

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: P884834

Luminaire Tested: **NAV-SB5D-830-U-SL4**

Issue Date: 10/7/2024

**Test Information**

Test Method: LM-79-08  
Report Number: P884834  
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-SB5D-830-U-SL4  
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE  
(5) 80 CRI, 3000K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE IV SPILL  
LIGHT ELIMINATOR OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

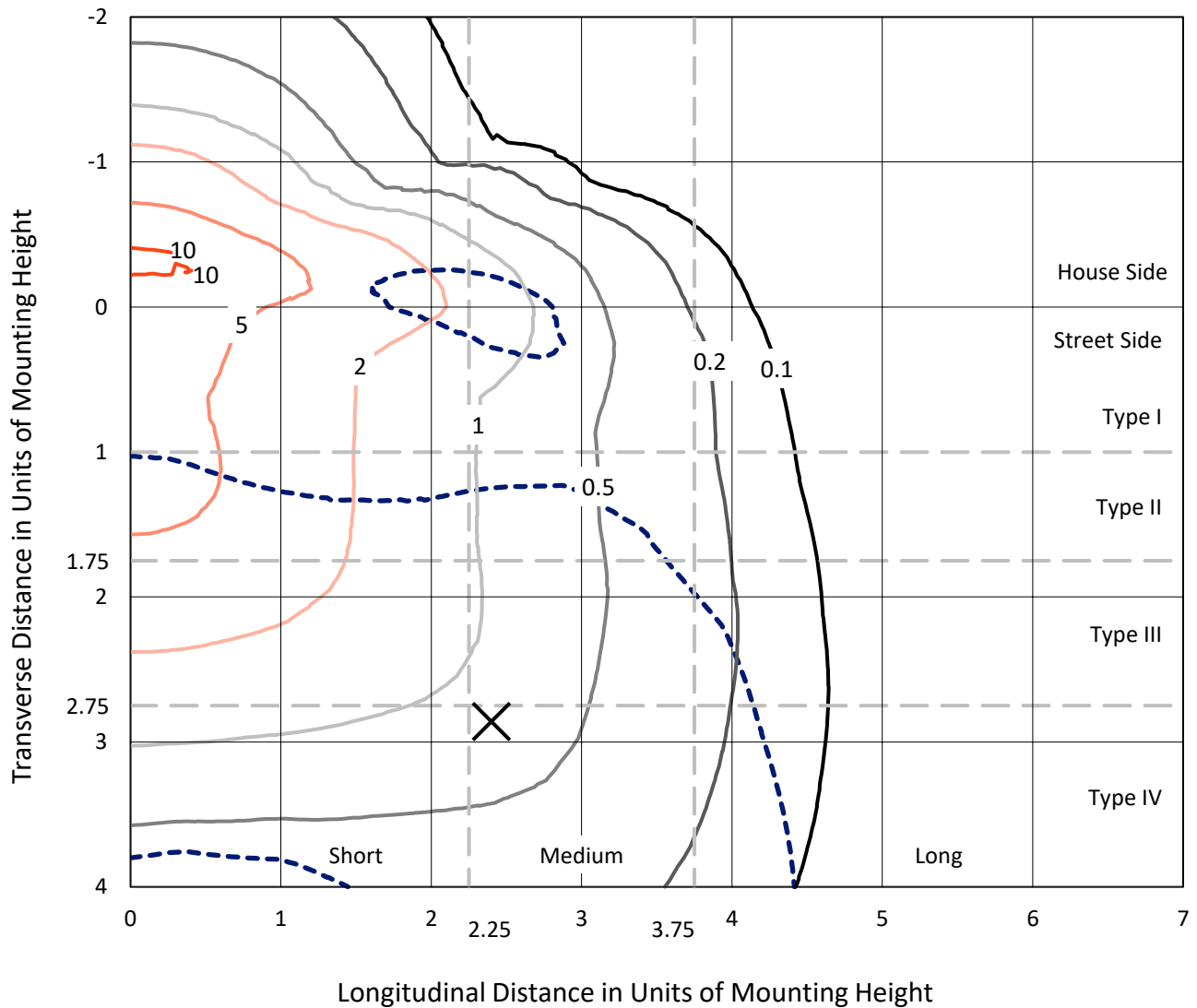
Lumens per Lamp: N/A  
Luminaire Lumens: 44787 lumens  
Efficiency: N/A  
Efficacy: 122.7 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')  
IES Classification: Type IV - Medium  
BUG Rating: B4 - U0 - G5  
  
Input Watts (W): 364.9  
Input Voltage (V): 120.0  
Input Current (Ain): 3.094  
Voltage Rise (V): NR  
Power Factor: 0.998  
Total Harmonic Distortion (THDi): 3.28  
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

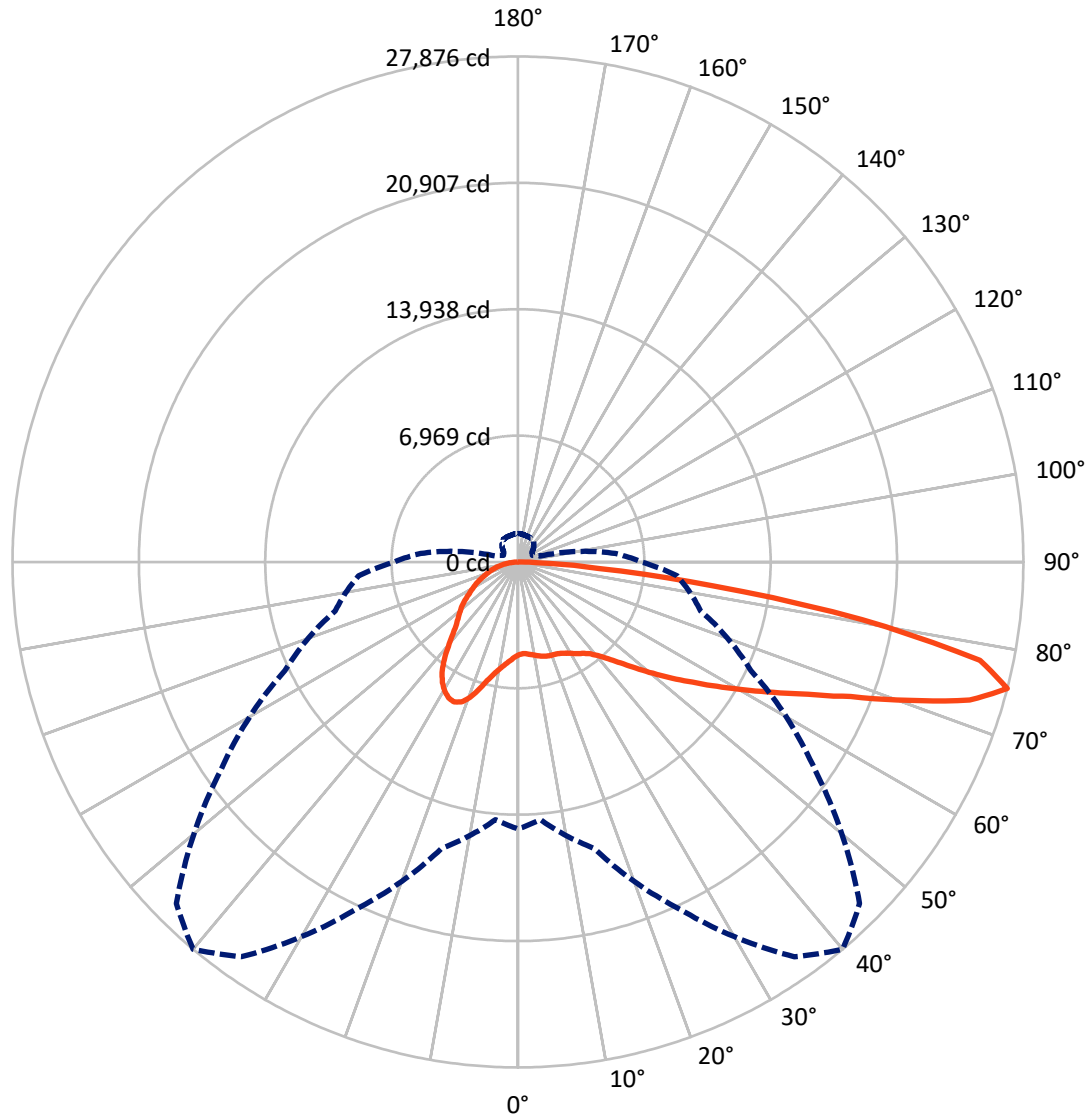
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 10.6 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
<b>House Side</b>	Lumens	13876.5	0.0	13876.5
	% Fixture	31.0	0.0	31.0
<b>Street Side</b>	Lumens	30910.5	0.0	30910.5
	% Fixture	69.0	0.0	69.0
<b>Total</b>	Lumens	44787.0	0.0	44787.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	511.2	1.1
