

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: P884154

Luminaire Tested: **NAV-SB4D-830-U-SL4**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P884154
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-9)
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB4D-830-U-SL4
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 80 CRI, 3000K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE IV SPILL
LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 35770 lumens
Efficiency: N/A
Efficacy: 121.8 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Medium
BUG Rating: B4 - U0 - G5

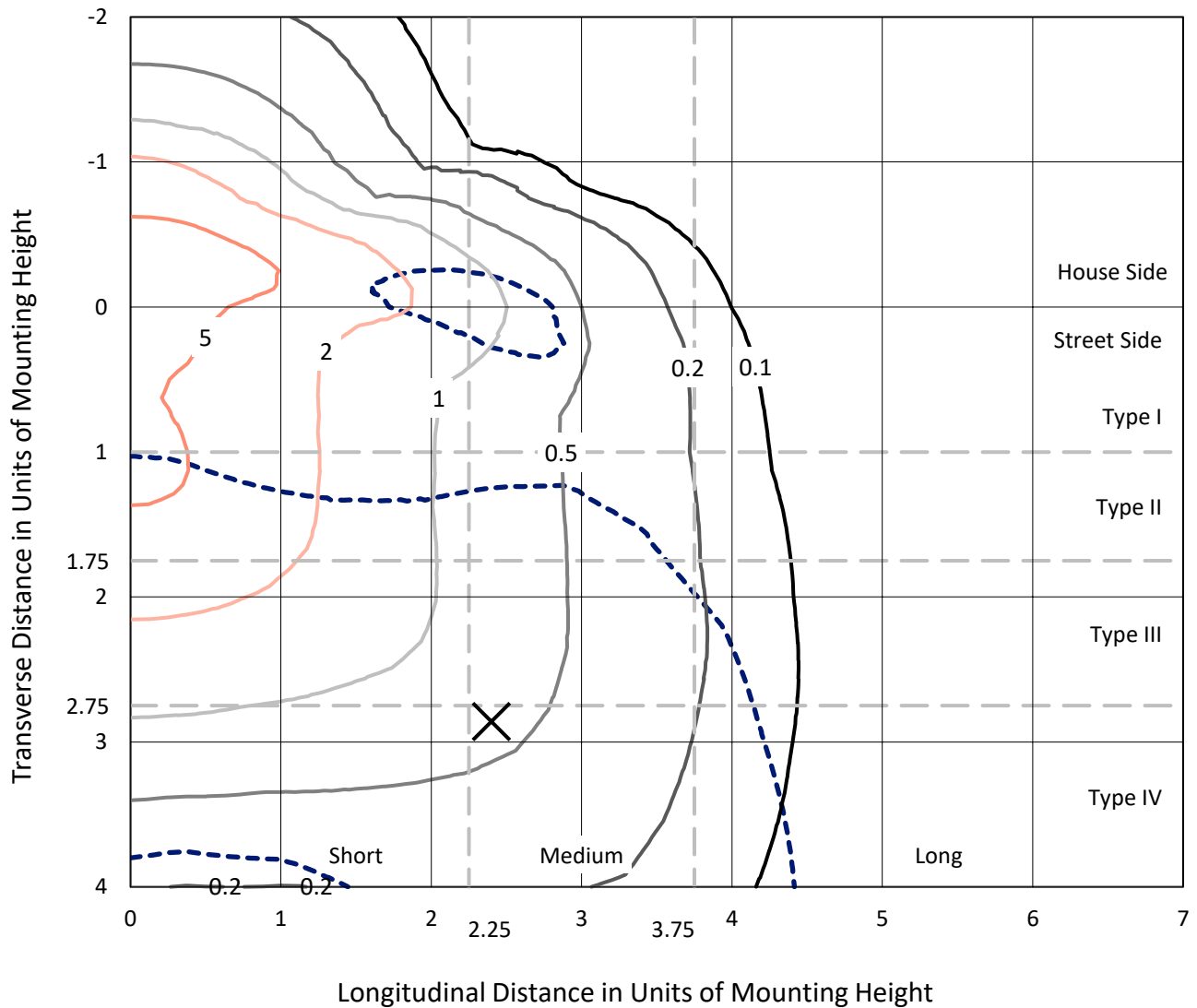
Input Watts (W): 293.6
Input Voltage (V): 120.0
Input Current (Ain): 2.469
Voltage Rise (V): NR
Power Factor: 0.999
Total Harmonic Distortion (THDi): 3.108
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

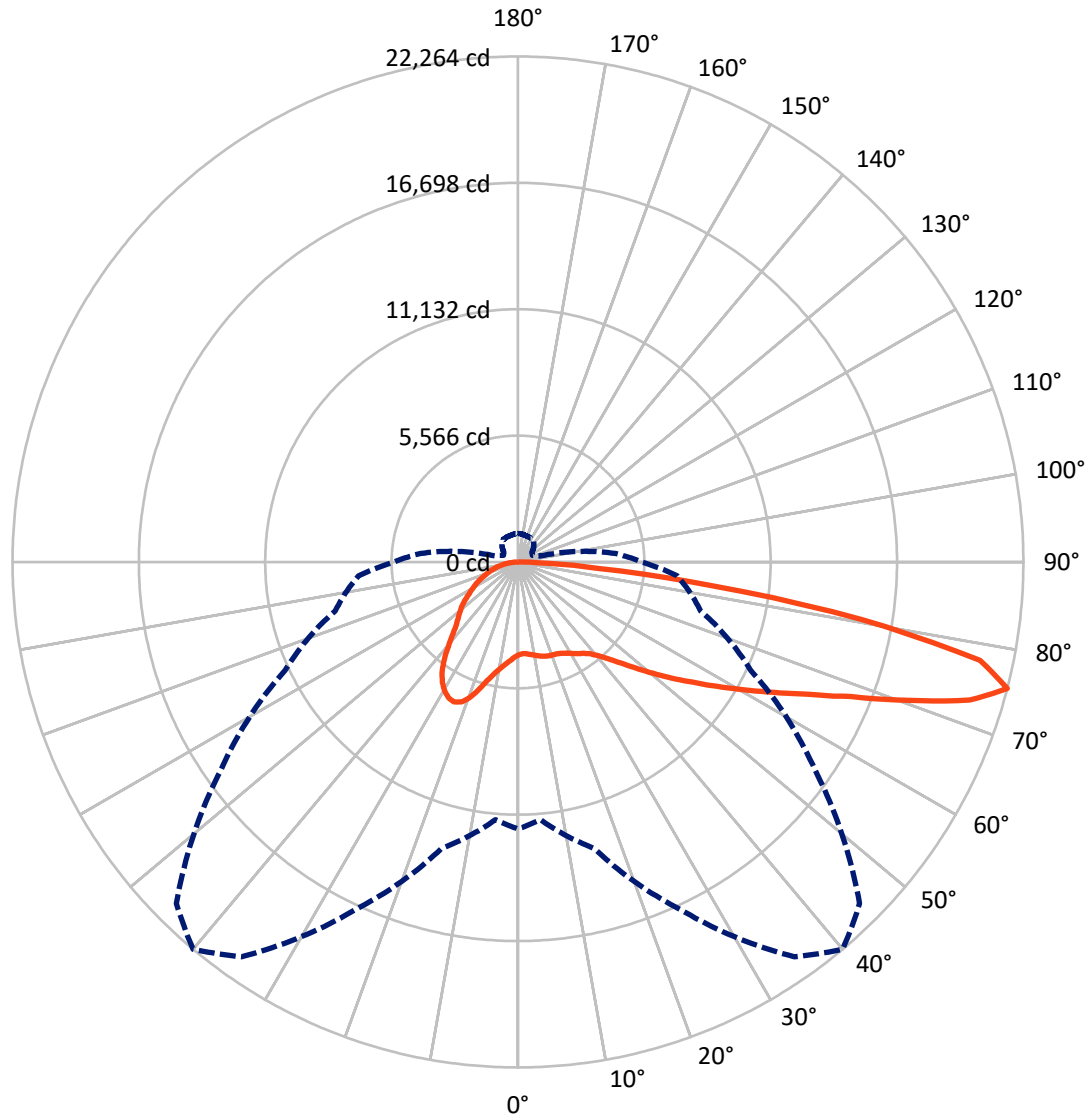
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 8.5 fc
 Type IV - Medium - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 40-Deg Lateral - - - Horizontal Cone Through 75-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	11082.7	0.0	11082.7
	% Fixture	31.0	0.0	31.0
Street Side	Lumens	24687.3	0.0	24687.3
	% Fixture	69.0	0.0	69.0
Total	Lumens	35770.0	0.0	35770.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	408.3	1.1
10°-20°	1370.8	3.8
