

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: P196200

Luminaire Tested: **NAV-AF-06-D-UNV-SL4-1200**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196200  
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-SL4-1200  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(6) 70 CRI, 4000K, 1200mA 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: 38563.2 lumens  
Efficiency: N/A  
Efficacy: 101.0 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

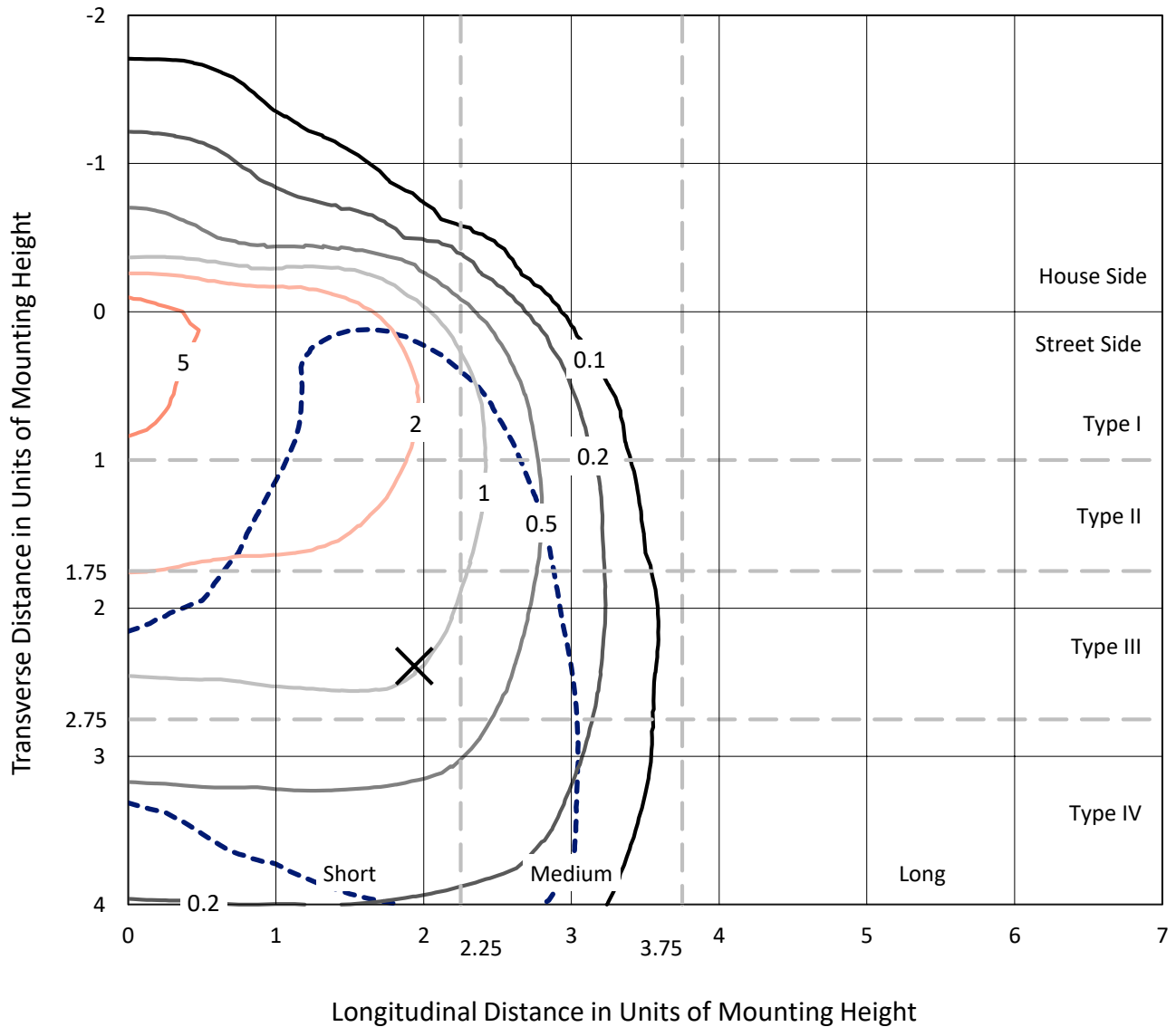
Input Watts (W): 382  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

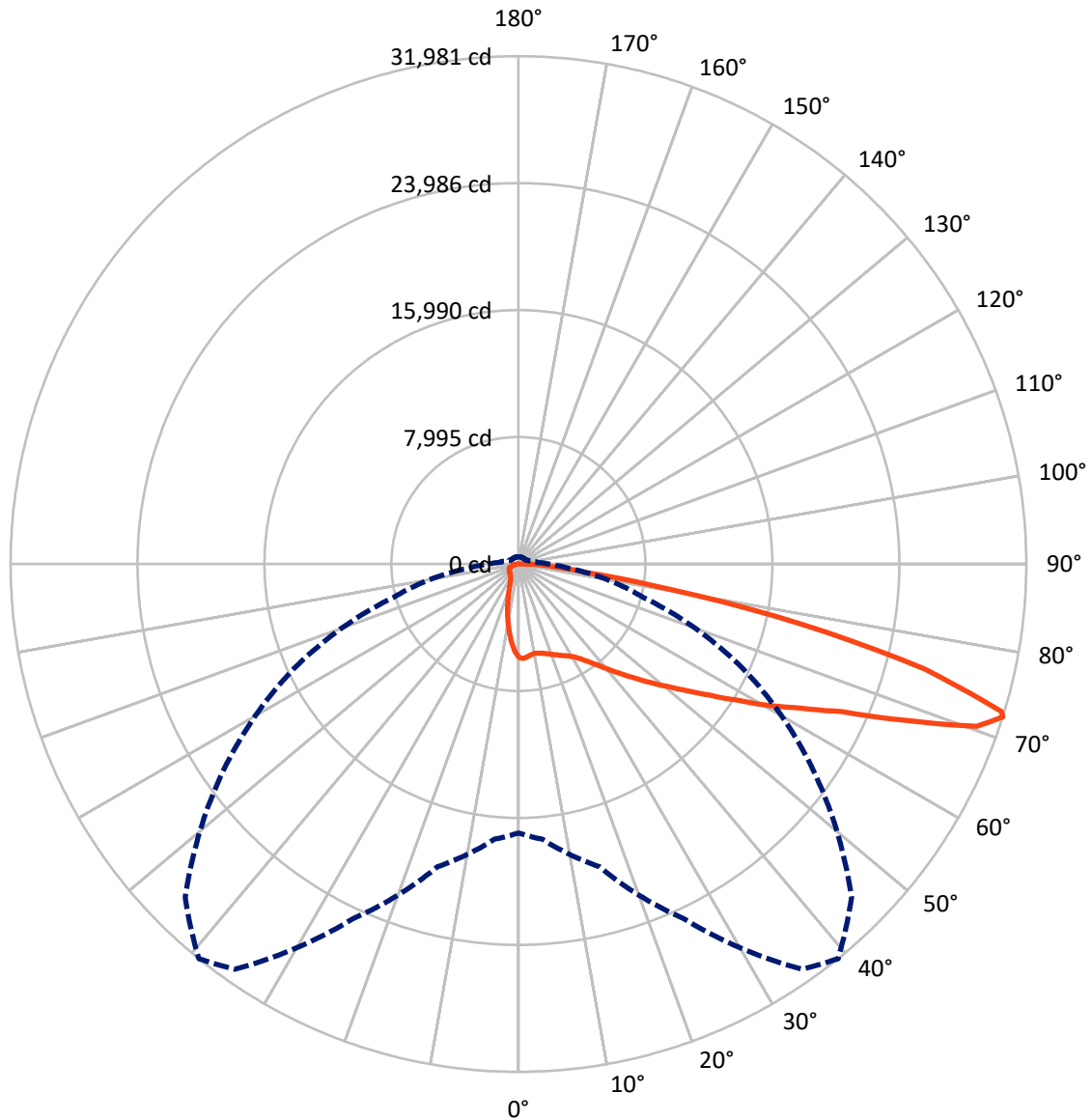
× Max cd  
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 6.5 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	4421.8	0.0	4421.8
	% Fixture	11.5	0.0	11.5
<b>Street Side</b>	Lumens	34141.4	0.0	34141.4
	% Fixture	88.5	0.0	88.5
<b>Total</b>	Lumens	38563.2	0.0	38563.2
