

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: P195174

Luminaire Tested: **NAV-AF-06-D-UNV-SL3-7060-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195174
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24262)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-06-D-UNV-SL3-7060-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 5700K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III
SPILL LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 23703 lumens
Efficiency: N/A
Efficacy: 122.8 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type III - Medium - Non-Cutoff
BUG Rating: B3 - U0 - G4

Input Watts (W): 193
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: 25 FT

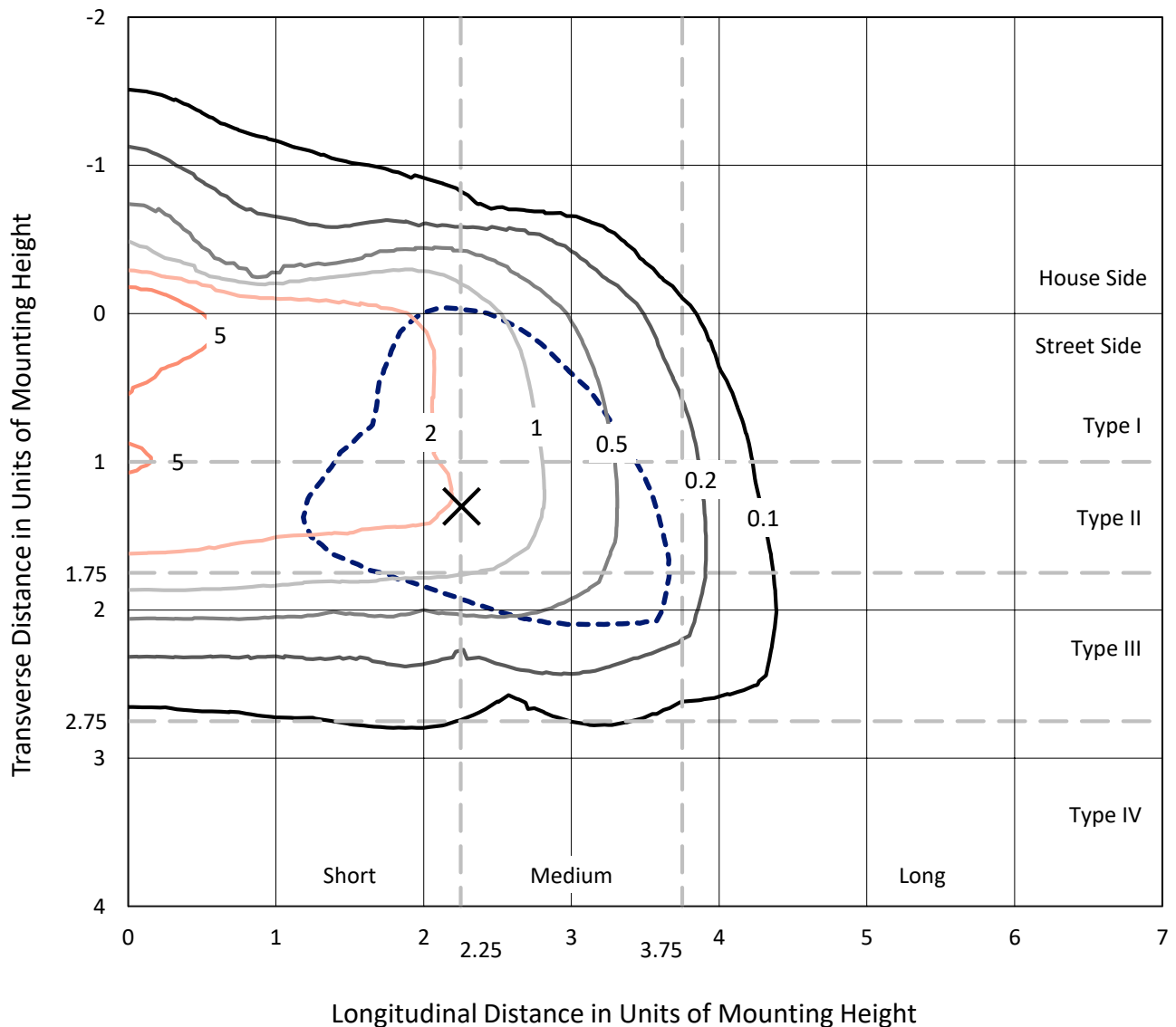


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Iso-Footcandle Lines of Horizontal Illumination

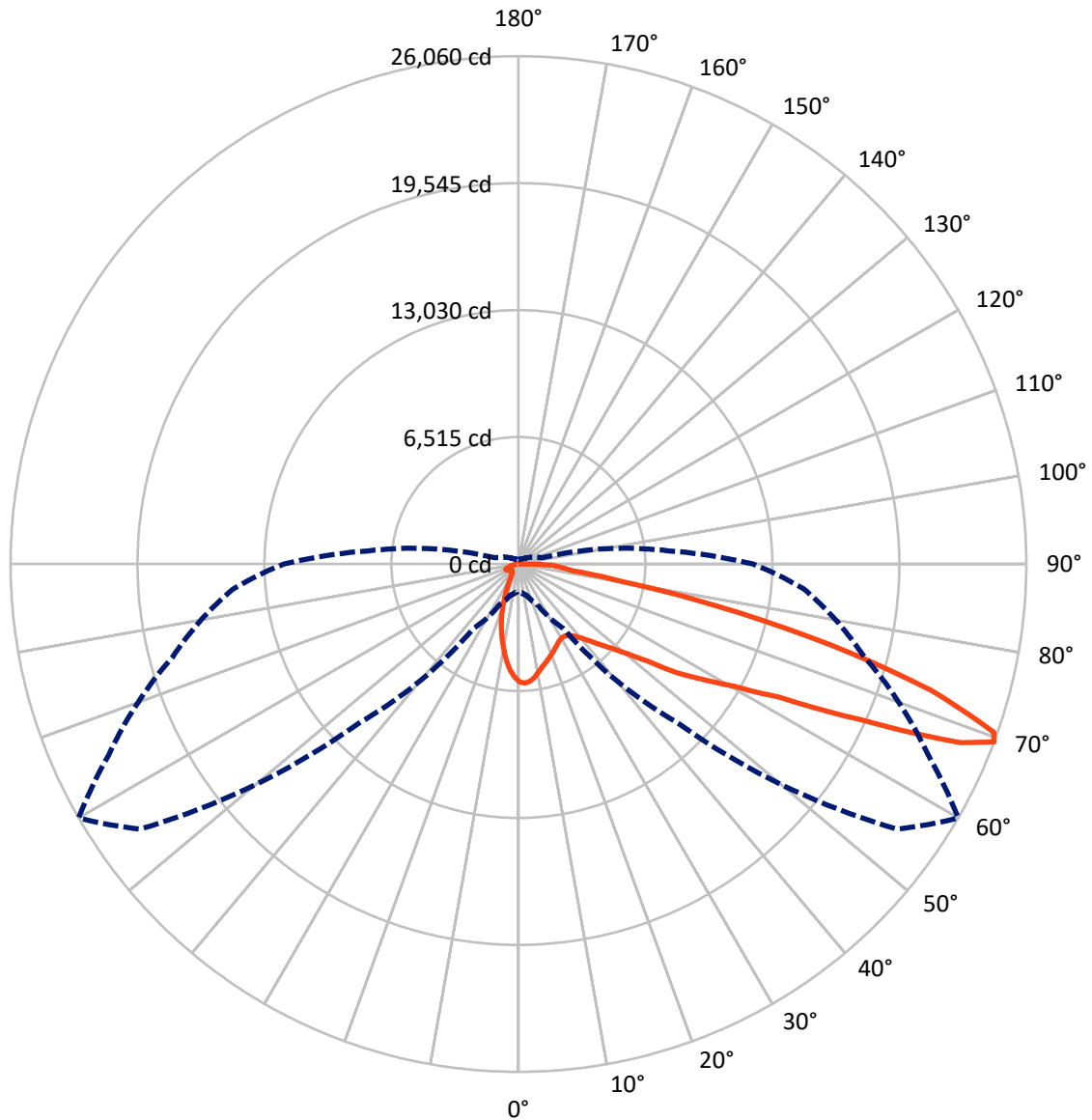
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 9.7 fc
 Type III - Medium - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 60-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3380.8	0.0	3380.8
	% Fixture	14.3	0.0	14.3
Street Side	Lumens	20322.2	0.0	20322.2
	% Fixture	85.7	0.0	85.7
Total	Lumens	23703.0	0.0	23703.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	513.1	2.2
10°-20°	1098.5	4.6
20°-30°	1401.4	5.9
