

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: P196625

Luminaire Tested: **NAV-AF-05-D-UNV-SL3-7030**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196625  
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-05-D-UNV-SL3-7030  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(5) 70 CRI, 3000K, 1050mA 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: 29044.4 lumens  
Efficiency: N/A  
Efficacy: 104.1 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

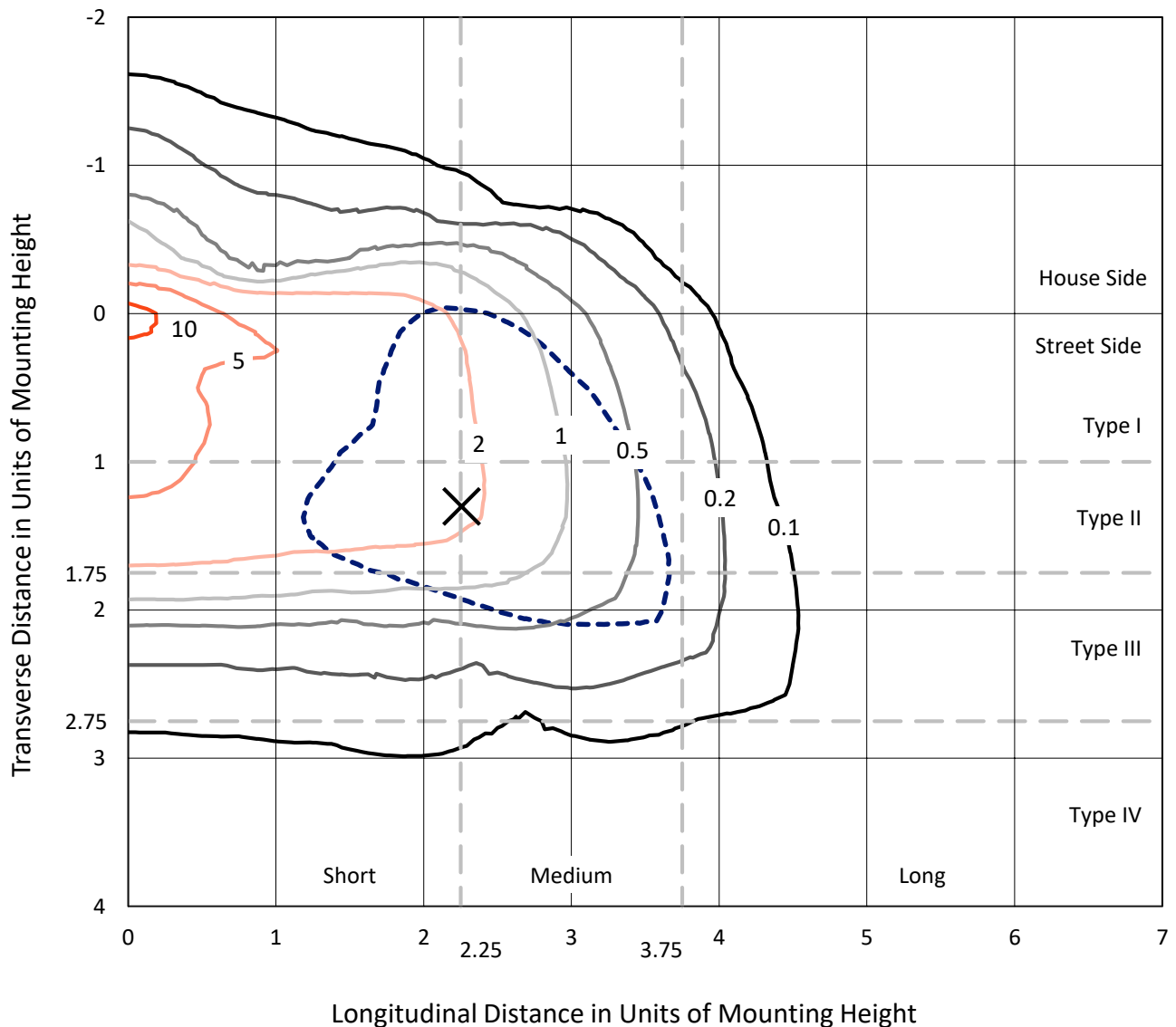
Input Watts (W): 279  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

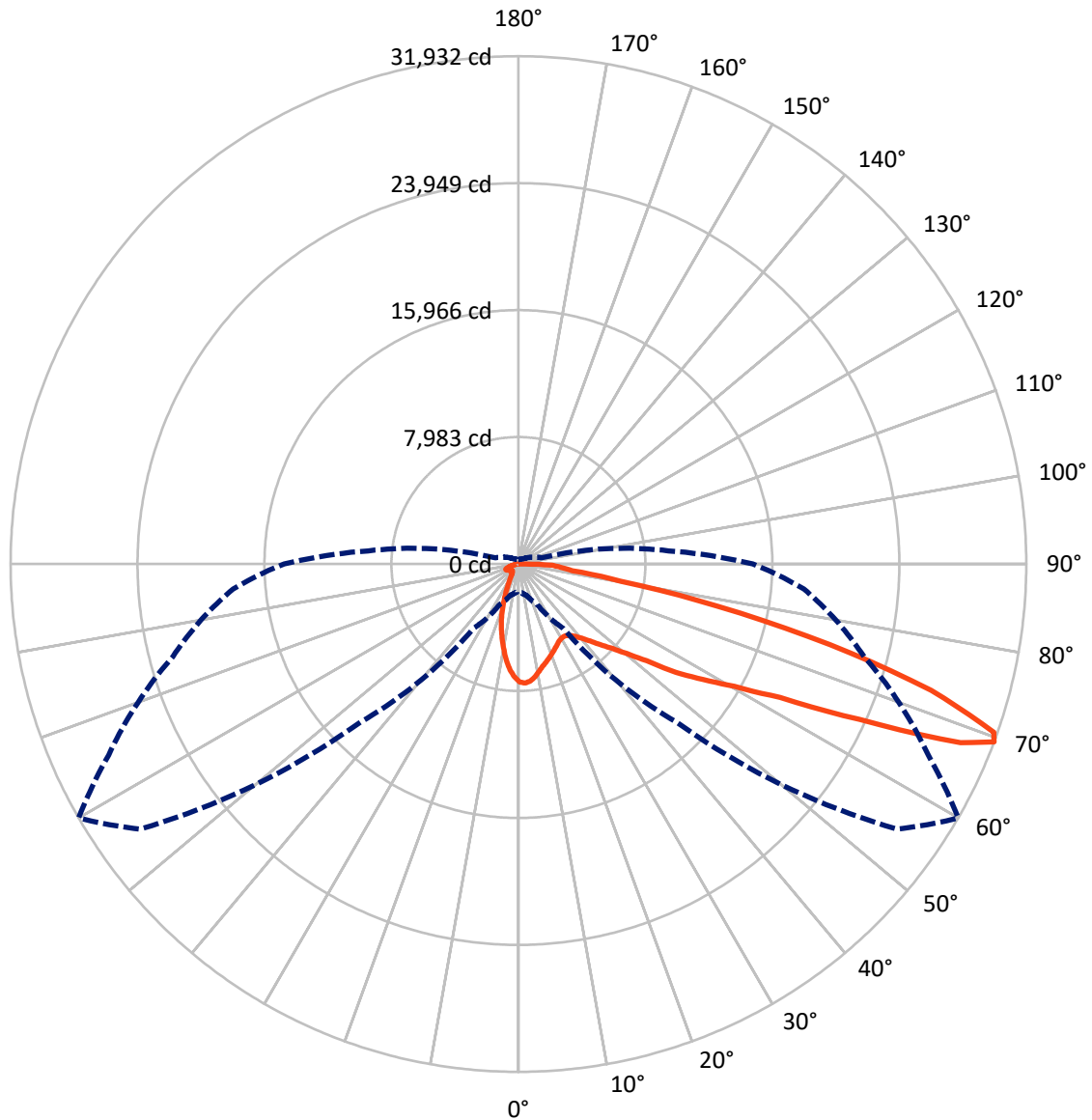
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 11.9 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
<b>House Side</b>	Lumens	4142.7	0.0	4142.7
	% Fixture	14.3	0.0	14.3
<b>Street Side</b>	Lumens	24901.7	0.0	24901.7
	% Fixture	85.7	0.0	85.7
<b>Total</b>	Lumens	29044.4	0.0	29044.4
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	628.7	2.2
10°-20°	1346.1	4.6
20°-30°	1717.2	5.9
30°-40°	2363.0	8.1
40°-50°	3827.6	13.2
50°-60°	6007.3	20.7
60°-70°	8008.8	27.6
70°-80°	4454.8	15.3
80°-90°	690.9	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°	29044.4	100.0
0°-180°	29044.4	100.0

**Coefficient of Utilization**



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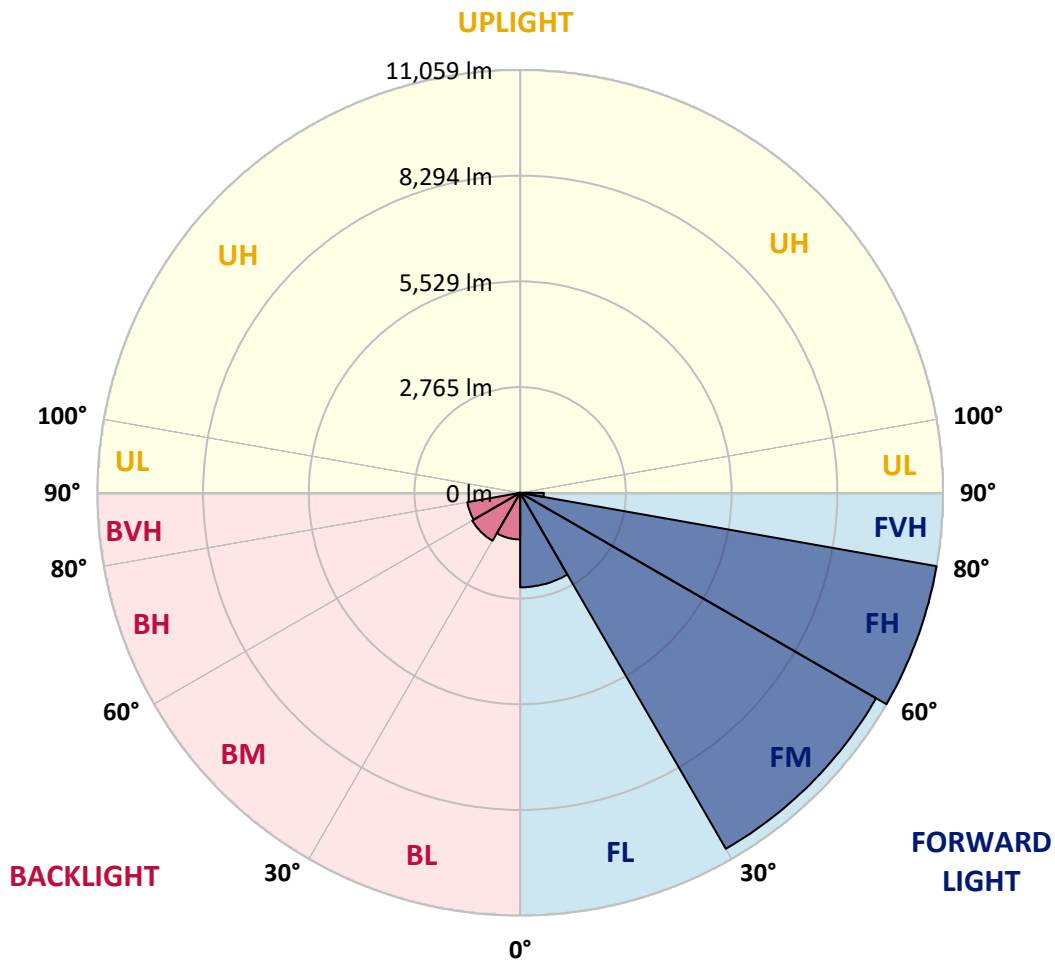
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2471.1	8.5			
FM	(30°-60°)	10750.7	37.0			
FH	(60°-80°)	11059.0	38.1			G4/12000
FVH	(80°-90°)	620.9	2.1			G4/750
