH	(80°-90°)	182.7	0.7			G2/225
BL	(0°-30°)	883.7	3.2	B2/1000		
BM	(30°-60°)	2119.1	7.6	B2/2500		
BH	(60°-80°)	1066.0	3.8	B3/2500		G3/2500
BVH	(80°-90°)	14.6	0.1			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G4

Type II Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	63°	65°	75°	85°
0°	3428.6	3428.6	3428.6	3428.6	3428.6	3428.6	3428.6	3428.6	3428.6	3428.6	3428.6
2.5°	3508.9	3499.4	3512.8	3507.0	3503.1	3495.6	3491.8	3487.9	3480.3	3474.5	3451.6
5°	3518.5	3512.8	3526.1	3537.6	3549.1	3560.5	3566.3	3573.9	3566.3	3551.0	3528.0
7.5°	3438.2	3434.4	3463.1	3497.4	3549.1	3593.0	3640.8	3667.6	3669.5	3663.8	3638.9
10°	3432.5	3422.9	3451.6	3493.6	3560.5	3638.9	3723.0	3780.3	3788.0	3812.8	3786.0
12.5°	3522.3	3512.8	3552.9	3598.8	3667.6	3749.8	3853.0	3933.2	3944.7	3979.0	3960.0
15°	3673.3	3659.9	3705.8	3765.0	3853.0	3946.6	4055.5	4128.2	4137.7	4179.7	4145.3
17.5°	3849.1	3835.8	3889.3	3952.3	4047.8	4176.0	4302.0	4382.3	4393.8	4420.5	4357.5
20°	4074.6	4057.5	4099.5	4156.8	4258.1	4411.0	4562.0	4676.7	4674.7	4674.7	4571.5
22.5°	4336.5	4309.7	4346.0	4391.9	4487.4	4672.9	4873.5	5009.2	5009.2	4955.7	4785.6
25°	4617.4	4590.7	4630.7	4672.9	4756.9	4967.2	5202.2	5370.4	5378.1	5286.3	5014.9
27.5°	4969.1	4934.7	4965.2	5014.9	5064.6	5278.6	5557.7	5752.6	5756.5	5615.1	5232.8
30°	5645.6	5548.1	5452.6	5399.1	5422.0	5634.1	5932.3	6148.3	6167.3	5972.5	5469.8
32.5°	6884.0	6864.9	6528.5	6089.0	5859.6	6016.3	6350.8	6610.7	6622.2	6371.8	5777.5
35°	8808.6	8785.7	8244.8	7407.7	6660.4	6528.5	6859.2	7166.9	7159.2	6876.4	6177.0
37.5°	11105.9	11084.9	10372.0	9252.0	8042.3	7302.6	7514.8	7837.8	7885.5	7514.8	6692.9
40°	13068.6	12990.2	12539.2	11459.4	9877.0	8586.9	8447.4	8661.5	8711.2	8271.5	7348.4
42.5°	14555.5	14488.6	14259.3	13584.6	12097.8	10486.6	9546.3	9628.5	9683.9	9156.4	8101.5
45°	15325.7	15310.4	15402.2	15339.1	14360.6	12818.2	11117.4	10775.2	10796.2	10136.8	8955.7
47.5°	15434.7	15427.0	15845.6	16438.0	16306.1	15448.0	13133.6	12204.8	12130.3	11243.4	9884.6
50°	14792.5	14777.2	15579.9	16690.3	17605.7	17657.4	15423.2	13815.9	13651.6	12388.3	10853.5
52.5°	12741.8	12738.0	14056.6	15904.8	18062.6	19591.4	17686.0	15585.6	15310.4	13599.9	11877.9
55°	9804.3	9875.1	11386.8	13571.2	17229.2	20522.2	19717.6	17550.4	17128.0	14819.2	12822.0
57.5°	6945.2	7048.4	8543.0	10488.5	14645.3	19971.8	21091.7	19518.9	19064.0	16034.8	13779.6
60°	3730.6	3822.3	5318.8	7640.9	10895.6	17919.2	21816.1	21227.4	20797.5	17189.1	14643.5
62.5°	2222.7	2253.3	2872.5	4932.7	7369.4	13689.7	21508.4	22528.9	22175.4	18158.1	15394.5
65°	1595.8	1601.6	1913.1	3012.0	4474.0	8317.5	19350.7	23152.0	23043.0	18888.2	15950.6
67.5°	1343.6	1339.8	1469.6	2001.0	3048.4	4166.3	14830.7	22270.9	22733.5	19350.7	16266.0
70°	1152.4	1158.1	1311.1	1465.9	2291.5	2358.4	7373.3	19390.7	20376.9	19472.9	16246.9
72.5°	858.1	877.2	1018.6	1335.9	1729.6	1622.6	2545.7	14377.8	16160.9	18347.3	15404.1
75°	605.9	615.4	716.7	1123.8	1290.1	1181.1	1299.6	7432.6	9718.3	14066.3	12608.0
77.5°	466.4	483.5	542.7	785.5	1270.9	829.4	795.1	2572.4	3952.3	8497.0	8644.2