10°-20°	1716.4	3.8
20°-30°	3134.0	7.0
30°-40°	4444.9	9.9
40°-50°	6001.9	13.4
50°-60°	8074.2	18.0
60°-70°	10248.0	22.9
70°-80°	9300.7	20.8
80°-90°	1355.8	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°	44787.0	100.0
0°-180°	44787.0	100.0

**Coefficient of Utilization**



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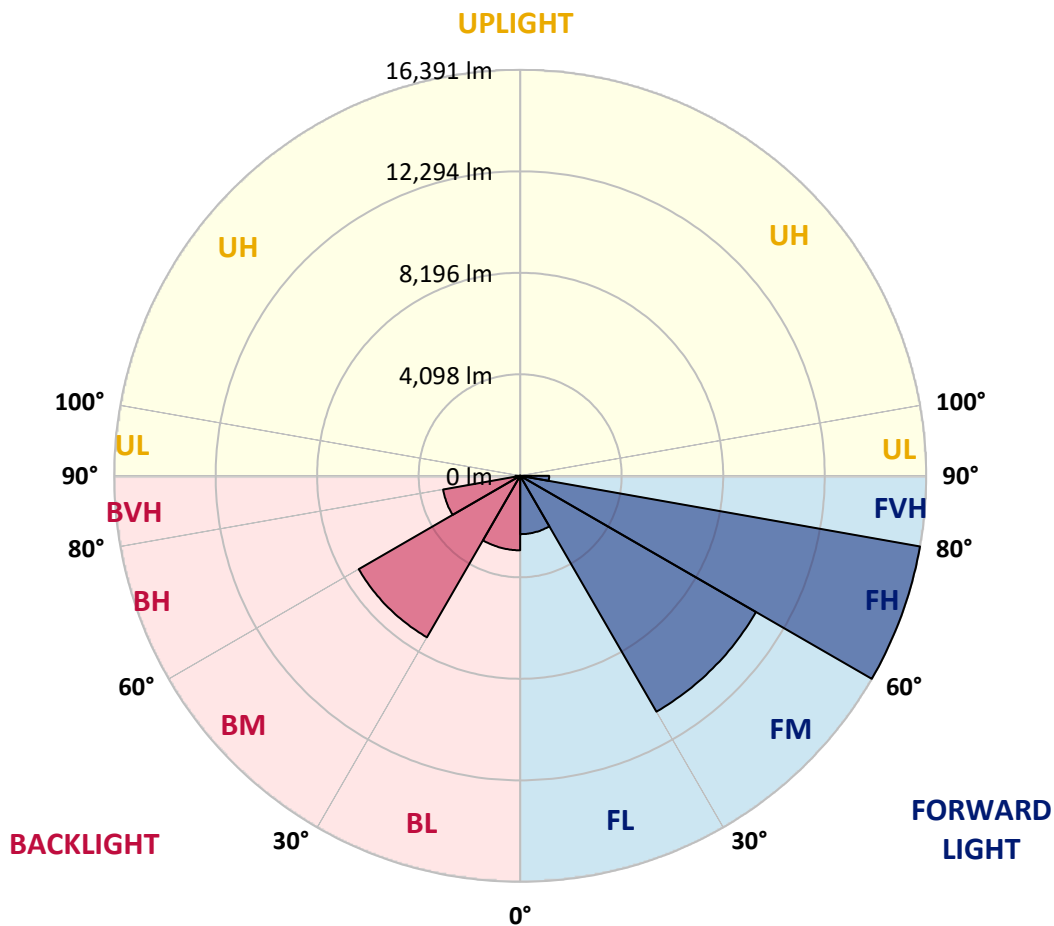
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2355.8	5.3			
FM (30°-60°)	10994.2	24.5			
FH (60°-80°)	16391.4	36.6			G5
FVH (80°-90°)	1169.1	2.6			G5
BL (0°-30°)	3005.8	6.7	B4/5000		
BM (30°-60°)	7526.7	16.8	B4/8500		
BH (60°-80°)	3157.3	7.0	B4/5000		G4/5000
BVH (80°-90°)	186.7	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°	5121.5	5121.5	5121.5	5121.5	5121.5	5121.5	5121.5	5121.5	5121.5	5121.5	5121.5
2.5°	5043.1	5071.6	5064.4	5054.9	5054.9	5057.3	5054.9	5071.6	5088.2	5104.8	5131.0
5°	5095.3	5123.8	5109.6	5097.7	5088.2	5085.8	5078.7	5076.3	5085.8	5107.2	5142.8
7.5°	5197.5	5226.0	5204.6	5183.2	5164.2	5154.7	5145.2	5131.0	5123.8	5135.7	5185.6
10°	5311.5	5340.0	5313.9	5275.9	5245.0	5233.1	5223.6	5209.3	5199.8	5207.0	5261.6
12.5°	5425.5	5454.0	5418.4	5366.1	5325.7	5318.6	5306.7	5302.0	5299.6	5297.2	5351.9
15°	5532.4	5556.2	5511.0	5449.3	5406.5	5394.6	5382.8	5389.9	5401.8	5416.0	5477.8
17.5°	5615.5	5639.3	5572.8	5492.0	5451.6	5446.9	5439.8	5463.5	5496.8	5532.4	5608.4