BL	(0°-30°)	1220.9	4.2	B3/2500		
BM	(30°-60°)	1447.2	5.0	B2/2500		
BH	(60°-80°)	1404.6	4.8	B3/2500		G3/2500
BVH	(80°-90°)	70.0	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°	7410.7	7410.7	7410.7	7410.7	7410.7	7410.7	7410.7	7410.7	7410.7	7410.7	7410.7
2.5°	7608.2	7628.7	7628.7	7611.9	7602.6	7548.6	7516.9	7494.5	7455.5	7382.8	7317.6
5°	7336.3	7375.3	7392.2	7399.6	7447.9	7431.3	7433.1	7418.2	7384.8	7306.5	7200.3
7.5°	6837.1	6844.5	6874.4	6924.7	7042.0	7123.9	7191.0	7204.0	7196.6	7138.9	6989.9
10°	6345.4	6358.5	6393.9	6479.5	6591.3	6708.6	6854.0	6913.5	6958.1	6939.6	6751.4
12.5°	5937.5	5939.5	5978.5	6077.2	6202.0	6349.2	6546.6	6639.6	6745.8	6788.8	6578.3
15°	5544.6	5570.7	5607.9	5727.1	5881.7	6067.9	6295.2	6423.7	6563.3	6686.2	6444.1
17.5°	5246.6	5267.1	5289.5	5388.1	5566.9	5799.7	6081.0	6218.8	6403.1	6591.3	6306.3
20°	5082.6	5090.2	5073.4	5121.7	5272.7	5524.0	5850.1	6015.9	6235.5	6500.1	6164.7
22.5°	5049.2	5049.2	4987.6	4978.4	5045.5	5257.8	5611.7	5814.7	6082.8	6436.7	6038.1
25°	5205.6	5194.4	5078.9	4972.8	4948.6	5056.6	5384.4	5634.0	5952.5	6434.9	5943.1
27.5°	5501.8	5486.9	5343.5	5164.5	5010.1	4963.4	5209.4	5464.5	5850.1	6498.2	5894.7
30°	5870.5	5864.9	5719.6	5496.2	5240.9	5000.7	5140.4	5376.9	5781.1	6615.5	5892.9
32.5°	6274.6	6248.5	6159.2	5935.7	5604.1	5207.6	5181.4	5380.7	5762.5	6786.8	5935.7
35°	6704.9	6686.2	6663.9	6438.5	6066.1	5572.6	5362.0	5509.2	5853.8	7025.3	6056.8
37.5°	7252.4	7232.0	7269.2	7023.4	6615.5	6051.3	5667.5	5766.1	6040.0	7371.6	6282.1
40°	8226.5	8166.9	8062.7	7684.5	7256.2	6637.8	6108.9	6123.8	6358.5	7835.4	6643.4
