

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: P884159

Luminaire Tested: **NAV-SB4D-830-U-T3**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P884159
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-5)
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB4D-830-U-T3
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 80 CRI, 3000K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE III OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 36109 lumens
Efficiency: N/A
Efficacy: 123.0 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B3 - U0 - G4

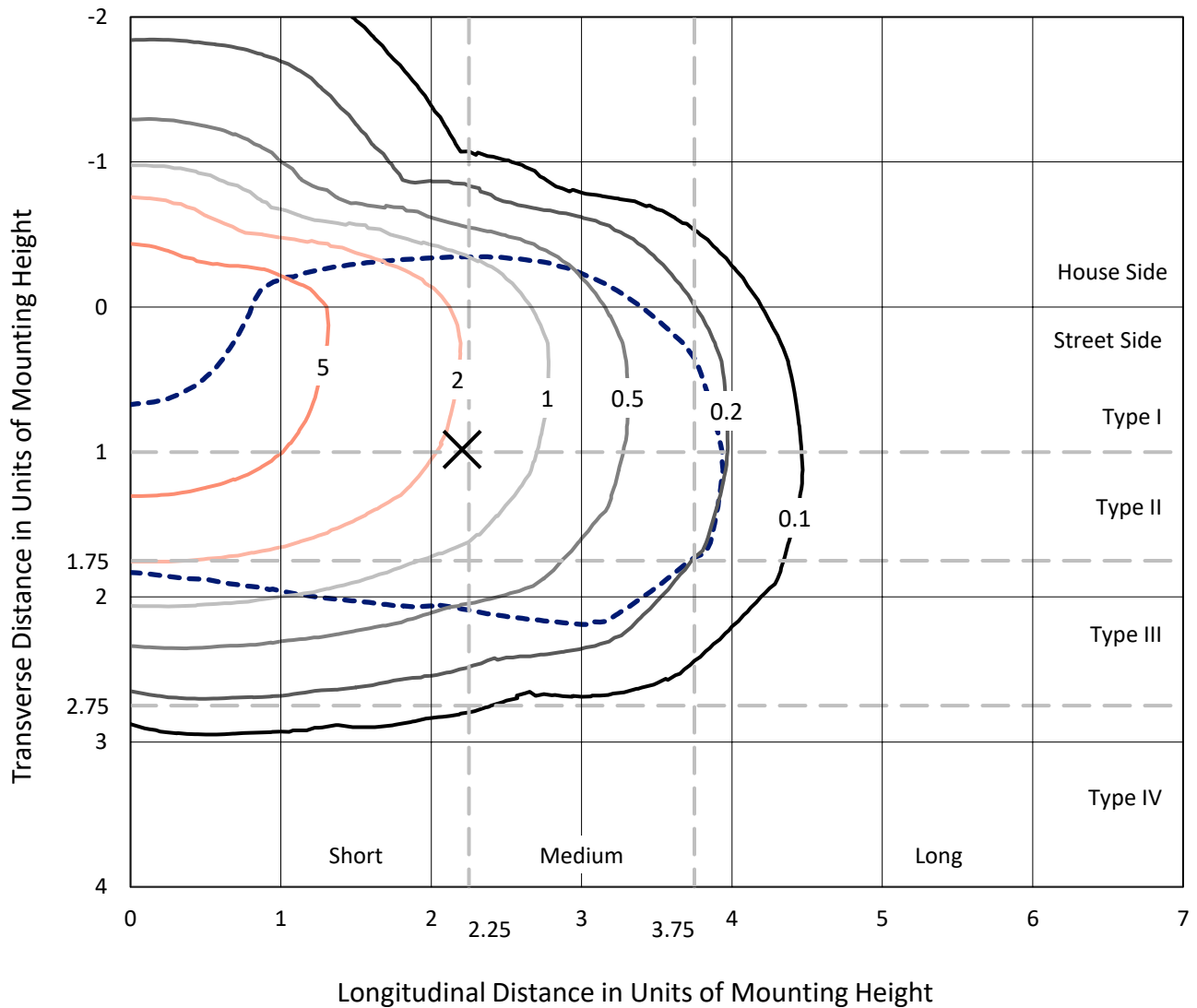
Input Watts (W): 293.6
Input Voltage (V): 120.0
Input Current (Ain): 2.469
Voltage Rise (V): NR
Power Factor: 0.999
Total Harmonic Distortion (THDi): 3.108
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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 CATALOG NUMBER: NAV-SB4D-830-U-T3

