

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: P195234

Luminaire Tested: **NAV-AF-06-D-UNV-SL4-7060**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P195234  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24284)  
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-SL4-7060  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(6) 70 CRI, 5700K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV  
SPILL LIGHT ELIMINATOR OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 34365 lumens  
Efficiency: N/A  
Efficacy: 103.2 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')  
IES Classification: Type IV - Short - Non-Cutoff  
BUG Rating: B3 - U0 - G5

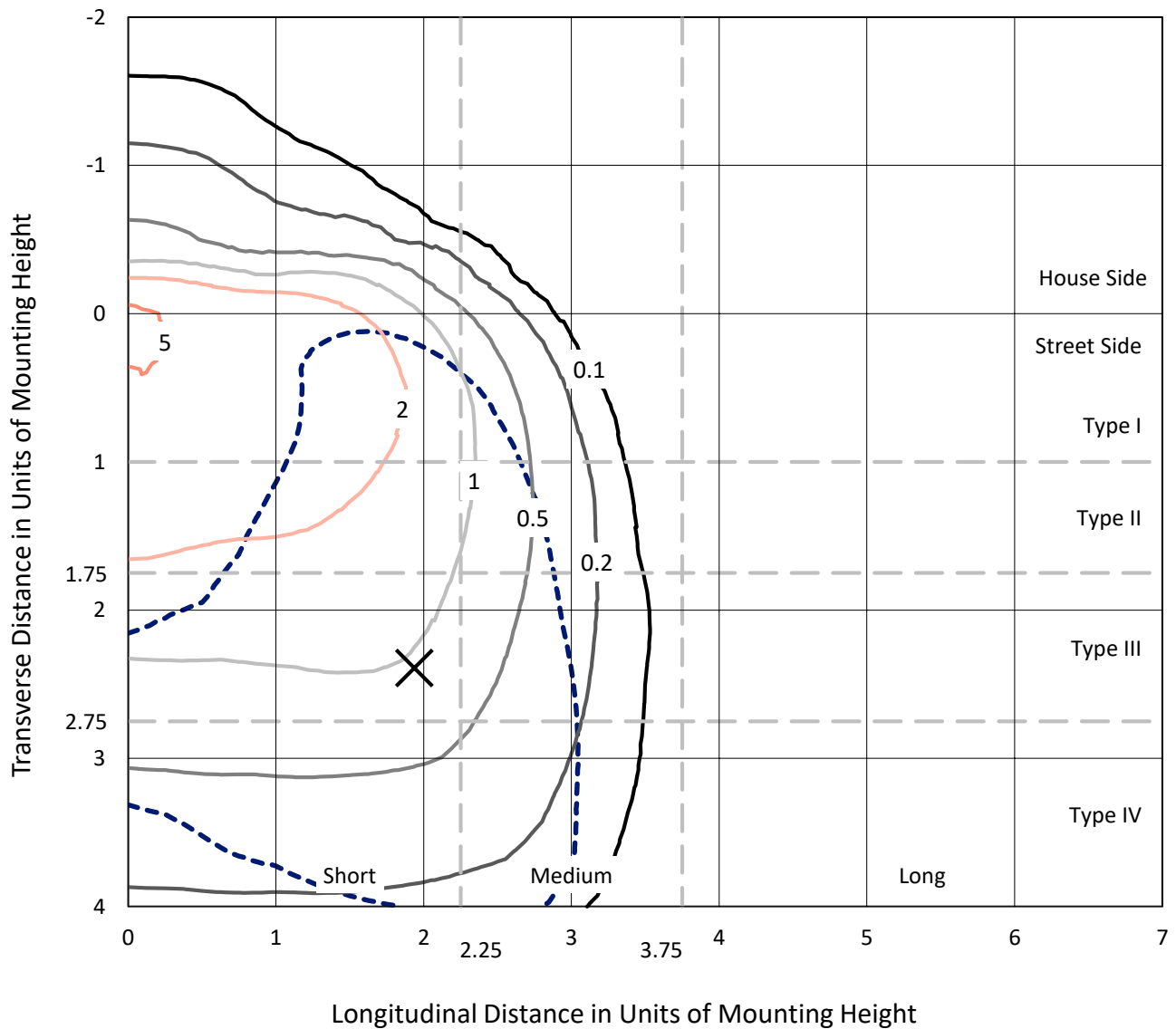
Input Watts (W): 333  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

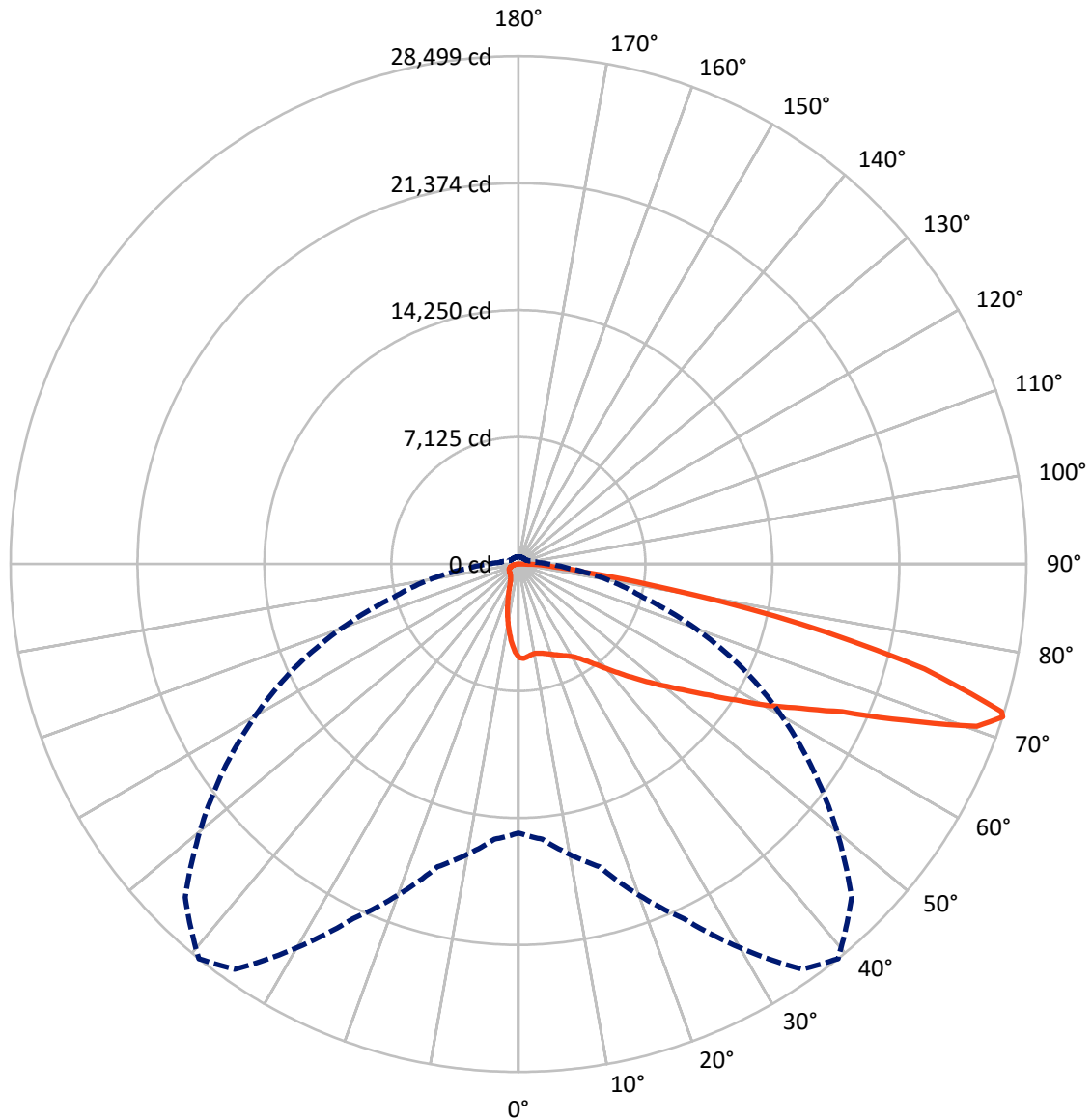
× Max cd  
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 5.8 fc  
 Type IV - Short - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 39-Deg Lateral    - - - Horizontal Cone Through 72-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	3940.4	0.0	3940.4
	% Fixture	11.5	0.0	11.5
<b>Street Side</b>	Lumens	30424.6	0.0	30424.6
	% Fixture	88.5	0.0	88.5
<b>Total</b>	Lumens	34365.0	0.0	34365.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	451.0	1.3
10°-20°	1133.3	3.3
20°-30°	1766.1	5.1
30°-40°	2719.2	7.9
