

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: P884120

Luminaire Tested: **NAV-SB4D-740-U-T4FT-HSS**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P884120
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-740-U-T4FT-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 70 CRI, 4000K, 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: 33664 lumens
Efficiency: N/A
Efficacy: 114.7 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B3 - U0 - G5

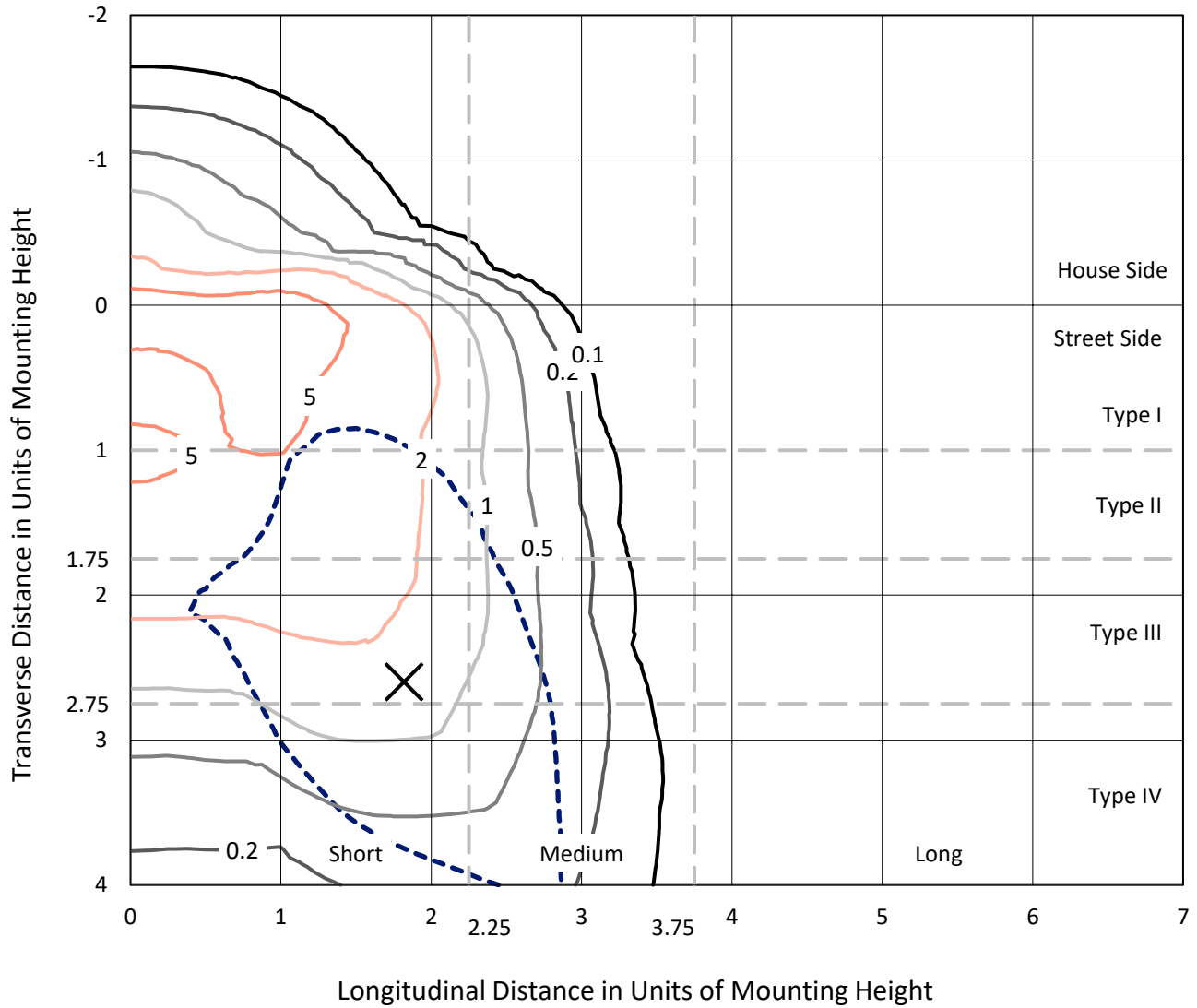
Input Watts (W): 293.6
Input Voltage (V): 120.0
Input Current (Ain): 2.469
Voltage Rise (V): NR
Power Factor: 0.999
Total Harmonic Distortion (THDi): 3.108
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

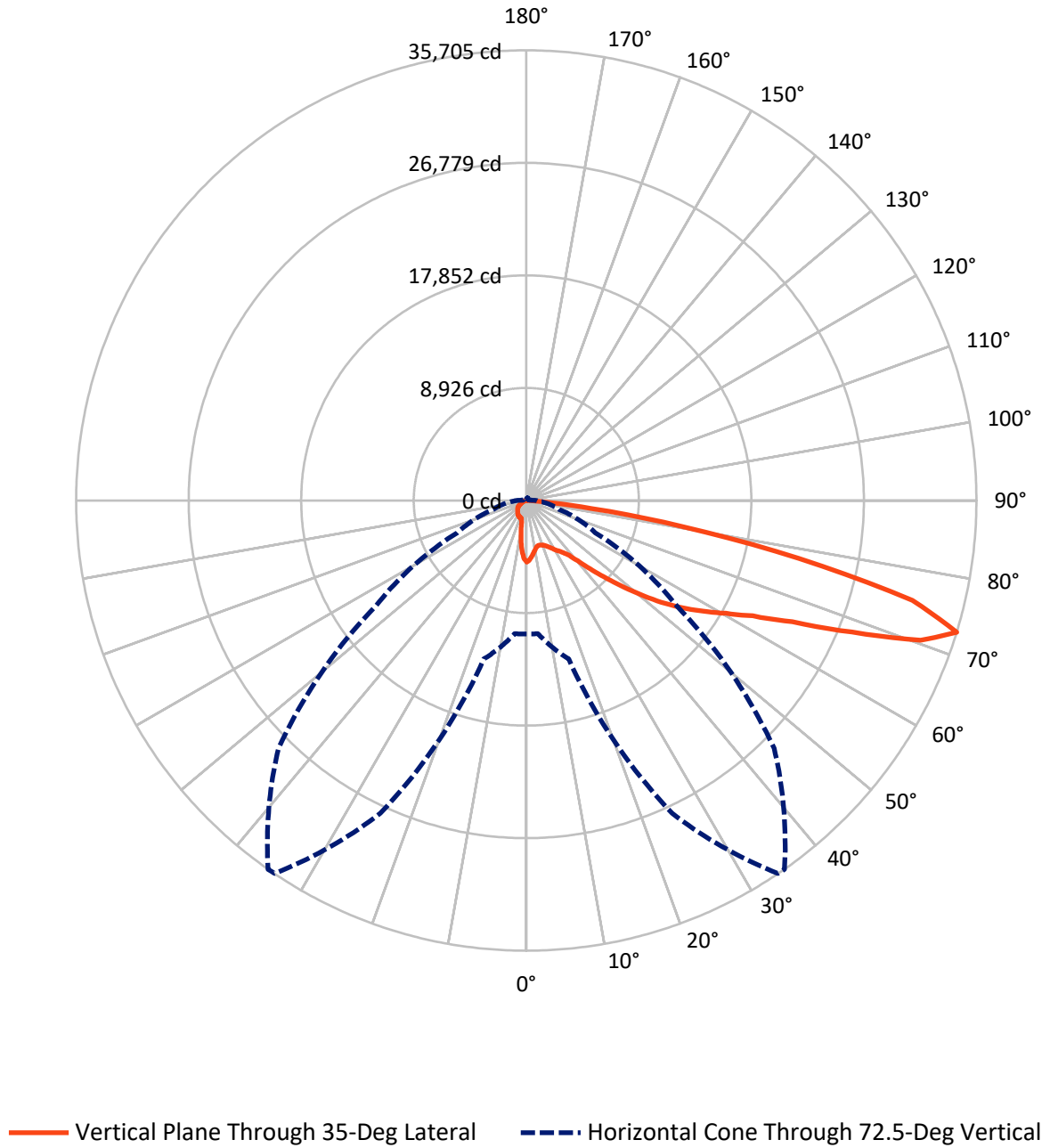
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 7.8 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	3788.7	0.0	3788.7
	% Fixture	11.3	0.0	11.3
Street Side	Lumens	29875.3	0.0	29875.3
	% Fixture	88.7	0.0	88.7
Total	Lumens	33664.0	0.0	33664.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	400.9	1.2
10°-20°	937.9	2.8
20°-30°	1523.6	4.5
30°-40°	2542.2	7.6
40°-50°	4809.8	14.3
50°-60°	7642.8	22.7
60°-70°	9454.7	28.1
70°-80°	5877.1	17.5
80°-90°	475.0	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°	33664.0	100.0
0°-180°	33664.0	100.0

Coefficient of Utilization



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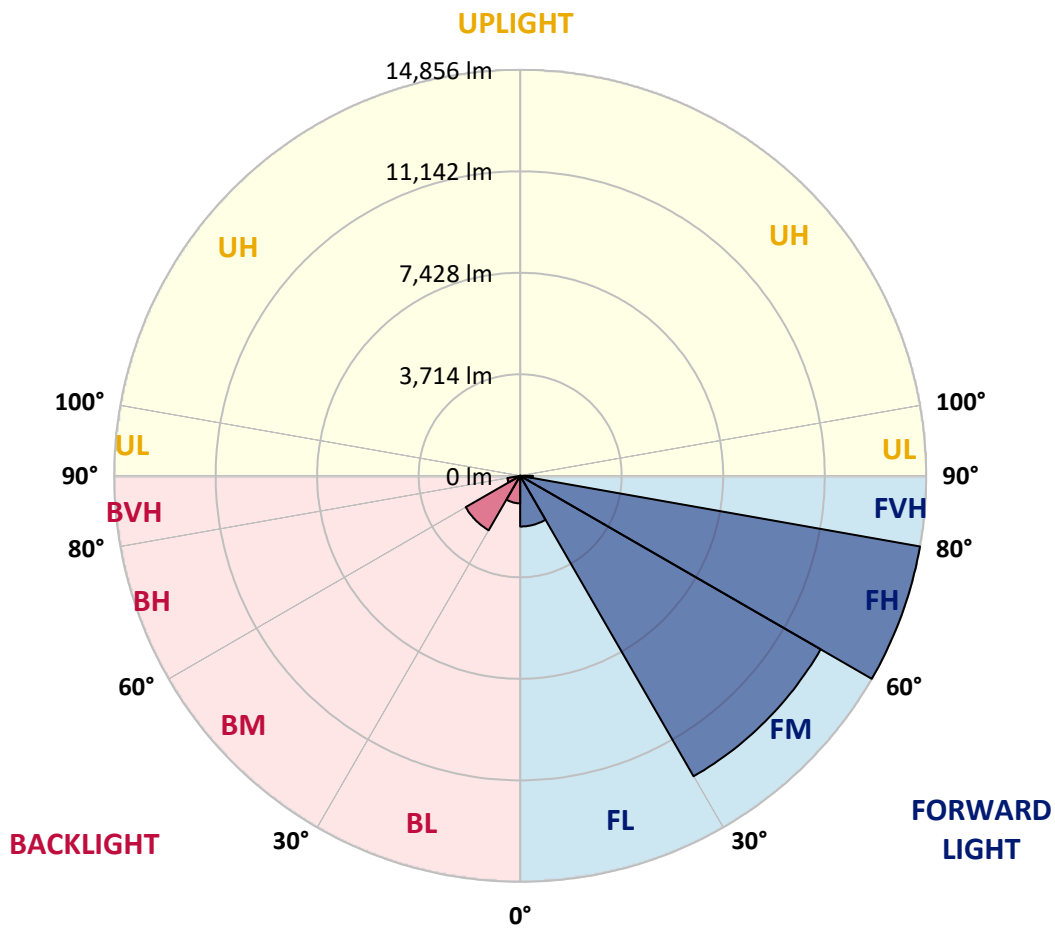
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1855.7	5.5			
FM (30°-60°)	12694.7	37.7			
FH (60°-80°)	14856.3	44.1			G5