Iso-Footcandle Lines of Horizontal Illumination

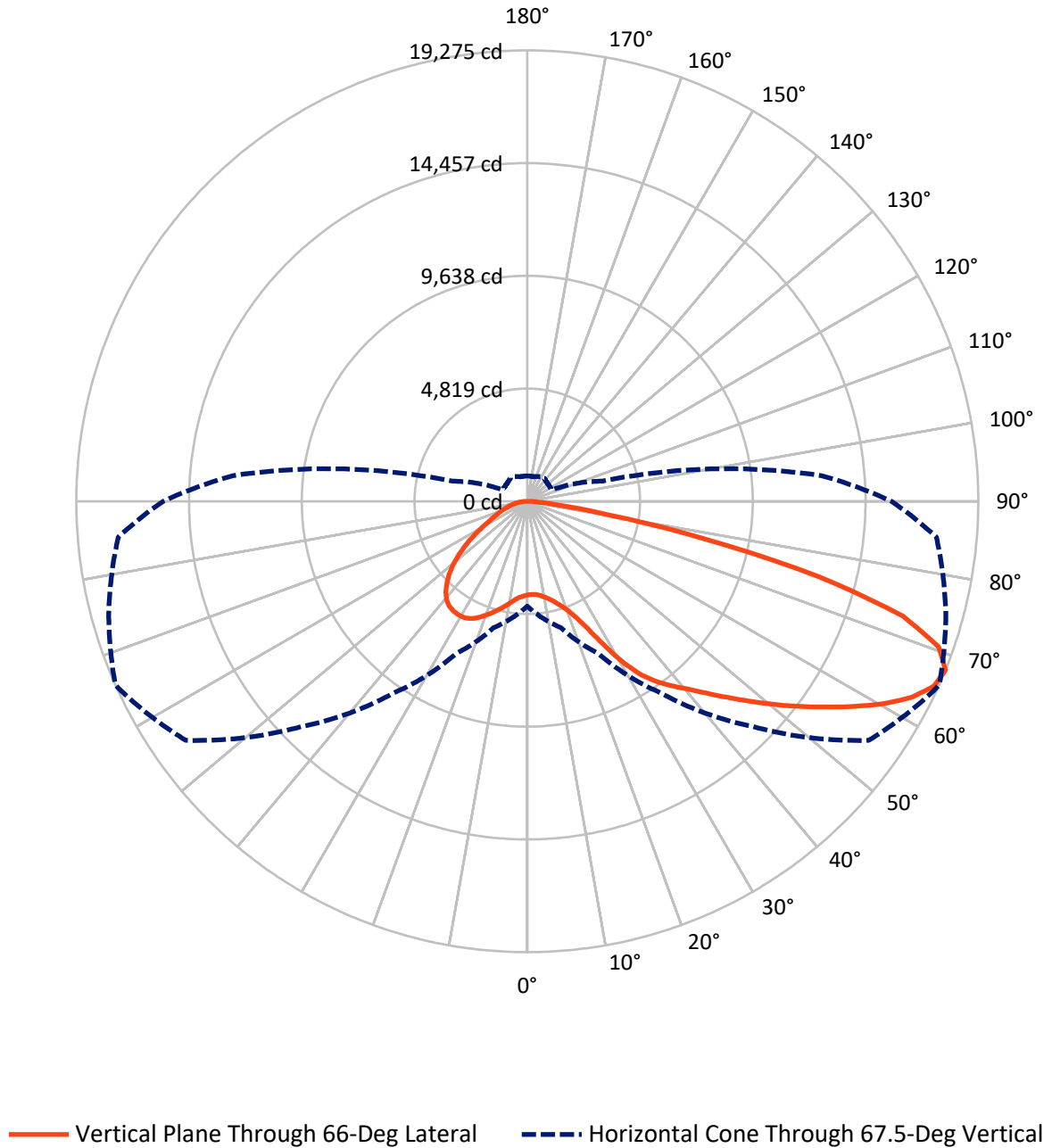
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 9.1 fc
 Type III - Short - N/A