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	506.1	1.3
10°-20°	1271.7	3.3
20°-30°	1981.8	5.1
30°-40°	3051.4	7.9
40°-50°	4974.5	12.9
50°-60°	7729.9	20.0
60°-70°	10346.1	26.8
70°-80°	7440.4	19.3
80°-90°	1261.3	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°	38563.2	100.0
0°-180°	38563.2	100.0



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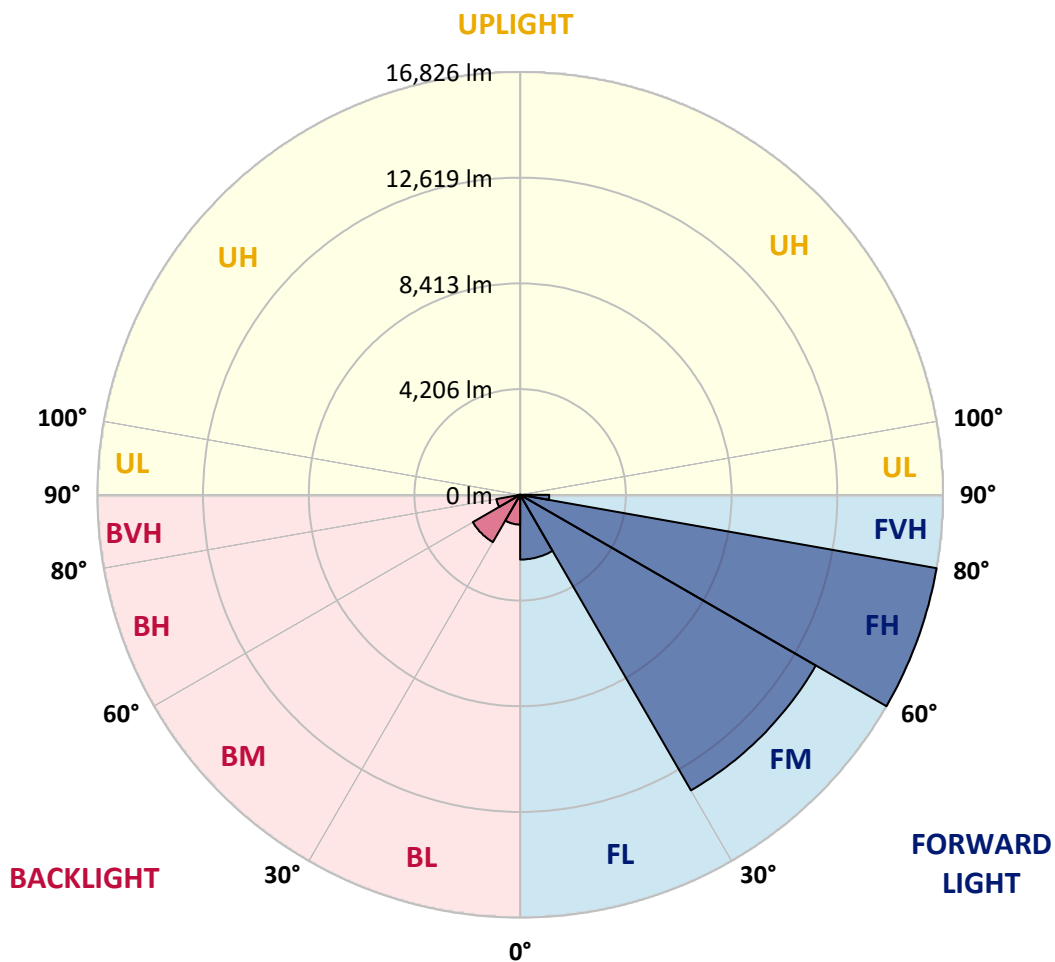
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2575.9	6.7			
FM	(30°-60°)	13582.7	35.2			
FH	(60°-80°)	16825.7	43.6			G5
FVH	(80°-90°)	1157.0	3.0			G5
BL	(0°-30°)	1183.7	3.1	B3/2500		
BM	(30°-60°)	2173.1	5.6	B2/2500		
BH	(60°-80°)	960.7	2.5	B2/1000		G2/1000
BVH	(80°-90°)	104.3	0.3			G2/225
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°	5889.3	5889.3	5889.3	5889.3	5889.3	5889.3	5889.3	5889.3	5889.3	5889.3	5889.3
2.5°	6016.2	6018.7	6011.0	5987.6	5967.0	5956.6	5938.4	5907.4	5866.0	5837.5	5814.2