20°-30°	2503.0	7.0
30°-40°	3550.0	9.9
40°-50°	4793.5	13.4
50°-60°	6448.6	18.0
60°-70°	8184.8	22.9
70°-80°	7428.2	20.8
80°-90°	1082.8	3.0
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°	35770.0	100.0
0°-180°	35770.0	100.0



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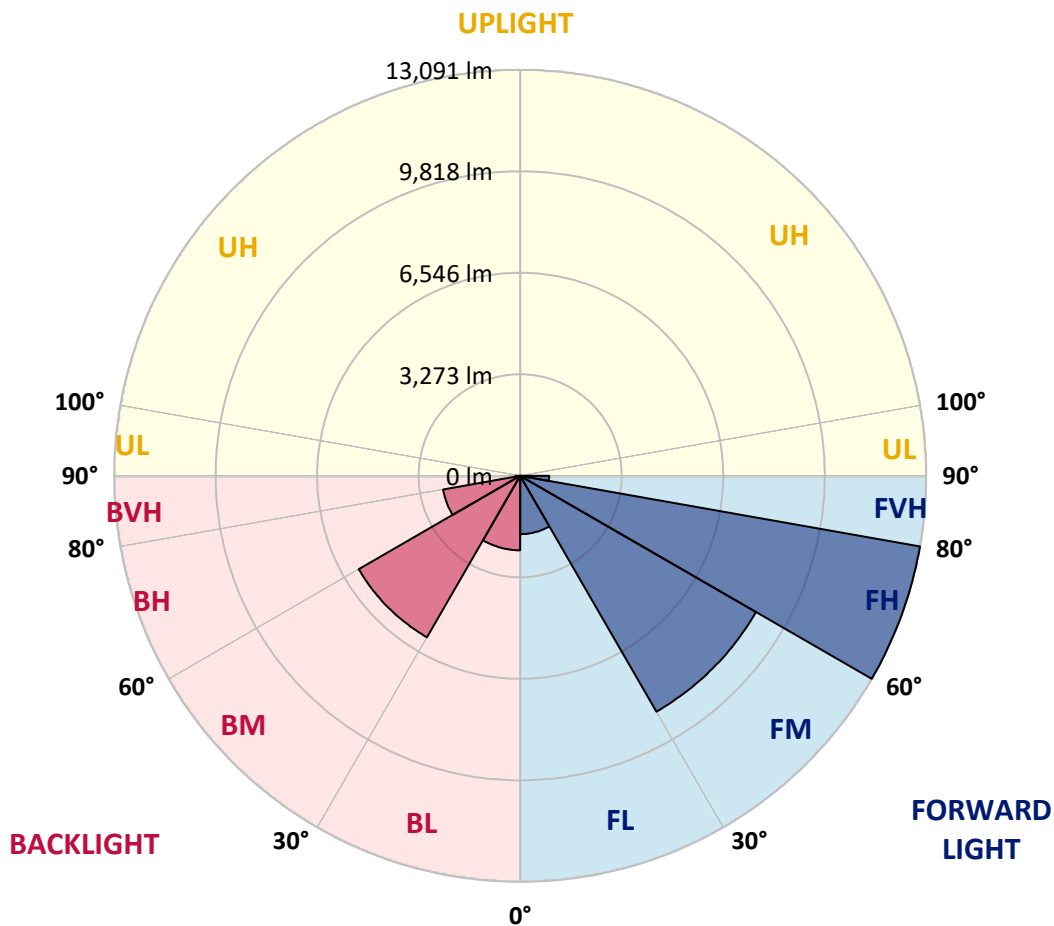
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1881.5	5.3			
FM (30°-60°)	8780.7	24.5			
FH (60°-80°)	13091.3	36.6			G5
FVH (80°-90°)	933.7	2.6			G5
BL (0°-30°)	2400.6	6.7	B3/2500		
BM (30°-60°)	6011.4	16.8	B4/8500		
BH (60°-80°)	2521.7	7.0	B4/5000		G4/5000
BVH (80°-90°)	149.1	0.4			G2/225
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B4-U0-G5

Type IV Medium



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	40°	45°	55°	65°	75°	85°
0°	4090.3	4090.3	4090.3	4090.3	4090.3	4090.3	4090.3	4090.3	4090.3	4090.3	4090.3
2.5°	4027.7	4050.5	4044.8	4037.2	4037.2	4039.1	4037.2	4050.5	4063.8	4077.1	4097.9
5°	4069.5	4092.2	4080.9	4071.4	4063.8	4061.9	4056.2	4054.3	4061.9	4079.0	4107.4
7.5°	4151.1	4173.8	4156.7	4139.7	4124.5	4116.9	4109.3	4097.9	4092.2	4101.7	4141.6
10°	4242.1	4264.9	4244.0	4213.7	4189.0	4179.5	4171.9	4160.5	4153.0	4158.6	4202.3
12.5°	4333.2	4356.0	4327.5	4285.8	4253.5	4247.8	4238.3	4234.5	4232.6	4230.7	4274.4
15°	4418.6	4437.5	4401.5	4352.2	4318.0	4308.5	4299.0	4304.7	4314.2	4325.6	4374.9