REPORT NUMBER: P884159
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Luminous Intensity Polar Plot



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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	8978.4	0.0	8978.4
	% Fixture	24.9	0.0	24.9
Street Side	Lumens	27130.6	0.0	27130.6
	% Fixture	75.1	0.0	75.1
Total	Lumens	36109.0	0.0	36109.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	397.1	1.1
10°-20°	1311.9	3.6
20°-30°	2528.6	7.0
30°-40°	4433.6	12.3
40°-50°	6591.2	18.3
50°-60°	8355.0	23.1
60°-70°	8175.2	22.6
70°-80°	3899.6	10.8
80°-90°	416.8	1.2
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°	36109.0	100.0
0°-180°	36109.0	100.0

Coefficient of Utilization



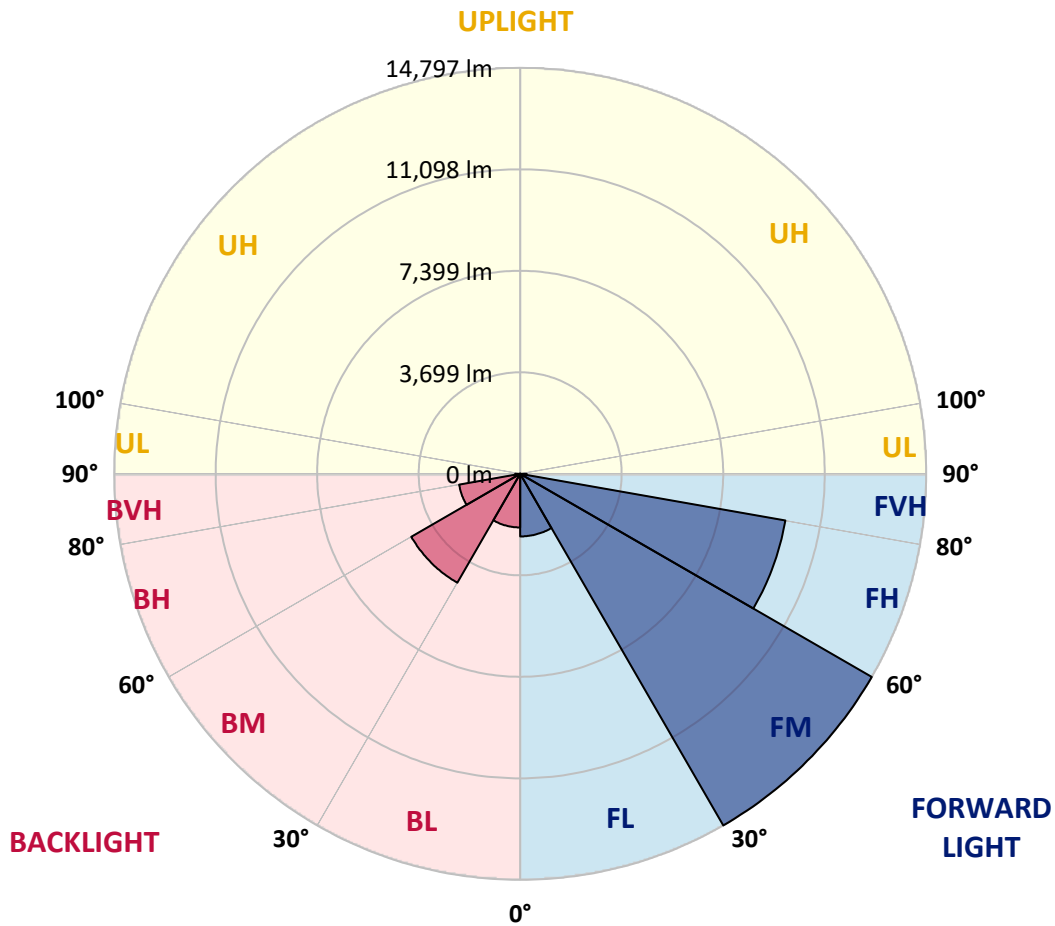
REPORT NUMBER: P884159
 CATALOG NUMBER: NAV-SB4D-830-U-T3