42.5°	9826.3	9634.6	9118.7	8424.0	7932.2	7319.5	6684.4	6613.7	6798.0	8448.2	7168.6
45°	11429.9	11214.0	10342.3	9230.4	8632.6	8051.5	7395.9	7226.4	7345.6	9161.5	7844.7
47.5°	12465.5	12359.3	11376.0	10036.9	9366.4	8848.6	8209.7	7930.4	8016.1	9969.8	8679.1
50°	12769.1	12677.8	11904.9	10668.2	10059.2	9811.5	9217.3	8846.7	8861.6	10914.1	9679.3
52.5°	12541.9	12504.6	11992.4	11059.3	10696.2	10826.5	10612.4	10096.4	9973.5	11949.5	10763.2
55°	12238.2	12251.4	12053.9	11452.3	11344.3	11772.6	12437.5	12022.3	11500.7	13028.0	11891.9
57.5°	11282.8	11292.2	11810.0	12201.1	12580.9	13098.8	13858.7	13683.5	13076.3	14192.0	13156.5
60°	9085.1	9157.8	10310.7	12046.5	13994.6	15711.8	15898.1	15596.3	14752.6	15533.0	14801.1
62.5°	6490.6	6555.9	7891.2	10457.8	13828.8	18669.3	19663.9	18464.5	17026.8	17538.9	17114.3
65°	3410.2	3399.0	4432.6	7226.4	11647.9	19354.8	25597.8	23556.6	20857.8	20297.2	19349.2
67.5°	1905.3	1966.7	2367.2	3644.9	7591.5	17034.2	29387.9	29989.5	26184.4	22485.5	19252.3
69°	1762.0	1782.3	2050.6	2817.9	4948.6	14054.2	29062.0	31932.0	28430.6	22495.0	18011.9
70°	1711.6	1734.0	1977.9	2596.3	4157.0	11515.6	27875.6	31704.9	28976.3	21995.7	16883.3
72.5°	1534.6	1564.5	1801.0	2333.7	3503.3	5935.7	22454.0	27136.1	26247.8	19224.3	13091.3
75°	1309.4	1359.6	1717.2	2317.0	3319.0	3773.4	14974.3	20217.2	19535.4	13748.7	7427.6
77.5°	541.9	547.6	750.6	1696.7	3482.8	3611.3	8047.7	12806.4	11336.8	6028.8	2236.9
80°	378.0	370.6	374.3	495.4	2810.4	3635.5	4129.1	6513.1	5062.2	1590.6	1046.7
82.5°	318.5	314.7	329.6	311.1	951.7	4125.4	3453.0	3395.2	2383.9	856.7	499.1