30°-40°	1928.4	8.1
40°-50°	3123.7	13.2
50°-60°	4902.5	20.7
60°-70°	6536.0	27.6
70°-80°	3635.5	15.3
80°-90°	563.9	2.4
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°	23703.0	100.0
0°-180°	23703.0	100.0

Coefficient of Utilization



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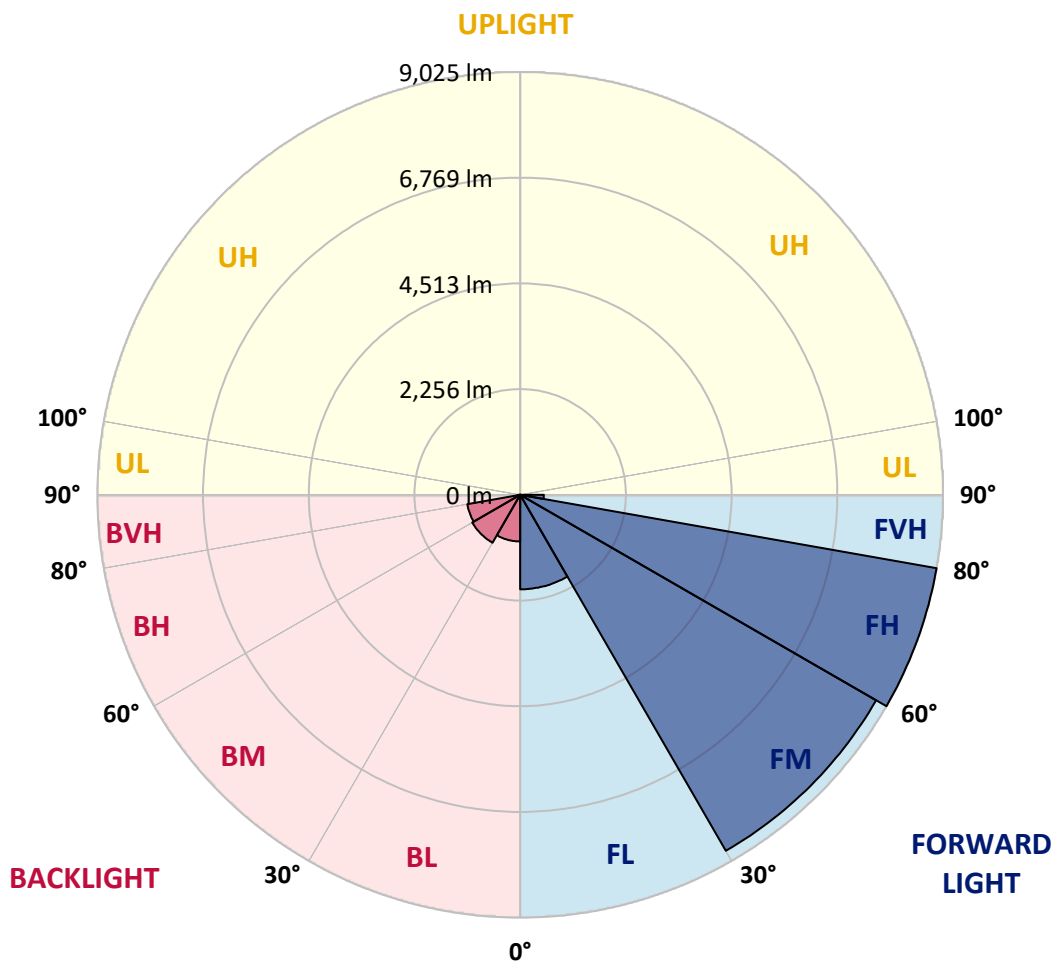
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2016.7	8.5			
FM	(30°-60°)	8773.6	37.0			
FH	(60°-80°)	9025.2	38.1			G4/12000
FVH	(80°-90°)	506.7	2.1			G4/750
BL	(0°-30°)	996.3	4.2	B2/1000		
BM	(30°-60°)	1181.1	5.0	B2/2500		
BH	(60°-80°)	1146.3	4.8	B3/2500		G3/2500
BVH	(80°-90°)	57.1	0.2			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 III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	60°	65°	75°	85°
0°	6047.9	6047.9	6047.9	6047.9	6047.9	6047.9	6047.9	6047.9	6047.9	6047.9	6047.9
2.5°	6209.0	6225.7	6225.7	6212.1	6204.5	6160.4	6134.5	6116.3	6084.4	6025.1	5971.9
5°	5987.1	6019.0	6032.7	6038.8	6078.3	6064.6	6066.1	6054.0	6026.6	5962.8	5876.1
7.5°	5579.7	5585.8	5610.1	5651.2	5746.9	5813.8	5868.5	5879.2	5873.1	5826.0	5704.4
10°	5178.5	5189.1	5218.0	5287.9	5379.1	5474.9	5593.4	5642.1	5678.5	5663.3	5509.8
12.5°	4845.6	4847.1	4879.1	4959.6	5061.4	5181.5	5342.6	5418.6	5505.3	5540.2	5368.5
15°	4524.9	4546.2	4576.6	4673.9	4800.0	4952.0	5137.4	5242.3	5356.3	5456.6	5259.0