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2281.7	6.3			
FM (30°-60°)	14797.2	41.0			
FH (60°-80°)	9815.4	27.2			G4/12000
FVH (80°-90°)	236.3	0.7			G3/500
BL (0°-30°)	1955.8	5.4	B3/2500		
BM (30°-60°)	4582.7	12.7	B3/5000		
BH (60°-80°)	2259.4	6.3	B3/2500		G3/2500
BVH (80°-90°)	180.5	0.5			G2/225
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G4

Type III Short



REPORT NUMBER: P884159
 CATALOG NUMBER: NAV-SB4D-830-U-T3

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	66°	75°	85°
0°	4005.0	4005.0	4005.0	4005.0	4005.0	4005.0	4005.0	4005.0	4005.0	4005.0	4005.0
2.5°	3963.2	3986.0	3980.3	3970.8	3968.9	3972.7	3978.4	3984.1	3982.2	3991.7	4006.9
5°	3951.8	3974.6	3972.7	3972.7	3980.3	3995.5	4005.0	4014.5	4005.0	4016.3	4037.2
7.5°	3959.4	3976.5	3984.1	3991.7	4010.7	4039.1	4061.9	4082.8	4071.4	4084.6	4111.2
10°	4056.2	4069.5	4077.1	4077.1	4090.3	4122.6	4145.4	4183.3	4173.8	4194.7	4228.8
12.5°	4232.6	4245.9	4245.9	4238.3	4247.8	4268.7	4276.3	4318.0	4300.9	4335.1	4369.2
15°	4448.9	4475.5	4454.6	4441.3	4445.1	4466.0	4464.1	4496.3	4479.3	4507.7	4538.1
17.5°	4688.0	4722.1	4688.0	4686.1	4678.5	4701.2	4703.1	4731.6	4701.2	4722.1	4743.0
20°	4970.6	5018.1	4989.6	4999.1	4982.0	4991.5	5001.0	5042.7	4995.3	5010.5	5004.8
22.5°	5369.0	5426.0	5395.6	5431.7	5420.3	5412.7	5410.8	5484.8	5410.8	5416.5	5361.5
25°	5949.6	6017.9	5964.8	6014.1	6014.1	6038.8	6067.2	6162.1	6038.8	6002.7	5860.4
27.5°	6807.1	6875.4	6771.1	6801.4	6791.9	6852.6	6822.3	7057.5	6924.7	6865.9	6579.5
30°	7839.2	7960.6	7763.3	7755.7	7746.2	7843.0	7886.6	8042.2	7907.5	7848.7	7503.4
32.5°	8954.7	9081.8	8846.6	8778.3	8742.2	8801.1	8765.0	8890.2	8797.3	8706.2	8279.3
35°	10134.8	10260.0	10036.1	9903.3	9759.1	9635.8	9506.8	9539.1	9451.8	9313.3	8871.3
37.5°	11250.3	11479.9	11242.7	11100.5	10834.8	10593.9	10233.4	10083.6	10002.0	9874.9	9429.0