FVH (80°-90°)	468.5	1.4			G3/500
BL (0°-30°)	1006.7	3.0	B3/2500		
BM (30°-60°)	2300.1	6.8	B2/2500		
BH (60°-80°)	475.4	1.4	B1/500		G1/500
BVH (80°-90°)	6.5	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G5

Type IV Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	34°	35°	45°	55°	65°	75°	85°
0°	4879.0	4879.0	4879.0	4879.0	4879.0	4879.0	4879.0	4879.0	4879.0	4879.0	4879.0
2.5°	4662.0	4701.4	4708.8	4721.2	4721.2	4736.0	4760.6	4795.2	4851.9	4881.5	4901.2
5°	4296.9	4326.5	4363.5	4393.1	4449.8	4457.2	4553.4	4647.2	4777.9	4876.6	4945.6
7.5°	3929.4	3963.9	4013.2	4084.8	4158.8	4181.0	4326.5	4484.4	4691.6	4876.6	4992.5
10°	3670.4	3672.8	3717.2	3788.8	3907.2	3934.3	4111.9	4336.4	4595.4	4847.0	5036.9
12.5°	3524.8	3542.1	3561.8	3616.1	3729.6	3746.8	3936.8	4200.7	4499.2	4829.7	5088.7
15°	3524.8	3537.2	3549.5	3576.6	3667.9	3682.7	3850.4	4114.4	4449.8	4837.1	5172.6
17.5°	3561.8	3581.6	3571.7	3603.8	3700.0	3709.8	3857.8	4089.7	4447.4	4884.0	5300.8
20°	3650.6	3665.4	3645.7	3665.4	3761.6	3781.4	3934.3	4136.6	4489.3	4965.4	5461.2
22.5°	3791.2	3798.6	3751.8	3766.6	3865.2	3889.9	4067.5	4269.8	4590.4	5096.1	5675.8
25°	3968.8	3983.6	3912.1	3929.4	4023.1	4052.7	4257.4	4469.6	4750.8	5276.2	5949.6
27.5°	4173.6	4181.0	4119.3	4116.8	4237.7	4279.6	4486.8	4716.2	4965.4	5503.1	6294.9
30°	4407.9	4430.1	4370.9	4361.0	4514.0	4548.5	4753.2	5019.6	5281.1	5843.5	6785.8
32.5°	4592.9	4610.2	4575.6	4600.3	4755.7	4782.8	5076.4	5448.8	5776.9	6327.0	7454.2
35°	4859.3	4869.2	4790.2	4834.6	5012.2	5081.3	5517.9	6050.7	6401.0	6933.8	8327.4