40°-50°	4432.9	12.9
50°-60°	6888.3	20.0
60°-70°	9219.8	26.8
70°-80°	6630.4	19.3
80°-90°	1124.0	3.3
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°	34365.0	100.0
0°-180°	34365.0	100.0

**Coefficient of Utilization**



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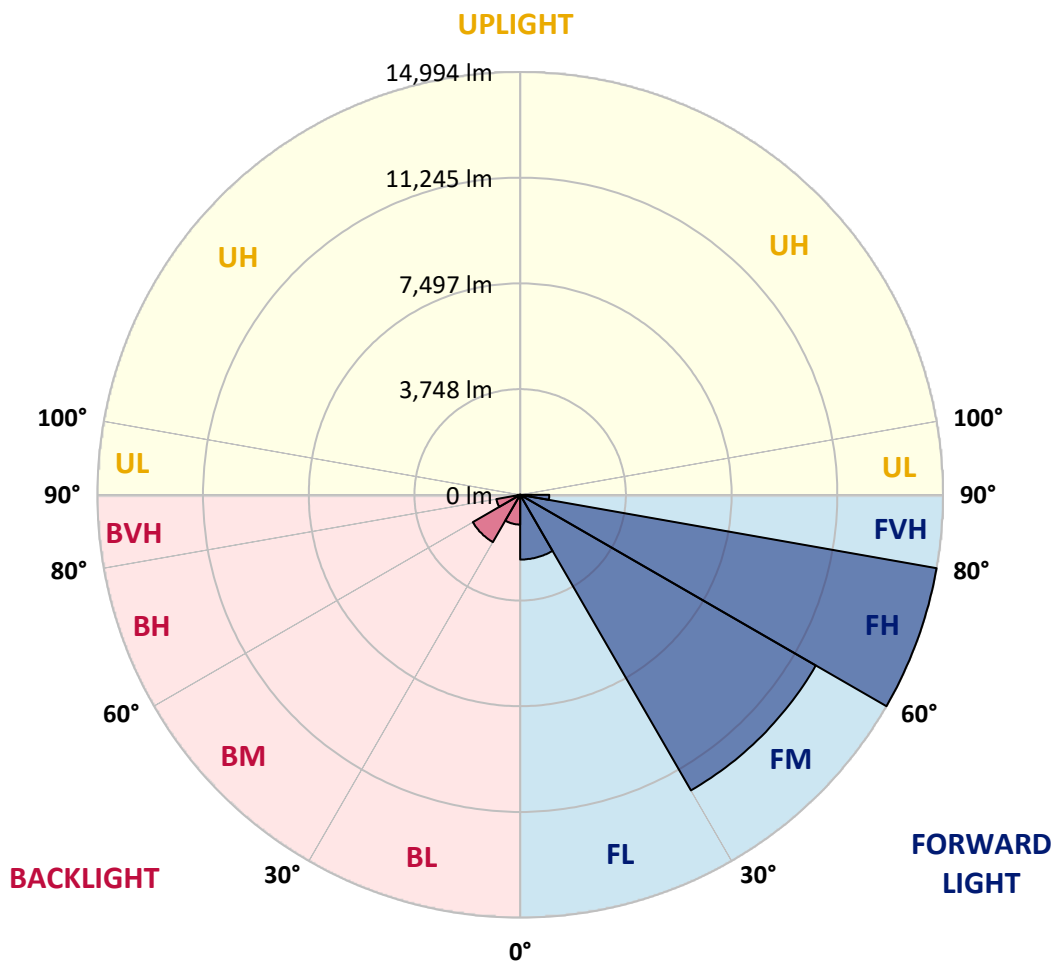
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2295.5	6.7			
FM	(30°-60°)	12104.0	35.2			
FH	(60°-80°)	14994.0	43.6			G5
FVH	(80°-90°)	1031.1	3.0			G5
BL	(0°-30°)	1054.8	3.1	B3/2500		
BM	(30°-60°)	1936.5	5.6	B2/2500		
BH	(60°-80°)	856.1	2.5	B2/1000		G2/1000
BVH	(80°-90°)	92.9	0.3			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B3-U0-G5**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	39°	45°	55°	65°	75°	85°
0°	5248.2	5248.2	5248.2	5248.2	5248.2	5248.2	5248.2	5248.2	5248.2	5248.2	5248.2
2.5°	5361.2	5363.5	5356.6	5335.8	5317.4	5308.1	5292.0	5264.3	5227.4	5202.0	5181.3
5°	5310.4	5317.4	5312.7	5278.1	5245.8	5227.4	5202.0	5162.8	5114.4	5093.6	5045.1
7.5°	5271.2	5275.8	5262.0	5222.8	5160.5	5137.4	5091.3	5040.5	4996.7	4966.7	4909.0
10°	5243.5	5248.2	5236.6	5197.4	5128.2	5100.5	5045.1	4989.8	4932.1	4895.2	4830.6
12.5°	5204.3	5213.5	5213.5	5195.1	5149.0	5130.5	5075.1	5015.2	4962.1	4922.9	4842.1
15°	5197.4	5208.9	5229.7	5227.4	5213.5	5199.7	5155.9	5095.9	5049.8	5003.6	4904.4