17.5°	4485.0	4503.9	4450.8	4386.3	4354.1	4350.3	4344.6	4363.5	4390.1	4418.6	4479.3
20°	4545.7	4564.6	4496.3	4409.1	4371.1	4371.1	4373.0	4412.9	4450.8	4492.6	4576.0
22.5°	4631.0	4646.2	4562.7	4443.2	4388.2	4392.0	4407.2	4447.0	4494.4	4551.4	4667.1
25°	4758.2	4769.5	4667.1	4507.7	4445.1	4456.5	4469.8	4488.8	4534.3	4600.7	4756.3
27.5°	4963.1	4972.5	4837.8	4621.6	4526.7	4545.7	4564.6	4551.4	4572.2	4629.1	4828.4
30°	5251.4	5257.1	5086.4	4799.9	4665.2	4674.7	4678.5	4623.5	4583.6	4629.1	4879.6
32.5°	5592.9	5591.0	5388.0	5016.2	4822.7	4813.2	4780.9	4672.8	4579.8	4619.7	4925.1
35°	6122.2	6101.4	5839.6	5319.7	5001.0	4942.2	4866.3	4727.8	4598.8	4610.2	4965.0
37.5°	6998.7	6934.2	6571.9	5816.8	5266.6	5116.7	5004.8	4817.0	4640.5	4606.4	5012.4
40°	7987.2	7905.6	7507.2	6497.9	5665.0	5424.1	5243.8	4944.1	4708.8	4623.5	5082.6
42.5°	9159.6	9043.9	8615.2	7300.4	6169.7	5820.6	5549.3	5105.3	4809.4	4678.5	5177.4
45°	10599.6	10445.9	9838.8	8205.4	6805.2	6340.4	5978.1	5350.1	4963.1	4784.7	5319.7
47.5°	12054.8	12092.7	11229.5	9241.2	7567.9	6981.7	6515.0	5718.1	5186.9	4955.5	5549.3
50°	13601.0	13627.5	12612.5	10389.0	8433.0	7706.4	7118.3	6129.8	5498.1	5198.3	5892.7
52.5°	14807.6	14811.4	13868.5	11589.9	9334.2	8503.2	7769.0	6600.3	5858.5	5520.8	6349.9
55°	15562.7	15553.2	14748.8	12726.4	10370.1	9339.9	8489.9	7135.3	6298.7	5900.3	6924.8