37.5°	5823.8	5823.8	5488.3	5268.8	5439.0	5500.6	6122.2	6808.0	7170.6	7747.8	9427.6
40°	7158.2	7136.0	6645.2	6196.2	6174.0	6294.9	6983.1	7762.6	8164.6	8724.6	10665.8
42.5°	8581.5	8547.0	7878.5	7434.5	7360.5	7402.4	7977.2	8939.2	9348.6	9916.0	11997.8
45°	9844.4	9834.6	9222.8	8625.9	8492.7	8625.9	9217.9	10315.5	10609.1	11206.0	13327.3
47.5°	10902.6	10902.6	10456.1	10066.4	9997.4	10076.3	10897.7	11842.4	11815.3	12579.9	14622.3
50°	12121.1	12111.3	11687.0	11519.3	11590.8	11701.8	12831.5	13450.7	13063.4	13929.2	15779.2
52.5°	12974.6	13033.8	12888.3	12861.1	13226.2	13418.6	14795.0	15024.4	14180.8	15209.4	16645.0
55°	13650.5	13719.5	13887.3	14077.2	14780.2	15031.8	16696.8	16516.7	15115.7	16319.4	17143.2
57.5°	14607.5	14508.9	14767.9	15142.8	16279.9	16583.3	18539.4	17925.2	15868.0	17219.7	17197.5
60°	15769.3	15784.1	15828.5	16302.1	17777.2	18166.9	20354.8	19257.2	16351.5	17772.2	16595.7
62.5°	17165.4	17187.6	17278.9	18006.6	19787.5	20155.0	22288.7	20347.4	16573.5	17616.8	15041.7
65°	17069.2	17163.0	18181.7	20670.6	22843.7	23206.3	24545.7	21112.1	16238.0	16196.1	12246.9
67.5°	15549.8	15702.7	17407.2	23852.5	27451.4	27855.9	27273.8	21262.6	14790.1	12594.7	7989.5
70°	13556.7	13611.0	15660.8	26713.9	32786.8	33196.2	29715.8	19607.4	11223.3	7025.0	3579.1
72.5°	10586.9	10599.2	13004.2	27377.4	35682.6	35704.8	27799.2	14555.7	6035.9	2698.5	1243.2
75°	7562.8	7488.8	8709.8	22202.4	31393.1	31644.7	20840.8	6827.7	2306.3	1275.3	619.1
77.5°	4055.2	4136.6	4928.4	13167.0	21686.8	22116.0	11371.3	1968.4	1174.1	868.3	409.5
80°	1253.1	1322.1	2020.2	6028.5	12283.9	12542.9	4215.5	875.7	818.9	619.1	268.9
