

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: P270418

Luminaire Tested: **NAV-AF-03-D-UNV-AFL-7027-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270418
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24160)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-03-D-UNV-AFL-7027-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 70 CRI, 2700K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND AUTOMOTIVE FRONTLINE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 17689.3 lumens
Efficiency: N/A
Efficacy: 92.6 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type II - Short - Full Cutoff
BUG Rating: B2 - U0 - G2

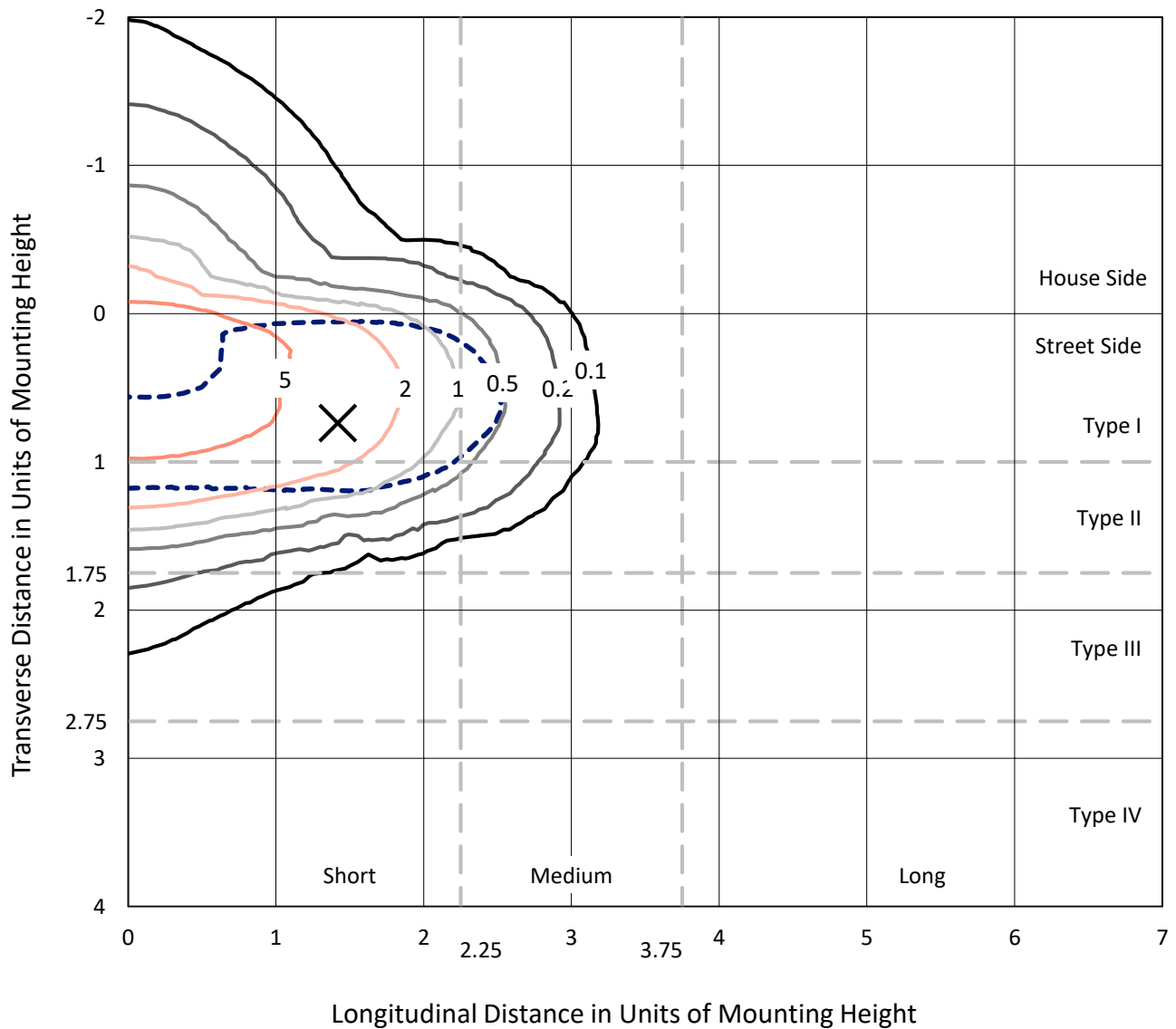
Input Watts (W): 191
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

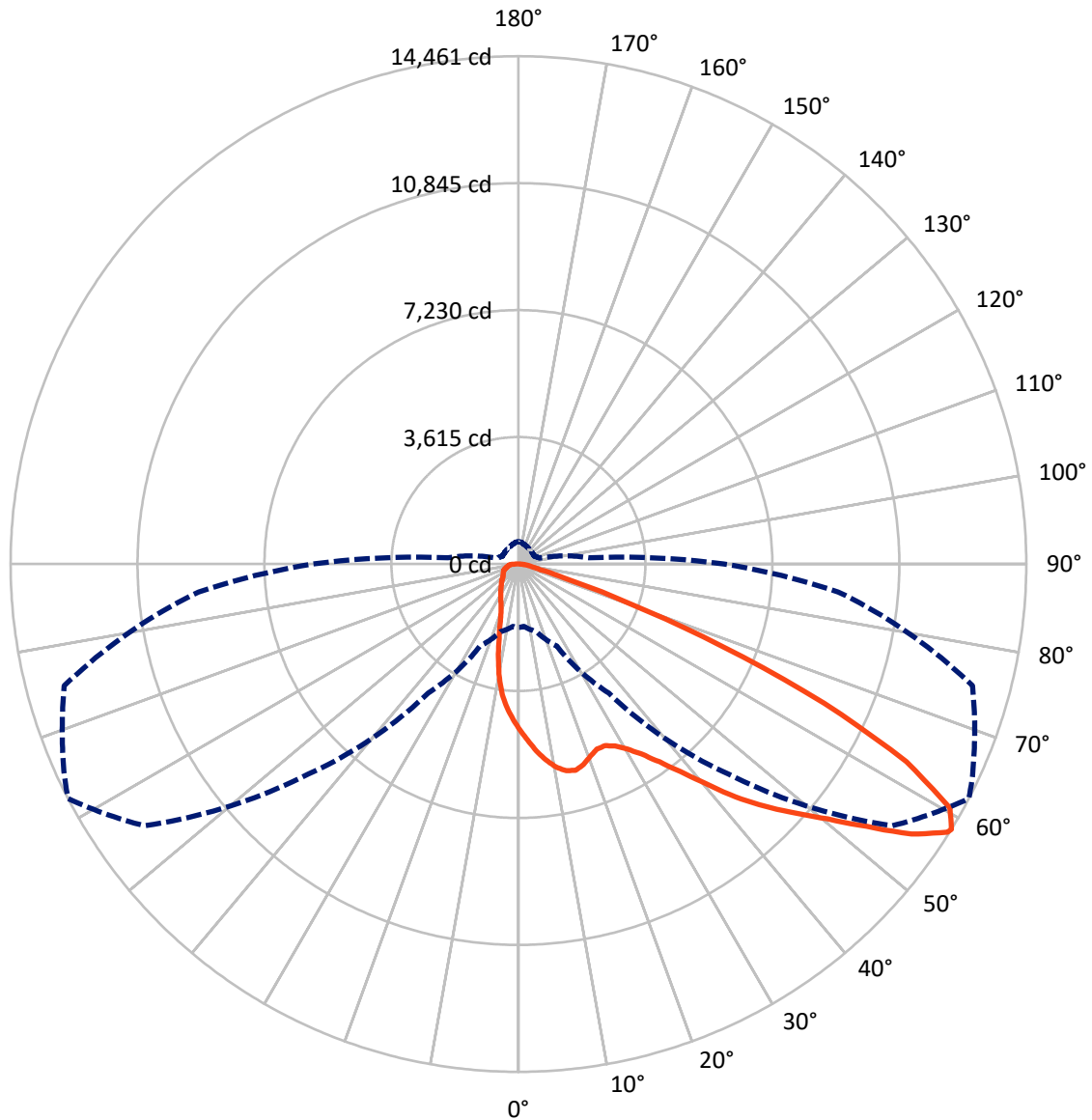
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 8.8 fc
 Type II - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 62.5-Deg Lateral - - - Horizontal Cone Through 58-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2716.0	0.0	2716.0
	% Fixture	15.4	0.0	15.4
Street Side	Lumens	14973.3	0.0	14973.3
	% Fixture	84.6	0.0	84.6
Total	Lumens	17689.3	0.0	17689.3
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	422.1	2.4
10°-20°	1065.4	6.0
20°-30°	1726.6	9.8
30°-40°	2756.7	15.6
40°-50°	4009.7	22.7
50°-60°	4195.8	23.7
60°-70°	2557.9	14.5
70°-80°	715.3	4.0
80°-90°	239.8	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°	17689.3	100.0
0°-180°	17689.3	100.0

Coefficient of Utilization



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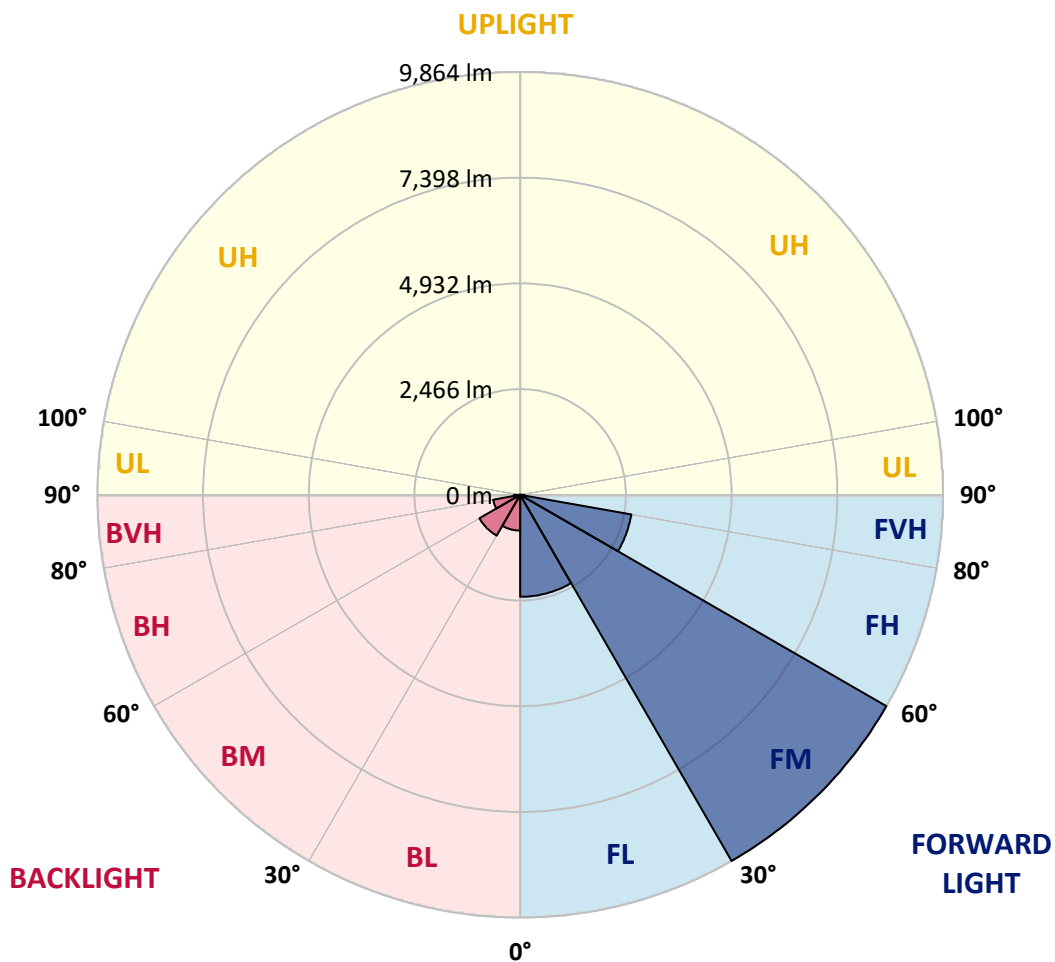