17.5°	5255.1	5280.4	5322.0	5335.8	5326.6	5296.6	5245.8	5190.5	5139.7	5095.9	4973.6
20°	5400.4	5414.2	5476.5	5504.2	5458.1	5414.2	5347.3	5275.8	5229.7	5195.1	5038.2
22.5°	5619.6	5638.0	5688.8	5691.1	5594.2	5541.1	5455.8	5368.1	5324.3	5310.4	5125.9
25°	5970.2	5965.6	5979.4	5921.8	5746.4	5684.2	5580.3	5478.8	5448.9	5476.5	5255.1
27.5°	6390.1	6378.5	6334.7	6184.7	5919.5	5838.7	5714.1	5624.2	5624.2	5688.8	5430.4
30°	6874.5	6863.0	6719.9	6468.5	6124.8	6032.5	5901.0	5806.4	5854.9	5979.4	5668.0
32.5°	7386.6	7345.1	7144.4	6807.6	6417.7	6316.2	6189.4	6092.5	6184.7	6397.0	6009.4
35°	7868.8	7845.7	7598.9	7199.8	6796.1	6710.7	6623.1	6503.1	6650.7	6980.6	6491.6
37.5°	8367.1	8348.6	8046.4	7621.9	7257.4	7199.8	7126.0	7042.9	7280.5	7714.2	7144.4
40°	8923.0	8886.1	8505.5	8081.0	7794.9	7767.3	7728.0	7705.0	8087.9	8733.8	7970.3
42.5°	9552.8	9481.3	8989.9	8586.2	8380.9	8404.0	8383.2	8475.5	9061.4	9910.4	8953.0
45°	10272.5	10129.5	9472.1	9123.7	9029.1	9121.4	9165.2	9400.5	10212.6	11269.1	10051.1
47.5°	10946.1	10761.6	10000.3	9707.4	9760.4	9919.6	10044.2	10459.4	11474.4	12611.7	11172.2
50°	11566.7	11359.1	10565.5	10311.8	10570.1	10796.2	11054.6	11640.5	12817.0	13993.5	12201.1
52.5°	12025.8	11875.8	11130.7	10971.5	11499.8	11799.7	12212.6	12953.1	14173.5	15310.8	13119.2
55°	12381.0	12300.3	11682.0	11728.2	12551.7	12980.8	13481.4	14332.6	15608.4	16491.9	13857.4