82.5°	394.7	409.5	942.3	2533.3	5098.6	5217.0	1221.0	495.8	559.9	409.5	157.9
85°	113.5	115.9	419.3	944.7	1260.5	1285.1	342.9	192.4	320.7	254.1	81.4
87.5°	12.3	39.5	157.9	157.9	111.0	108.5	37.0	41.9	91.3	32.1	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

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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	4879.0	4879.0	4879.0	4879.0	4879.0	4879.0	4879.0	4879.0	4879.0	4879.0	4879.0
2.5°	4888.9	4891.4	4859.3	4805.0	4745.8	4696.5	4634.8	4585.5	4551.0	4541.1	4558.4
5°	4923.4	4906.2	4814.9	4649.6	4452.3	4282.1	4092.2	3941.7	3843.0	3801.1	3815.9
7.5°	4975.2	4925.9	4726.1	4400.5	4023.1	3687.6	3347.2	3083.3	2915.6	2831.7	2844.1
10°	5019.6	4921.0	4578.1	4040.4	3463.2	2955.1	2496.3	2178.1	2000.5	1916.6	1919.1
12.5°	5061.6	4918.5	4385.7	3613.6	2831.7	2210.1	1783.4	1625.5	1576.2	1558.9	1554.0
15°	5140.5	4925.9	4144.0	3125.3	2202.7	1669.9	1514.5	1512.1	1521.9	1517.0	1514.5
17.5°	5249.0	4933.3	3870.2	2607.3	1699.5	1472.6	1465.2	1487.4	1502.2	1494.8	1492.3
20°	5389.6	4962.9	3579.1	2094.2	1460.3	1423.3	1440.5	1460.3	1472.6	1460.3	1457.8
22.5°	5587.0	5014.7	3260.9	1682.3	1383.8	1393.7	1408.5	1430.7	1443.0	1425.7	1423.3
25°	5828.7	5096.1	2947.7	1462.7	1346.8	1359.1	1381.3	1406.0	1420.8	1403.5	1401.1
27.5°	6142.0	5226.8	2659.1	1413.4	1309.8	1317.2	1349.3	1386.3	1406.0	1383.8	1383.8
30°	6595.8	5441.4	2409.9	1435.6	1287.6	1270.3	1314.7	1366.5	1388.7	1369.0	1366.5
32.5°	7197.7	5744.8	2257.0	1470.1	1277.7	1216.1	1258.0	1324.6	1361.6	1349.3	1349.3