57.5°	16111.0	16082.5	15355.9	13703.4	11474.2	10328.3	9305.7	7742.4	6818.5	6351.8	7681.7
60°	16319.7	16302.6	15767.6	14547.7	12635.3	11421.1	10246.7	8421.6	7408.5	6884.9	8655.0
62.5°	16399.3	16431.6	16171.7	15365.4	13878.0	12631.5	11280.7	9233.6	8072.6	7488.2	9681.4
65°	16680.1	16738.9	16685.8	16435.4	15281.9	14048.7	12652.4	10199.3	8797.3	8135.2	10753.3
67.5°	17236.0	17294.8	17317.6	17716.0	16996.9	15815.0	14363.6	11402.1	9645.3	8806.8	11559.6
70°	17222.7	17205.6	17607.8	18734.8	19144.6	18260.5	16670.6	12881.9	10656.5	9364.5	11662.0
72.5°	15676.5	15539.9	16490.4	18723.4	20931.7	20814.1	19488.0	14790.5	11529.2	9432.8	10119.6
75°	11760.7	11396.4	13075.5	16873.6	21229.6	22263.6	21278.9	15974.4	11322.4	8334.4	7042.4
77.5°	5029.5	4663.3	6642.1	12491.1	19000.4	20812.2	19635.9	13936.8	9038.2	5511.3	3458.6
80°	1316.7	1314.8	2007.2	5663.1	12921.8	15369.2	13483.3	9000.3	5164.2	1969.3	954.3
82.5°	544.5	531.2	738.0	2202.6	6313.9	8624.6	7038.6	4014.5	1864.9	533.1	316.8
85°	203.0	201.1	358.6	760.8	2227.3	3557.2	2574.5	1026.4	464.8	259.9	142.3
87.5°	56.9	55.0	77.8	263.7	542.6	823.4	440.1	168.9	130.9	102.4	41.7
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°	4090.3	4090.3	4090.3	4090.3	4090.3	4090.3	4090.3	4090.3	4090.3	4090.3	4090.3
2.5°	4103.6	4113.1	4130.2	4143.5	4160.5	4179.5	4206.1	4223.2	4240.2	4251.6	4244.0
5°	4120.7	4141.6	4185.2	4228.8	4280.1	4327.5	4382.5	4422.4	4454.6	4464.1	4467.9