40°	12386.7	12517.7	12337.4	12216.0	11927.6	11550.1	10973.3	10656.5	10546.5	10423.2	10045.6
42.5°	13223.4	13348.6	13251.9	13168.4	12942.6	12504.4	11758.8	11362.3	11202.9	11064.4	10743.8
45°	13887.4	13980.4	13919.7	13950.0	13853.3	13428.3	12572.7	12119.2	11954.2	11785.3	11533.0
47.5°	14154.9	14253.6	14350.3	14530.6	14695.6	14382.6	13447.3	12938.8	12764.3	12591.6	12343.1
50°	14124.6	14225.1	14505.9	14889.1	15401.4	15297.0	14369.3	13811.5	13650.3	13453.0	13223.4
52.5°	13881.7	13995.6	14356.0	14993.5	15809.3	15981.9	15308.4	14712.7	14560.9	14325.7	14096.1
55°	13244.3	13312.6	13853.3	14756.3	15906.0	16460.0	16228.6	15672.7	15520.9	15192.7	14942.3
57.5°	12062.3	12161.0	12948.3	14117.0	15663.2	16784.4	17036.8	16682.0	16535.9	16063.5	15801.7
60°	10519.9	10677.4	11578.5	13043.2	15044.7	16782.5	17771.0	17674.2	17552.8	16921.0	16647.8
62.5°	8774.5	8956.6	9823.6	11525.4	13963.3	16306.3	18230.1	18505.2	18442.6	17712.2	17363.1
65°	6738.8	6864.0	7727.2	9561.8	12280.5	15283.8	18283.2	19072.4	19083.8	18313.6	17736.8
67.5°	4486.9	4847.3	5596.7	7175.2	10026.6	13612.3	17816.5	19165.4	19275.4	18520.4	17549.0
70°	2189.4	2663.7	3397.9	4663.3	7175.2	11049.2	16596.6	18402.7	18647.5	17917.0	16429.7
72.5°	908.8	1062.4	1462.7	2301.3	4118.8	7456.0	14145.4	16334.8	16788.2	15875.7	13813.4
75°	612.8	664.0	836.7	1180.1	1876.3	3676.8	10201.2	12180.0	12910.4	11990.2	9800.9
77.5°	472.4	504.7	609.0	825.3	1115.5	1390.6	5460.1	7340.2	7717.8	7144.8	5099.6
80°	371.8	396.5	455.3	601.4	791.1	743.7	1861.1	3325.8	3543.9	2972.9	1639.2
82.5°	322.5	332.0	326.3	407.9	525.5	434.5	610.9	1227.5	1354.6	982.7	535.0
85°	233.4	259.9	271.3	252.3	278.9	220.1	250.4	434.5	478.1	426.9	301.7
87.5°	94.9	140.4	172.6	163.2	102.4	62.6	77.8	127.1	146.1	159.4	98.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