17.5°	4281.7	4298.4	4316.7	4397.2	4543.1	4733.1	4962.6	5075.1	5225.6	5379.1	5146.6
20°	4148.0	4154.0	4140.4	4179.9	4303.0	4508.2	4774.2	4909.5	5088.8	5304.6	5031.0
22.5°	4120.6	4120.6	4070.4	4062.8	4117.6	4290.8	4579.6	4745.3	4964.2	5253.0	4927.7
25°	4248.3	4239.2	4144.9	4058.3	4038.5	4126.7	4394.2	4597.9	4857.8	5251.4	4850.2
27.5°	4489.9	4477.8	4360.7	4214.8	4088.7	4050.7	4251.3	4459.5	4774.2	5303.1	4810.7
30°	4790.9	4786.3	4667.8	4485.4	4277.1	4081.1	4195.1	4388.1	4717.9	5398.9	4809.1
32.5°	5120.7	5099.4	5026.5	4844.1	4573.5	4249.8	4228.5	4391.1	4702.7	5538.7	4844.1
35°	5471.8	5456.6	5438.4	5254.5	4950.5	4547.7	4375.9	4496.0	4777.2	5733.3	4942.9
37.5°	5918.7	5902.0	5932.4	5731.7	5398.9	4938.3	4625.2	4705.8	4929.2	6016.0	5126.8
40°	6713.6	6665.0	6579.9	6271.3	5921.7	5417.1	4985.4	4997.6	5189.1	6394.4	5421.7
42.5°	8019.3	7862.7	7441.7	6874.8	6473.5	5973.4	5455.1	5397.4	5547.8	6894.5	5850.3
45°	9328.0	9151.6	8440.3	7532.9	7045.0	6570.8	6035.7	5897.4	5994.7	7476.7	6402.0
47.5°	10173.0	10086.4	9283.9	8191.0	7643.8	7221.3	6700.0	6472.0	6541.9	8136.3	7083.0
50°	10420.8	10346.3	9715.5	8706.3	8209.3	8007.1	7522.3	7219.8	7231.9	8906.9	7899.2
52.5°	10235.4	10205.0	9787.0	9025.5	8729.1	8835.5	8660.7	8239.7	8139.4	9752.0	8783.8
55°	9987.6	9998.3	9837.1	9346.2	9258.0	9607.6	10150.3	9811.3	9385.7	10632.1	9704.9