5°	5959.2	5967.0	5961.8	5923.0	5886.7	5866.0	5837.5	5793.5	5739.2	5715.8	5661.5
7.5°	5915.2	5920.3	5904.8	5860.8	5790.9	5765.0	5713.3	5656.3	5607.1	5573.4	5508.8
10°	5884.1	5889.3	5876.3	5832.4	5754.7	5723.6	5661.5	5599.3	5534.7	5493.2	5420.7
12.5°	5840.1	5850.5	5850.5	5829.8	5777.9	5757.3	5695.2	5627.9	5568.3	5524.2	5433.7
15°	5832.4	5845.2	5868.6	5866.0	5850.5	5834.9	5785.7	5718.4	5666.6	5614.9	5503.6
17.5°	5897.1	5925.5	5972.1	5987.6	5977.3	5943.7	5886.7	5824.6	5767.6	5718.4	5581.2
20°	6060.2	6075.7	6145.6	6176.7	6124.8	6075.7	6000.6	5920.3	5868.6	5829.8	5653.7
22.5°	6306.1	6326.7	6383.7	6386.3	6277.6	6218.1	6122.3	6024.0	5974.7	5959.2	5752.1
25°	6699.5	6694.4	6709.9	6645.2	6448.5	6378.5	6262.1	6148.1	6114.5	6145.6	5897.1
27.5°	7170.7	7157.8	7108.6	6940.3	6642.6	6552.0	6412.2	6311.3	6311.3	6383.7	6093.8
30°	7714.3	7701.4	7540.9	7258.8	6873.0	6769.5	6621.9	6515.8	6570.1	6709.9	6360.4