80°	252.3	282.9	391.8	567.6	892.5	586.7	393.7	1024.4	1339.8	3973.3	3333.1
82.5°	130.0	145.2	273.3	409.0	508.4	512.2	195.0	426.2	552.4	1226.9	456.7
85°	51.6	63.0	183.5	225.5	261.8	252.3	87.9	172.0	198.7	340.2	139.5
87.5°	11.5	19.1	66.9	51.6	49.7	53.5	21.0	40.2	38.2	40.2	24.8
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°	3428.6	3428.6	3428.6	3428.6	3428.6	3428.6	3428.6	3428.6	3428.6	3428.6	3428.6
2.5°	3449.6	3442.1	3421.0	3398.1	3371.3	3356.1	3346.4	3344.6	3331.1	3321.6	3331.1
5°	3507.0	3499.4	3459.3	3411.4	3359.8	3319.7	3281.5	3247.1	3197.4	3187.9	3184.1
7.5°	3621.6	3600.6	3535.6	3470.6	3373.3	3256.6	3115.2	2952.7	2807.5	2763.6	2742.5
10°	3763.1	3734.5	3652.3	3537.6	3321.6	3004.4	2662.2	2345.0	2092.7	2022.0	1995.3
12.5°	3923.6	3898.8	3789.8	3577.8	3105.6	2530.4	2006.7	1613.0	1368.4	1307.3	1290.1
15°	4114.8	4078.5	3927.5	3516.6	2719.6	1922.6	1377.9	1144.8	1056.9	1045.4	1033.9
17.5°	4317.3	4258.1	4049.8	3296.8	2199.8	1366.5	1064.6	997.6	959.4	947.9	942.2
20°	4502.7	4426.3	4122.4	2964.2	1643.6	1064.6	953.7	909.7	875.4	861.9	854.3
22.5°	4688.1	4579.2	4122.4	2511.2	1232.7	944.1	875.4	835.2	795.1	777.9	768.3
25°	4881.2	4735.9	4049.8	2006.7	991.9	865.7	800.8	756.9	722.4	701.4	693.7
27.5°	5068.4	4867.7	3883.5	1528.9	882.9	796.9	732.0	689.9	657.4	642.2	642.2
30°	5246.2	4997.7	3650.3	1160.1	812.2	730.1	668.9	632.6	600.1	584.9	586.7
32.5°	5487.0	5162.1	3401.9	951.8	751.1	667.0	611.6	577.2	548.5	537.0	537.0
35°	5821.5	5404.8	3187.9	934.6	699.5	615.4	560.0	527.5	498.9	489.2	489.2
37.5°	6295.4	5796.6	3075.1	1049.2	657.4	569.5	517.9	483.5	456.7	449.2	447.2
40°	6880.2	6327.9	3136.2	1163.9	628.7	529.4	479.7	445.3	422.4	412.8	410.9
42.5°	7574.0	6983.4	3474.5	1251.8	609.7	495.0	443.4	405.2	389.9	386.0	386.0
45°	8371.0	7703.9	3992.5	1345.5	579.1	462.5	407.1	378.4	367.0	365.0	363.2
47.5°	9276.9	8495.2	4592.5	1462.1	548.5	431.9	378.4	359.3	349.7	345.9	345.9
50°	10175.1	9292.1	5209.9	1527.0	523.7	403.2	355.5	340.2	332.5	330.7	330.7
52.5°	11115.4	10112.0	5708.6	1465.9	502.7	380.3	336.4	324.9	317.2	315.4	315.4
55°	12011.8	10775.2	5794.6	1244.1	460.6	357.4	315.4	309.7	300.0	300.0	298.2
57.5°	12783.8	11107.7	5186.9	913.6	418.5	323.0	294.3	288.5	281.0	279.0	277.2
60°	13492.9	11012.2	4004.0	615.4	372.7	288.5	267.5	263.7	256.1	246.5	244.7
62.5°	13892.3	10591.7	2738.7	401.4	326.8	252.3	237.0	235.0	217.9	198.7	195.0
65°	14043.3	9727.9	1708.6	292.4	273.3	216.0	204.5	200.7	175.8	154.8	152.9
67.5°	13911.4	8306.0	861.9	231.2	216.0	179.7	168.2	168.2	151.0	131.9	130.0
70°	13383.9	6226.6	363.2	185.4	166.3	137.6	137.6	145.2	128.0	107.0	105.2
72.5°	12239.1	4189.3	193.0	141.4	124.2	97.5	112.7	118.5	101.3	80.3	80.3
75°	9729.8	2555.2	133.8	105.2	78.3	68.8	86.0	89.8	68.8	53.5	51.6
77.5°	6654.7	1467.8	89.8	66.9	49.7	40.2	59.2	55.5	36.3	24.8	26.8
80°	2922.2	611.6	51.6	30.5	19.1	15.3	21.0	15.3	11.5	7.7	7.7
82.5°	342.1	143.3	19.1	11.5	7.7	3.8	1.9	0.0	0.0	0.0	0.0
85°	70.7	17.2	9.5	3.8	1.9	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	13.4	3.8	1.9	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)