REPORT NUMBER: P884159
 CATALOG NUMBER: NAV-SB4D-830-U-T3

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	4005.0	4005.0	4005.0	4005.0	4005.0	4005.0	4005.0	4005.0	4005.0	4005.0	4005.0
2.5°	4008.8	4022.0	4031.5	4042.9	4050.5	4061.9	4084.6	4097.9	4099.8	4109.3	4107.4
5°	4044.8	4063.8	4084.6	4115.0	4149.2	4177.6	4221.2	4251.6	4263.0	4272.5	4270.6
7.5°	4122.6	4149.2	4187.1	4240.2	4289.5	4327.5	4380.6	4416.7	4452.7	4466.0	4467.9
10°	4238.3	4276.3	4331.3	4403.4	4456.5	4505.8	4560.8	4591.2	4627.2	4642.4	4650.0
12.5°	4382.5	4422.3	4494.4	4595.0	4644.3	4678.5	4697.4	4689.9	4697.4	4710.7	4714.5
15°	4547.6	4591.2	4672.8	4780.9	4815.1	4784.7	4743.0	4705.0	4699.3	4703.1	4716.4
17.5°	4743.0	4775.2	4870.1	4961.1	4936.5	4811.3	4720.2	4659.5	4629.1	4619.7	4632.9
20°	5016.2	5016.2	5094.0	5150.9	4985.8	4773.3	4631.0	4532.4	4469.8	4443.2	4437.5
22.5°	5348.2	5317.8	5367.1	5327.3	4976.3	4667.1	4469.8	4299.0	4204.2	4166.2	4160.5
25°	5769.4	5733.3	5720.0	5473.4	4908.0	4498.2	4177.6	3970.8	3887.3	3866.5	3870.3
27.5°	6404.9	6313.8	6141.2	5553.1	4782.8	4232.6	3836.1	3644.5	3597.1	3599.0	3604.7
30°	7251.1	7068.9	6645.9	5566.4	4577.9	3857.0	3487.0	3350.4	3327.7	3337.2	3369.4
32.5°	8034.6	7861.9	7161.9	5505.6	4263.0	3488.9	3174.0	3082.9	3048.8	3060.2	3075.3
35°	8649.3	8601.9	7640.0	5420.3	3876.0	3143.6	2893.2	2815.4	2749.0	2733.8	2745.2
37.5°	9229.8	9210.9	7998.5	5300.7	3492.7	2898.9	2667.4	2565.0	2468.2	2415.1	2417.0
40°	9867.3	9848.3	8233.8	5116.7	3153.1	2686.4	2464.4	2329.7	2210.2	2113.5	2123.0
42.5°	10584.4	10472.5	8345.7	4853.0	2864.8	2506.2	2299.4	2117.3	1959.8	1870.6	1876.3
45°	11368.0	11115.6	8343.8	4517.2	2621.9	2341.1	2123.0	1864.9	1718.9	1635.4	1631.6
47.5°	12198.9	11730.3	8241.4	4145.4	2386.7	2159.0	1849.8	1652.5	1555.7	1504.5	1493.1
50°	13056.5	12305.2	8066.8	3718.5	2145.7	1952.2	1679.0	1544.3	1470.3	1422.9	1405.8
52.5°	13862.8	12826.9	7856.3	3234.7	1901.0	1751.1	1603.1	1498.8	1421.0	1367.9	1345.1
55°	14612.1	13276.5	7558.4	2739.5	1701.8	1616.4	1567.1	1479.8	1390.6	1328.0	1303.4
57.5°	15278.1	13568.7	7044.3	2274.7	1559.5	1523.4	1529.1	1447.6	1345.1	1292.0	1257.8
60°	15832.0	13783.1	6283.5	1844.1	1443.8	1432.4	1470.3	1386.8	1267.3	1206.6	1180.1
62.5°	16164.0	13779.3	5350.1	1510.2	1345.1	1348.9	1392.5	1311.0	1189.5	1132.6	1115.5
65°	16135.6	13441.6	4325.6	1292.0	1250.2	1254.0	1311.0	1227.5	1125.0	1090.9	1089.0
67.5°	15564.5	12618.2	3318.2	1149.7	1145.9	1163.0	1229.4	1170.6	1085.2	1081.4	1087.1
70°	14018.3	10908.8	2390.5	1035.9	1037.8	1062.4	1149.7	1134.5	1064.3	1071.9	1070.0
72.5°	11240.8	8317.3	1605.0	916.3	918.2	958.1	1073.8	1106.1	1043.5	1144.0	1159.2
75°	7486.3	5186.9	1032.1	789.2	791.1	842.4	1007.4	1051.0	986.5	1140.2	1149.7
77.5°	3597.1	2331.6	747.5	664.0	664.0	711.4	870.8	941.0	840.5	886.0	812.0
80°	1242.7	876.5	588.1	535.0	523.6	555.9	734.2	815.8	724.7	667.8	626.1
82.5°	489.5	455.3	472.4	415.5	377.5	398.4	571.1	673.5	533.1	481.9	480.0
85°	280.8	296.0	333.9	275.1	218.2	244.7	419.3	483.8	402.2	354.8	362.4
87.5°	75.9	104.3	153.7	142.3	98.7	104.3	199.2	267.5	231.5	178.3	184.0
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)