57.5°	12791.7	12731.7	12311.8	12641.7	13857.4	14397.2	14987.8	15933.6	16974.0	17532.3	14436.5
60°	13225.3	13225.3	13013.1	13742.1	15490.7	16108.9	16697.2	17433.1	18335.1	18468.9	14671.8
62.5°	13552.9	13638.3	13714.4	14914.0	17040.9	17809.1	18455.0	19160.9	19744.6	18930.3	14118.1
65°	14028.1	14210.4	14639.5	16268.1	18960.2	19966.0	20838.0	21430.9	20886.5	18563.5	12311.8
67.5°	14844.8	15114.7	16028.2	18284.3	21899.2	23405.6	24252.2	23228.0	20662.7	16254.3	9430.5
70°	15580.7	15961.3	17523.1	20842.7	25719.4	27283.5	26893.6	22810.4	17996.0	11915.0	5801.8
72°	15091.6	15506.8	17592.3	21956.9	27761.0	28499.2	26443.8	20215.2	13905.9	7271.3	2860.5
72.5°	14771.0	15202.3	17368.5	21929.2	27816.4	28344.6	25818.6	19184.0	12623.2	6362.4	2313.8
75°	12339.5	12708.6	14934.7	19435.5	24512.9	23544.0	20148.3	12415.6	5801.8	2055.4	1190.4
77.5°	8057.9	8339.4	10297.9	13465.3	17170.1	16238.1	12263.4	5813.3	2175.4	1248.0	895.1
80°	4048.6	4249.3	5511.1	7079.8	9266.7	8526.2	5661.1	2812.1	1455.6	902.0	703.6
82.5°	2816.7	3001.3	3794.8	3614.9	3873.3	3748.7	2662.1	2346.1	1088.8	569.8	369.1
85°	2362.2	2553.7	3139.7	2576.8	2108.5	1921.6	1907.8	2216.9	719.7	281.4	311.4
87.5°	2060.0	2350.7	2590.6	1882.4	1446.4	1275.7	1404.9	2032.4	228.4	154.6	94.6
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°	5248.2	5248.2	5248.2	5248.2	5248.2	5248.2	5248.2	5248.2	5248.2	5248.2	5248.2
2.5°	5146.6	5139.7	5105.1	5052.1	5012.9	4987.5	4939.0	4936.7	4941.3	4899.8	4916.0