35°	7987.0	6206.1	2197.8	1509.6	1270.3	1159.3	1188.9	1260.5	1324.6	1336.9	1336.9
37.5°	8944.1	6847.4	2215.1	1526.9	1248.1	1112.5	1127.3	1188.9	1272.8	1312.3	1322.1
40°	10031.9	7594.8	2313.7	1509.6	1223.5	1073.0	1075.5	1122.3	1196.3	1255.5	1275.3
42.5°	11154.2	8468.0	2496.3	1445.5	1201.3	1038.5	1031.1	1063.1	1112.5	1154.4	1171.7
45°	12222.3	9365.9	2676.3	1356.7	1174.1	1003.9	986.7	999.0	1008.9	1026.1	1036.0
47.5°	13154.7	9997.4	2624.5	1275.3	1137.1	964.5	934.9	929.9	900.3	897.9	895.4
50°	13798.5	10135.5	2331.0	1193.9	1082.9	920.1	873.2	843.6	791.8	767.1	769.6
52.5°	14003.2	9590.4	1904.3	1112.5	994.1	860.9	794.3	747.4	683.3	661.1	658.6
55°	13731.9	8522.3	1521.9	1013.8	870.7	781.9	707.9	646.3	594.5	567.3	567.3
57.5°	13068.3	7163.2	1203.7	897.9	740.0	693.1	619.1	557.5	513.1	485.9	481.0
60°	11968.2	5688.1	952.1	759.7	631.5	596.9	520.5	481.0	441.5	409.5	402.1
62.5°	10298.3	4060.1	747.4	601.9	527.9	488.4	444.0	414.4	367.5	323.1	315.7
65°	8036.4	2483.9	577.2	441.5	424.3	404.5	377.4	350.3	293.5	249.1	241.7
67.5°	5069.0	1176.6	411.9	333.0	335.5	325.6	313.3	291.1	249.1	209.7	204.7
70°	2232.3	569.8	271.3	254.1	249.1	249.1	259.0	251.6	212.1	175.1	167.7
72.5°	759.7	305.9	202.3	192.4	180.1	177.6	217.1	209.7	170.2	135.7	128.3
75°	397.1	204.7	148.0	138.1	108.5	130.7	172.7	162.8	120.9	88.8	81.4
77.5°	259.0	145.5	101.1	88.8	61.7	86.3	128.3	113.5	71.5	44.4	39.5
80°	162.8	96.2	59.2	41.9	29.6	46.9	69.1	49.3	27.1	9.9	7.4
82.5°	86.3	49.3	22.2	14.8	12.3	14.8	17.3	12.3	4.9	0.0	0.0
85°	34.5	17.3	7.4	4.9	2.5	0.0	4.9	2.5	0.0	0.0	0.0
87.5°	12.3	2.5	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)