20°	5691.6	5715.3	5629.8	5520.5	5473.0	5473.0	5475.4	5525.3	5572.8	5625.0	5729.6
22.5°	5798.5	5817.5	5712.9	5563.3	5494.4	5499.1	5518.2	5568.0	5627.4	5698.7	5843.6
25°	5957.6	5971.9	5843.6	5644.1	5565.7	5579.9	5596.5	5620.3	5677.3	5760.4	5955.2
27.5°	6214.2	6226.0	6057.4	5786.6	5667.8	5691.6	5715.3	5698.7	5724.8	5796.1	6045.5
30°	6575.2	6582.4	6368.6	6009.9	5841.2	5853.1	5857.8	5789.0	5739.1	5796.1	6109.6
32.5°	7002.8	7000.4	6746.3	6280.7	6038.4	6026.5	5986.1	5850.7	5734.3	5784.2	6166.6
35°	7665.6	7639.4	7311.6	6660.7	6261.7	6188.0	6093.0	5919.6	5758.1	5772.3	6216.5
37.5°	8763.0	8682.2	8228.5	7283.1	6594.2	6406.6	6266.4	6031.2	5810.3	5767.6	6275.9
40°	10000.6	9898.5	9399.6	8135.9	7093.1	6791.4	6565.7	6190.4	5895.8	5789.0	6363.8
42.5°	11468.6	11323.7	10786.9	9140.7	7724.9	7287.9	6948.2	6392.3	6021.7	5857.8	6482.6
45°	13271.6	13079.2	12319.0	10273.8	8520.7	7938.7	7485.0	6698.7	6214.2	5990.9	6660.7
47.5°	15093.6	15141.1	14060.2	11570.8	9475.6	8741.6	8157.3	7159.6	6494.5	6204.7	6948.2
50°	17029.5	17062.8	15791.9	13007.9	10558.8	9649.0	8912.7	7675.1	6884.0	6508.7	7378.1
52.5°	18540.3	18545.1	17364.5	14511.6	11687.2	10646.7	9727.4	8264.2	7335.4	6912.5	7950.6
55°	19485.8	19473.9	18466.7	15934.5	12984.2	11694.3	10630.1	8934.0	7886.5	7387.6	8670.4
57.5°	20172.3	20136.6	19226.8	17157.8	14366.7	12931.9	11651.5	9694.2	8537.3	7953.0	9618.2