7.5°	4158.6	4192.8	4266.8	4340.8	4422.4	4500.1	4579.8	4648.1	4703.1	4724.0	4725.9
10°	4225.0	4270.6	4374.9	4479.3	4587.4	4706.9	4809.4	4908.0	4985.8	5018.1	5020.0
12.5°	4308.5	4365.4	4502.0	4646.2	4796.1	4961.2	5094.0	5215.4	5312.1	5355.8	5355.8
15°	4416.7	4490.7	4665.2	4858.7	5078.8	5308.3	5477.2	5611.9	5720.0	5773.2	5769.4
17.5°	4534.3	4632.9	4853.0	5145.2	5460.1	5761.8	5959.1	6057.7	6169.7	6220.9	6219.0
20°	4648.1	4769.5	5084.5	5509.4	5928.7	6249.4	6408.7	6435.3	6442.9	6448.6	6463.7
22.5°	4765.7	4928.9	5374.7	5968.6	6418.2	6640.2	6662.9	6549.1	6389.7	6315.8	6336.6
25°	4894.8	5111.0	5754.2	6475.1	6839.4	6865.9	6691.4	6414.4	6112.8	5974.3	5995.1
27.5°	5020.0	5321.6	6209.5	6958.9	7142.9	6909.6	6533.9	6141.2	5777.0	5630.9	5647.9
30°	5145.2	5562.6	6712.3	7382.0	7281.4	6801.4	6285.4	5847.1	5481.0	5327.3	5344.4
32.5°	5272.3	5843.4	7290.9	7687.4	7256.8	6571.9	5976.2	5517.0	5194.5	5033.3	5054.1
35°	5416.5	6188.6	7839.2	7854.4	7091.7	6234.2	5568.3	5122.4	4841.6	4712.6	4741.1
37.5°	5604.3	6626.9	8323.0	7896.1	6803.3	5739.0	5061.7	4655.7	4424.3	4365.4	4407.2
40°	5837.7	7154.3	8692.9	7829.7	6376.5	5137.6	4507.7	4183.3	4052.4	4065.7	4111.2
42.5°	6141.2	7744.3	8952.9	7659.0	5782.6	4517.2	4022.0	3877.9	3940.5	3993.6	4042.9
45°	6535.8	8357.1	9114.1	7368.7	5111.0	3991.7	3735.6	3769.7	3817.2	3822.8	3860.8