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2379.3	13.5			
FM	(30°-60°)	9863.7	55.8			
FH	(60°-80°)	2633.8	14.9			G2/5000
FVH	(80°-90°)	96.5	0.5			G1/100
BL	(0°-30°)	834.9	4.7	B2/1000		
BM	(30°-60°)	1098.4	6.2	B2/2500		
BH	(60°-80°)	639.4	3.6	B2/1000		G2/1000
BVH	(80°-90°)	143.3	0.8			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G2

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	62.5°	65°	75°	85°
0°	4722.8	4722.8	4722.8	4722.8	4722.8	4722.8	4722.8	4722.8	4722.8	4722.8	4722.8
2.5°	5360.8	5357.5	5312.1	5282.4	5246.9	5165.2	5083.2	5022.6	4991.5	4873.2	4758.3
5°	5804.2	5790.8	5765.4	5733.4	5687.0	5584.1	5454.8	5343.1	5298.9	5088.9	4877.6
7.5°	5569.9	5590.8	5669.3	5757.6	5850.7	5857.2	5765.4	5632.8	5584.1	5303.4	4993.8
10°	4920.8	4911.9	5010.3	5182.9	5489.1	5792.0	5943.5	5878.1	5827.3	5506.7	5109.9
12.5°	4723.9	4721.9	4738.4	4782.5	4975.0	5390.6	5898.1	6039.7	6022.0	5722.4	5233.6
15°	4783.7	4785.9	4784.8	4790.3	4843.4	5041.3	5644.9	6093.8	6149.1	5935.7	5359.6
17.5°	4975.0	4967.3	4943.0	4916.3	4924.1	4994.8	5371.9	6000.9	6166.8	6125.8	5465.8
20°	5270.1	5270.1	5204.9	5130.8	5082.3	5097.7	5258.0	5841.7	6084.9	6287.2	5545.4
22.5°	5640.5	5646.0	5549.9	5415.1	5304.4	5262.5	5323.3	5723.5	5985.4	6436.5	5616.3
25°	6100.4	6099.3	5958.8	5765.4	5590.8	5490.3	5489.1	5729.0	5954.4	6611.2	5690.3
27.5°	6669.7	6617.9	6454.2	6178.9	5932.3	5778.6	5709.1	5868.3	6019.7	6825.7	5789.8
30°	7312.2	7259.1	7044.6	6690.8	6356.9	6132.5	6017.4	6109.3	6218.7	7098.8	5940.1
32.5°	7947.8	7960.1	7707.8	7308.8	6879.8	6563.6	6393.3	6449.8	6526.0	7432.7	6143.6