85°	210.5	204.9	270.1	283.1	452.6	3276.1	3713.7	2668.8	1776.8	458.2	212.3
87.5°	102.4	104.4	154.6	191.9	240.3	1037.4	3557.3	2110.2	1372.7	199.3	85.7
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°	7410.7	7410.7	7410.7	7410.7	7410.7	7410.7	7410.7	7410.7	7410.7	7410.7	7410.7
2.5°	7291.5	7235.7	7185.4	7122.1	7073.7	7032.7	6976.9	6975.0	6965.6	6978.7	6982.4
5°	7129.5	7036.4	6895.0	6736.6	6624.8	6477.7	6334.3	6285.8	6231.8	6226.2	6243.0
7.5°	6885.5	6740.3	6498.2	6256.0	6013.9	5766.1	5531.6	5412.3	5296.9	5261.5	5278.2
10°	6613.7	6429.3	6058.7	5663.8	5322.9	4954.2	4596.5	4365.7	4155.1	4065.7	4088.2
12.5°	6401.3	6166.6	5645.1	5133.0	4622.6	4093.7	3622.5	3166.3	2821.6	2667.0	2676.5
15°	6218.8	5918.9	5257.8	4576.1	3937.2	3212.8	2559.1	2030.1	1728.4	1616.6	1612.8
17.5°	6021.4	5658.2	4853.7	4058.3	3229.4	2333.7	1713.5	1400.6	1281.4	1244.1	1244.1
20°	5811.0	5390.0	4430.8	3494.0	2484.5	1629.7	1288.8	1167.8	1123.0	1111.9	1110.1
22.5°	5615.4	5127.4	4006.2	2892.4	1797.4	1236.7	1097.0	1050.4	1043.0	1052.2	1052.2
25°	5460.8	4896.5	3575.9	2259.2	1307.5	1035.6	975.9	970.3	998.3	1031.9	1037.4
27.5°	5345.3	4689.7	3151.2	1650.2	1028.1	901.4	880.9	905.2	970.3	1037.4	1050.4
30°	5265.2	4512.7	2642.9	1186.4	856.7	789.7	799.0	841.9	940.5	1043.0	1071.0
32.5°	5229.8	4369.4	2130.7	910.7	731.9	694.7	718.9	774.7	877.3	979.6	1013.2
35°	5263.3	4265.1	1657.6	756.2	640.7	612.7	640.7	698.3	765.5	815.7	836.3
37.5°	5384.4	4227.8	1247.8	670.6	581.0	553.2	575.5	614.6	644.4	662.9	672.4
40°	5639.5	4266.9	977.8	625.8	547.6	515.9	521.5	540.1	560.6	575.5	577.3