5°	5001.3	4973.6	4883.7	4761.4	4662.2	4567.6	4463.8	4429.2	4399.2	4336.9	4343.9
7.5°	4849.1	4800.6	4643.7	4443.1	4251.6	4076.3	3903.2	3817.9	3753.3	3672.6	3672.6
10°	4759.1	4683.0	4443.1	4150.1	3845.6	3589.5	3331.1	3176.6	3063.5	2959.7	2952.8
12.5°	4754.5	4639.1	4304.6	3900.9	3483.4	3123.5	2770.6	2533.0	2364.6	2242.3	2230.8
15°	4791.4	4629.9	4189.3	3667.9	3142.0	2673.7	2237.7	1935.5	1720.9	1584.8	1571.0
17.5°	4823.7	4618.4	4064.7	3423.4	2809.8	2240.0	1755.5	1441.8	1238.8	1128.1	1116.5
20°	4853.7	4593.0	3905.5	3165.0	2443.0	1834.0	1372.6	1118.8	985.0	922.8	915.8
22.5°	4897.5	4569.9	3739.5	2874.4	2083.1	1492.6	1132.7	950.4	878.9	848.9	844.3
25°	4969.0	4572.2	3578.0	2576.8	1753.2	1243.4	980.4	867.4	828.2	807.4	807.4
27.5°	5072.8	4599.9	3418.8	2274.6	1474.1	1072.7	890.5	823.6	798.2	782.0	777.4
30°	5225.1	4650.7	3250.4	1988.5	1252.6	955.0	837.4	795.9	775.1	761.3	759.0
32.5°	5446.5	4740.6	3072.8	1727.9	1084.2	872.0	798.2	772.8	756.7	745.1	742.8
35°	5776.4	4899.8	2899.7	1506.4	964.3	812.0	765.9	745.1	735.9	731.3	729.0
37.5°	6260.9	5155.9	2736.0	1333.4	885.8	772.8	733.6	722.1	717.4	717.4	717.4
40°	6869.9	5492.7	2588.3	1211.1	842.0	742.8	710.5	701.3	701.3	703.6	703.6
42.5°	7610.4	5914.8	2461.4	1128.1	816.6	722.1	694.4	689.8	687.5	687.5	689.8
45°	8470.9	6413.1	2383.0	1063.5	798.2	710.5	682.8	680.5	671.3	666.7	666.7