35°	8878.7	8877.6	8548.1	8049.5	7539.8	7102.1	6886.4	6916.3	6985.9	7903.6	6428.8
37.5°	9573.0	9561.9	9349.6	8908.5	8334.7	7809.7	7497.9	7502.3	7561.9	8495.0	6804.8
40°	9643.8	9641.5	9640.4	9577.4	9184.9	8689.7	8299.4	8218.7	8242.9	9122.9	7203.8
42.5°	9103.2	9183.8	9415.9	9771.9	9881.4	9621.6	9252.4	9072.2	9019.2	9843.8	7626.2
45°	8332.6	8373.5	8780.3	9580.8	10231.9	10497.2	10219.7	9839.3	9748.8	10544.8	7969.9
47.5°	7974.3	7956.6	8192.2	9064.3	10197.6	11193.7	11213.6	10590.1	10436.4	11149.5	8262.9
50°	7205.9	7182.8	7480.1	8304.9	9824.0	11539.7	12234.0	11408.1	11124.0	11724.4	8528.1
52.5°	5674.9	5652.7	6051.8	7114.1	8988.1	11410.5	13094.1	12412.1	11927.8	12278.3	8775.8
55°	3692.6	3694.8	4075.0	5170.6	7273.4	10656.5	13497.7	13571.8	13028.8	12832.1	8976.0
57.5°	2033.1	2014.3	2285.2	2958.5	5003.6	8944.0	13161.5	14407.6	14124.5	13307.5	9120.9
58°	1807.6	1785.6	1994.3	2574.8	4486.3	8460.7	12992.5	14460.6	14264.9	13386.1	9141.8
60°	1288.0	1250.4	1218.3	1451.7	2584.8	6100.4	11864.8	14116.8	14305.8	13542.9	9121.8
62.5°	1085.6	1042.6	927.6	918.6	1217.3	2983.9	9382.7	12397.7	12927.1	13181.5	8801.2
65°	1008.3	965.1	813.7	759.4	825.8	1288.0	5802.0	9573.0	10280.6	11924.6	7994.2
67.5°	953.0	902.2	739.7	668.9	682.2	770.6	2462.1	6260.7	7081.1	9298.7	6413.3
70°	903.2	846.8	681.0	599.2	588.2	586.0	961.8	3269.1	4059.6	6084.9	4296.1
72.5°	846.8	791.5	629.1	541.7	517.5	475.5	578.1	1351.1	1851.8	2982.8	1968.9
75°	765.0	719.7	571.6	494.2	452.1	385.8	426.8	647.9	798.2	1142.0	914.2
77.5°	673.3	636.8	513.0	454.5	397.9	315.0	326.2	438.9	493.1	643.5	529.6