42.5°	6045.6	4395.4	869.8	609.0	527.0	486.1	476.8	489.8	512.2	532.6	536.4
45°	6585.7	4609.6	858.6	614.6	517.8	461.8	443.3	456.2	486.1	519.6	525.2
47.5°	7284.1	4948.6	910.7	644.4	523.4	448.8	420.8	434.0	473.1	517.8	525.2
50°	8111.1	5417.9	1007.6	689.1	549.5	448.8	411.6	422.9	463.8	514.1	521.5
52.5°	9085.1	6071.6	1108.2	733.7	586.7	465.7	415.3	413.4	450.7	497.2	506.6
55°	10159.8	6883.7	1205.0	772.9	607.2	488.0	424.7	402.3	432.1	469.4	476.8
57.5°	11424.3	7995.6	1374.5	810.1	618.3	504.8	435.8	391.1	407.9	434.0	439.6
60°	13139.7	9629.0	1704.1	873.5	638.8	512.2	437.7	379.9	378.0	396.7	398.6
62.5°	15376.6	11541.7	2018.9	948.1	679.8	514.1	430.3	372.5	353.9	359.5	359.5
65°	16967.1	12245.8	1927.7	1011.3	717.1	512.2	422.9	366.9	335.2	325.9	325.9
67.5°	16061.9	10817.2	1637.1	1028.1	720.8	491.6	406.0	353.9	318.5	296.1	296.1
69°	14732.2	9481.8	1503.0	998.3	690.9	467.5	387.5	340.8	307.3	281.3	281.3
70°	13648.2	8470.6	1421.0	962.9	655.5	447.0	370.6	327.8	296.1	273.8	271.9
72.5°	10189.5	5652.6	1214.3	830.7	538.2	378.0	324.1	292.4	266.4	251.4	251.4
75°	5376.9	2832.8	994.6	678.0	415.3	301.8	266.4	245.9	231.0	229.1	227.3
77.5°	1762.0	1281.4	715.2	510.4	305.5	234.7	212.3	199.3	197.4	204.9	204.9
80°	951.7	765.5	460.0	344.6	212.3	175.1	163.9	162.0	167.6	178.7	178.7
82.5°	461.8	378.0	273.8	212.3	145.4	128.5	128.5	130.3	137.7	150.9	150.9
85°	199.3	178.7	158.3	119.2	89.4	80.1	91.2	100.6	106.2	115.5	119.2
87.5°	94.9	83.8	72.6	46.6	39.2	41.0	48.4	59.5	70.8	78.2	80.1
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)