57.5°	9207.9	9215.5	9638.0	9957.2	10267.3	10689.8	11310.0	11167.1	10671.6	11582.0	10737.0
60°	7414.3	7473.6	8414.5	9831.1	11420.9	12822.3	12974.3	12728.1	12039.6	12676.4	12079.1
62.5°	5297.0	5350.2	6440.0	8534.5	11285.7	15236.0	16047.7	15068.8	13895.4	14313.4	13966.9
65°	2783.0	2773.9	3617.5	5897.4	9505.8	15795.4	20890.2	19224.4	17022.0	16564.5	15790.8
67.5°	1554.9	1605.1	1931.9	2974.5	6195.3	13901.5	23983.3	24474.3	21369.0	18350.4	15711.8
69°	1437.9	1454.6	1673.5	2299.7	4038.5	11469.6	23717.4	26059.6	23202.1	18358.0	14699.5
70°	1396.8	1415.1	1614.2	2118.8	3392.5	9397.9	22749.1	25874.2	23647.4	17950.7	13778.4
72.5°	1252.4	1276.8	1469.8	1904.5	2859.0	4844.1	18324.6	22145.7	21420.7	15689.0	10683.8
75°	1068.5	1109.6	1401.4	1890.8	2708.6	3079.4	12220.4	16499.1	15942.8	11220.3	6061.6
77.5°	442.3	446.9	612.5	1384.7	2842.3	2947.2	6567.7	10451.2	9252.0	4920.1	1825.5
80°	308.6	302.5	305.5	404.3	2293.6	2966.9	3369.7	5315.3	4131.2	1298.0	854.2
82.5°	259.9	256.9	269.0	253.8	776.7	3366.7	2818.0	2770.9	1945.5	699.2	407.3
85°	171.8	167.2	220.4	231.0	369.3	2673.6	3030.8	2178.1	1450.0	373.9	173.3
87.5°	83.6	85.1	126.2	156.6	196.1	846.6	2903.1	1722.1	1120.2	162.6	69.9
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°	6047.9	6047.9	6047.9	6047.9	6047.9	6047.9	6047.9	6047.9	6047.9	6047.9	6047.9
2.5°	5950.6	5905.0	5864.0	5812.3	5772.8	5739.3	5693.7	5692.2	5684.6	5695.3	5698.3