60°	20433.6	20412.2	19742.3	18214.9	15820.4	14300.2	12829.8	10544.6	9276.1	8620.5	10836.8
62.5°	20533.3	20573.7	20248.3	19238.7	17376.4	15815.7	14124.4	11561.3	10107.5	9375.9	12121.9
65°	20884.9	20958.5	20892.0	20578.5	19134.2	17590.1	15841.8	12770.4	11014.9	10185.9	13464.0
67.5°	21580.9	21654.5	21683.0	22181.9	21281.6	19801.7	17984.5	14276.4	12076.7	11026.8	14473.6
70°	21564.3	21542.9	22046.5	23457.5	23970.6	22863.6	20873.0	16129.3	13342.9	11725.2	14601.8
72.5°	19628.3	19457.2	20647.3	23443.2	26208.3	26061.0	24400.5	18518.9	14435.6	11810.7	12670.6
75°	14725.4	14269.3	16371.5	21127.2	26581.2	27875.8	26643.0	20001.2	14176.6	10435.3	8817.6
77.5°	6297.3	5838.8	8316.4	15639.9	23790.1	26058.6	24585.8	17450.0	11316.6	6900.7	4330.4
80°	1648.6	1646.2	2513.2	7090.7	16179.1	19243.5	16882.3	11269.1	6466.0	2465.7	1194.8
82.5°	681.8	665.1	924.0	2757.9	7905.5	10798.8	8812.9	5026.4	2335.1	667.5	396.7
85°	254.2	251.8	449.0	952.6	2788.8	4454.0	3223.5	1285.1	582.0	325.4	178.2
87.5°	71.3	68.9	97.4	330.2	679.4	1030.9	551.1	211.4	163.9	128.3	52.3
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°	5121.5	5121.5	5121.5	5121.5	5121.5	5121.5	5121.5	5121.5	5121.5	5121.5	5121.5
2.5°	5138.1	5150.0	5171.3	5188.0	5209.3	5233.1	5266.4	5287.7	5309.1	5323.4	5313.9
5°	5159.5	5185.6	5240.2	5294.9	5359.0	5418.4	5487.3	5537.2	5577.5	5589.4	5594.2