47.5°	7040.5	8977.5	9220.4	6930.4	4426.2	3621.7	3553.4	3561.0	3551.5	3511.7	3542.1
50°	7670.3	9580.8	9315.2	6349.9	3843.7	3390.3	3299.2	3272.7	3141.8	3012.7	3029.8
52.5°	8387.5	10134.8	9355.1	5629.0	3390.3	3196.8	3048.8	2881.8	2637.1	2597.3	2610.5
55°	9184.3	10647.0	9252.6	4743.0	3008.9	2948.2	2724.4	2523.3	2496.7	2462.6	2468.2
57.5°	10136.7	11199.1	9043.9	3754.5	2618.1	2658.0	2439.8	2462.6	2415.1	2362.0	2352.5
60°	11178.3	11770.2	8677.8	2853.4	2214.0	2295.6	2365.8	2363.9	2350.6	2307.0	2291.8
62.5°	12115.5	12145.8	7956.8	2185.6	1859.2	2014.8	2206.4	2204.5	2193.2	2168.5	2159.0
65°	12673.2	12088.9	6754.0	1720.8	1567.1	1783.4	1990.2	2005.3	2007.2	2005.3	2005.3
67.5°	12574.6	11423.0	5103.4	1369.8	1326.1	1548.1	1775.8	1796.6	1811.8	1815.6	1819.4
70°	11459.0	9960.3	3327.7	1092.8	1111.8	1341.3	1572.8	1593.6	1606.9	1622.1	1629.7
72.5°	8932.0	7323.2	1904.8	884.1	923.9	1163.0	1371.7	1396.3	1403.9	1432.4	1443.8
75°	5443.0	4306.6	1028.3	696.3	758.9	994.1	1172.5	1200.9	1214.2	1248.4	1252.1
77.5°	2587.8	1864.9	586.2	542.6	610.9	812.0	990.3	1022.6	986.5	1005.5	990.3
80°	874.6	692.5	370.0	413.6	466.7	633.7	793.0	825.3	749.4	745.6	738.0
82.5°	305.4	280.8	235.3	275.1	301.7	453.4	599.5	641.3	557.8	555.9	529.3
85°	119.5	113.8	130.9	149.9	180.2	278.9	394.6	415.5	343.4	277.0	273.2
87.5°	24.7	26.6	32.3	34.1	55.0	96.8	142.3	174.5	138.5	117.6	108.1
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)