47.5°	9335.9	6946.0	2378.4	1026.6	775.1	696.7	671.3	671.3	652.8	643.6	645.9
50°	10143.4	7423.5	2429.1	1017.3	761.3	675.9	659.8	662.1	636.7	625.2	622.9
52.5°	10793.9	7788.0	2491.4	1028.9	761.3	657.5	639.0	650.5	622.9	609.0	606.7
55°	11296.8	8041.8	2514.5	1054.2	770.5	641.3	620.6	639.0	618.2	599.8	599.8
57.5°	11656.7	8122.5	2415.3	1065.8	784.3	639.0	602.1	636.7	625.2	602.1	602.1
60°	11525.2	7654.2	2046.2	1021.9	782.0	634.4	588.3	641.3	648.2	622.9	622.9
62.5°	10498.6	6403.9	1642.5	922.8	742.8	618.2	572.1	636.7	664.4	655.2	650.5
65°	8547.0	4696.8	1273.4	805.1	675.9	583.6	537.5	595.2	627.5	636.7	639.0
67.5°	6023.3	2973.6	989.7	685.1	592.9	532.9	498.3	526.0	537.5	542.1	551.3
70°	3294.2	1610.2	786.6	576.7	507.5	482.1	456.8	459.1	454.5	449.8	454.5
72°	1654.0	1051.9	664.4	500.6	449.8	433.7	422.2	415.2	415.2	408.3	410.6
72.5°	1423.3	978.1	641.3	482.1	436.0	422.2	412.9	406.0	403.7	399.1	401.4
75°	948.1	775.1	535.2	403.7	371.4	362.2	366.8	359.9	362.2	357.6	359.9
77.5°	765.9	666.7	454.5	341.4	318.3	304.5	313.7	316.0	320.7	316.0	313.7
80°	641.3	567.5	380.6	281.4	265.3	253.8	258.4	274.5	276.8	263.0	260.7
82.5°	415.2	456.8	299.9	219.2	203.0	198.4	209.9	226.1	230.7	212.2	207.6
85°	348.3	366.8	216.8	149.9	133.8	129.2	152.3	168.4	179.9	161.5	156.9
87.5°	96.9	179.9	106.1	71.5	60.0	60.0	73.8	87.7	103.8	106.1	106.1
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)