7.5°	5207.0	5249.7	5342.4	5435.0	5537.2	5634.5	5734.3	5819.8	5888.7	5914.9	5917.2
10°	5290.1	5347.1	5477.8	5608.4	5743.8	5893.5	6021.7	6145.3	6242.7	6283.0	6285.4
12.5°	5394.6	5465.9	5636.9	5817.5	6005.1	6211.8	6378.1	6530.1	6651.2	6705.9	6705.9
15°	5530.0	5622.7	5841.2	6083.5	6359.1	6646.5	6857.9	7026.6	7162.0	7228.5	7223.7
17.5°	5677.3	5800.8	6076.4	6442.2	6836.5	7214.2	7461.3	7584.8	7724.9	7789.1	7786.7
20°	5819.8	5971.9	6366.2	6898.3	7423.3	7824.7	8024.2	8057.5	8067.0	8074.1	8093.1
22.5°	5967.1	6171.4	6729.6	7473.1	8036.1	8314.0	8342.6	8200.0	8000.5	7907.8	7934.0
25°	6128.6	6399.4	7204.7	8107.4	8563.5	8596.7	8378.2	8031.4	7653.7	7480.3	7506.4
27.5°	6285.4	6663.1	7774.8	8713.1	8943.5	8651.4	8181.0	7689.3	7233.2	7050.3	7071.7
30°	6442.2	6964.8	8404.3	9242.8	9116.9	8516.0	7869.8	7321.1	6862.7	6670.2	6691.6
32.5°	6601.4	7316.4	9128.8	9625.3	9086.1	8228.5	7482.6	6907.8	6504.0	6302.0	6328.2
35°	6781.9	7748.7	9815.3	9834.3	8879.4	7805.7	6971.9	6413.7	6062.1	5900.6	5936.2
37.5°	7017.1	8297.4	10421.1	9886.6	8518.3	7185.7	6337.7	5829.3	5539.5	5465.9	5518.2
40°	7309.2	8957.8	10884.3	9803.4	7983.9	6432.7	5644.1	5237.8	5073.9	5090.6	5147.6
42.5°	7689.3	9696.6	11209.7	9589.7	7240.3	5655.9	5035.9	4855.4	4933.8	5000.3	5062.1
45°	8183.4	10463.8	11411.6	9226.2	6399.4	4997.9	4677.2	4720.0	4779.4	4786.5	4834.0
47.5°	8815.3	11240.6	11544.6	8677.5	5541.9	4534.7	4449.2	4458.7	4446.8	4396.9	4435.0