5°	5818.4	5742.4	5626.9	5497.7	5406.5	5286.4	5169.4	5129.8	5085.8	5081.2	5094.9
7.5°	5619.3	5500.7	5303.1	5105.5	4907.9	4705.8	4514.3	4417.0	4322.7	4293.9	4307.5
10°	5397.4	5246.9	4944.4	4622.2	4344.0	4043.1	3751.2	3562.8	3391.0	3318.1	3336.3
12.5°	5224.1	5032.6	4607.0	4189.0	3772.5	3340.9	2956.3	2583.9	2302.7	2176.6	2184.2
15°	5075.1	4830.4	4290.8	3734.5	3213.2	2621.9	2088.4	1656.7	1410.5	1319.3	1316.3
17.5°	4914.0	4617.6	3961.0	3312.0	2635.6	1904.5	1398.4	1143.0	1045.7	1015.3	1015.3
20°	4742.3	4398.7	3616.0	2851.4	2027.6	1330.0	1051.8	953.0	916.5	907.4	905.9
22.5°	4582.7	4184.4	3269.4	2360.5	1466.8	1009.2	895.3	857.3	851.2	858.8	858.8
25°	4456.5	3996.0	2918.3	1843.7	1067.0	845.1	796.5	791.9	814.7	842.1	846.6
27.5°	4362.3	3827.2	2571.8	1346.7	839.0	735.7	718.9	738.7	791.9	846.6	857.3
30°	4296.9	3682.8	2156.8	968.2	699.2	644.5	652.1	687.0	767.6	851.2	874.0
32.5°	4268.0	3565.8	1738.8	743.3	597.3	566.9	586.7	632.3	715.9	799.5	826.9
35°	4295.4	3480.7	1352.8	617.1	522.9	500.1	522.9	570.0	624.7	665.7	682.5
37.5°	4394.2	3450.3	1018.4	547.2	474.2	451.4	469.7	501.6	525.9	541.1	548.7
40°	4602.4	3482.2	798.0	510.7	446.9	421.0	425.6	440.8	457.5	469.7	471.2
42.5°	4933.8	3587.1	709.8	497.0	430.1	396.7	389.1	399.7	418.0	434.7	437.7
45°	5374.6	3761.9	700.7	501.6	422.5	376.9	361.7	372.4	396.7	424.1	428.6