80°	476.6	489.8	447.7	400.3	350.5	254.3	250.9	321.8	353.8	432.3	356.0
82.5°	328.3	338.3	364.8	316.3	283.1	197.8	184.6	223.3	239.8	260.9	172.5
85°	234.4	227.7	253.1	226.6	207.9	126.0	118.2	141.6	151.5	159.2	83.0
87.5°	142.7	141.6	146.0	117.1	108.3	64.0	58.6	67.5	71.9	69.7	39.9
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°	4722.8	4722.8	4722.8	4722.8	4722.8	4722.8	4722.8	4722.8	4722.8	4722.8	4722.8
2.5°	4715.2	4660.9	4542.6	4447.6	4344.8	4266.3	4187.8	4143.6	4095.0	4067.3	4064.0
5°	4767.1	4656.5	4404.5	4170.1	3929.1	3712.4	3500.2	3343.2	3214.9	3142.0	3137.6
7.5°	4824.6	4651.1	4261.9	3856.2	3427.3	3000.5	2623.5	2357.1	2185.7	2106.0	2100.5
10°	4868.9	4627.9	4088.4	3457.0	2777.1	2213.3	1870.6	1713.5	1661.7	1648.4	1646.1
12.5°	4922.0	4611.3	3869.4	2945.3	2122.7	1684.9	1580.9	1571.0	1582.1	1588.7	1589.8
15°	4971.7	4579.2	3574.3	2378.1	1661.7	1505.7	1508.0	1528.9	1551.2	1561.1	1562.2
17.5°	4994.8	4500.7	3186.2	1874.0	1453.7	1425.0	1450.5	1478.2	1498.1	1505.7	1505.7
20°	4994.8	4374.7	2736.2	1518.0	1345.4	1351.1	1382.0	1403.0	1407.4	1400.7	1397.5
22.5°	4973.8	4218.8	2298.5	1324.5	1257.0	1278.0	1302.4	1288.0	1236.0	1196.3	1188.5
25°	4955.1	4034.2	1877.2	1206.2	1179.7	1207.2	1197.4	1098.9	1019.2	978.4	971.7
27.5°	4924.1	3810.8	1525.6	1108.9	1104.5	1126.6	1028.2	933.1	893.3	871.1	866.8
30°	4916.3	3568.7	1276.9	1022.6	1030.4	999.5	886.6	855.6	846.8	834.6	829.1
32.5°	4941.8	3326.7	1121.1	951.8	959.6	857.9	814.9	819.3	818.0	802.6	797.1
35°	5011.5	3091.1	1021.6	887.7	865.6	768.4	773.9	787.2	787.2	768.4	761.8
37.5°	5133.1	2872.2	958.5	833.5	757.4	721.9	736.3	753.9	753.9	740.7	735.3