50°	9603.9	11996.0	11663.4	7950.6	4812.6	4244.9	4130.9	4097.6	3933.7	3772.2	3793.6
52.5°	10501.8	12689.6	11713.3	7047.9	4244.9	4002.6	3817.3	3608.3	3301.9	3252.0	3268.6
55°	11499.5	13331.0	11585.0	5938.6	3767.5	3691.4	3411.1	3159.3	3126.1	3083.3	3090.5
57.5°	12692.0	14022.2	11323.7	4701.0	3278.1	3328.0	3054.8	3083.3	3023.9	2957.4	2945.5
60°	13996.1	14737.2	10865.3	3572.7	2772.1	2874.3	2962.2	2959.8	2943.2	2888.5	2869.5
62.5°	15169.6	15207.6	9962.6	2736.5	2327.9	2522.7	2762.6	2760.3	2746.0	2715.1	2703.3
65°	15868.0	15136.3	8456.6	2154.5	1962.1	2232.9	2491.8	2510.8	2513.2	2510.8	2510.8
67.5°	15744.4	14302.5	6389.9	1715.1	1660.4	1938.4	2223.4	2249.5	2268.5	2273.3	2278.0
70°	14347.7	12471.1	4166.5	1368.3	1392.0	1679.4	1969.2	1995.4	2012.0	2031.0	2040.5
72.5°	11183.6	9169.2	2384.9	1107.0	1156.8	1456.1	1717.4	1748.3	1757.8	1793.5	1807.7
75°	6815.1	5392.3	1287.5	871.8	950.2	1244.7	1468.0	1503.7	1520.3	1563.0	1567.8
77.5°	3240.1	2335.1	734.0	679.4	764.9	1016.7	1240.0	1280.4	1235.2	1259.0	1240.0
80°	1095.1	867.0	463.2	517.8	584.4	793.4	992.9	1033.3	938.3	933.5	924.0
82.5°	382.4	351.6	294.6	344.4	377.7	567.7	750.6	802.9	698.4	696.0	662.7
85°	149.7	142.5	163.9	187.7	225.7	349.2	494.1	520.2	430.0	346.8	342.1
87.5°	30.9	33.3	40.4	42.8	68.9	121.1	178.2	218.5	173.4	147.3	135.4
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)