47.5°	5944.5	4038.5	743.3	525.9	427.1	366.3	343.5	354.1	386.1	422.5	428.6
50°	6619.4	4421.5	822.3	562.4	448.4	366.3	335.9	345.0	378.5	419.5	425.6
52.5°	7414.3	4955.0	904.4	598.9	478.8	380.0	338.9	337.4	367.8	405.8	413.4
55°	8291.3	5617.7	983.4	630.8	495.5	398.2	346.5	328.3	352.6	383.0	389.1
57.5°	9323.4	6525.2	1121.7	661.2	504.6	411.9	355.7	319.2	332.9	354.1	358.7
60°	10723.3	7858.2	1390.8	712.9	521.3	418.0	357.2	310.1	308.6	323.8	325.3
62.5°	12548.7	9419.2	1647.6	773.7	554.8	419.5	351.1	304.0	288.8	293.4	293.4
65°	13846.8	9993.7	1573.2	825.3	585.2	418.0	345.0	299.4	273.6	266.0	266.0
67.5°	13108.1	8827.9	1336.0	839.0	588.2	401.3	331.3	288.8	259.9	241.7	241.7
69°	12022.8	7738.1	1226.6	814.7	563.9	381.5	316.2	278.2	250.8	229.5	229.5
70°	11138.2	6912.7	1159.7	785.8	535.0	364.8	302.5	267.5	241.7	223.4	221.9
72.5°	8315.7	4613.1	991.0	677.9	439.3	308.6	264.5	238.6	217.4	205.2	205.2
75°	4388.1	2311.8	811.7	553.3	338.9	246.2	217.4	200.6	188.5	187.0	185.4
77.5°	1437.9	1045.7	583.7	416.5	249.3	191.5	173.3	162.6	161.1	167.2	167.2
80°	776.7	624.7	375.4	281.2	173.3	142.9	133.8	132.2	136.8	145.9	145.9
82.5°	376.9	308.6	223.4	173.3	118.6	104.9	104.9	106.4	112.5	123.1	123.1
85°	162.6	145.9	129.2	97.3	73.0	65.4	74.5	82.1	86.6	94.2	97.3
87.5°	77.5	68.4	59.3	38.0	31.9	33.4	39.5	48.6	57.8	63.8	65.4
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)