40°	5262.5	2658.9	911.1	790.5	688.8	689.9	704.2	717.4	723.0	725.2	720.8
42.5°	5379.6	2437.7	860.0	744.1	657.7	665.6	672.2	682.2	705.3	720.8	718.6
45°	5448.1	2215.5	804.8	686.6	636.8	640.1	637.8	655.7	683.3	706.4	706.4
47.5°	5511.2	2033.1	759.4	629.1	615.8	615.8	609.2	626.8	652.3	679.8	682.2
50°	5570.8	1914.7	727.4	584.8	589.3	586.0	583.7	600.2	634.7	667.8	673.3
52.5°	5631.7	1875.0	698.7	552.7	561.6	557.2	559.5	582.6	621.3	655.7	661.2
55°	5716.9	1900.5	668.9	530.7	535.1	534.0	542.8	569.3	603.7	637.8	640.1
57.5°	5821.8	1993.2	643.5	514.1	509.7	516.3	530.7	556.1	589.3	630.3	633.5
58°	5842.8	2015.3	639.1	509.7	504.0	514.1	528.5	552.7	587.0	630.3	633.5
60°	5874.8	2093.9	627.9	500.9	485.4	503.1	520.7	545.0	582.6	635.7	642.3
62.5°	5720.0	2109.4	624.6	490.8	465.4	487.5	508.5	536.2	578.1	654.4	668.9
65°	5183.8	1950.2	601.4	474.2	448.9	475.5	497.5	529.6	591.4	710.9	717.4
67.5°	4161.3	1619.6	545.0	448.9	430.1	461.0	488.7	529.6	597.1	719.7	724.2
70°	2861.1	1217.3	474.2	421.2	407.9	443.4	485.4	541.7	578.1	681.0	667.8
72.5°	1494.7	846.8	415.6	389.1	381.4	427.9	517.5	529.6	556.1	635.7	622.4
75°	752.9	576.1	365.9	352.7	351.5	422.4	579.2	509.7	532.9	598.1	626.8
77.5°	444.4	451.0	326.2	318.4	323.8	412.4	580.5	489.8	506.4	550.7	581.6
80°	304.0	372.5	295.3	292.9	297.3	379.3	535.1	465.4	475.5	520.7	553.9
82.5°	171.3	205.6	258.7	273.1	270.8	310.6	462.1	423.5	435.6	615.8	651.2
85°	83.0	123.8	216.8	255.4	231.0	206.7	375.9	375.9	379.3	441.1	446.6
87.5°	30.9	55.2	146.0	202.3	161.4	123.8	255.4	266.4	296.4	305.2	311.7
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)