32.5°	8289.0	8242.4	8017.2	7639.3	7201.8	7087.8	6945.5	6836.8	6940.3	7178.5	6743.6
35°	8830.0	8804.1	8527.2	8079.4	7626.3	7530.6	7432.1	7297.5	7463.2	7833.5	7284.6
37.5°	9389.3	9368.5	9029.4	8553.1	8144.0	8079.4	7996.5	7903.3	8169.9	8656.6	8017.2
40°	10013.1	9971.6	9544.5	9068.3	8747.3	8716.2	8672.2	8646.3	9076.0	9800.8	8944.0
42.5°	10719.8	10639.5	10088.1	9635.2	9404.7	9430.7	9407.4	9510.9	10168.4	11121.0	10046.7
45°	11527.5	11367.0	10629.2	10238.3	10132.1	10235.7	10285.0	10549.0	11460.2	12645.8	11279.0
47.5°	12283.4	12076.2	11222.0	10893.3	10952.8	11131.4	11271.2	11737.1	12876.2	14152.4	12537.1
50°	12979.7	12746.8	11856.2	11571.5	11861.4	12115.1	12405.0	13062.6	14382.8	15703.0	13691.7
52.5°	13494.9	13326.6	12490.4	12311.8	12904.6	13241.2	13704.6	14535.5	15904.9	17181.2	14721.9
55°	13893.5	13803.0	13109.2	13161.0	14085.1	14566.6	15128.3	16083.5	17515.2	18506.6	15550.3
57.5°	14354.4	14287.0	13815.9	14186.1	15550.3	16156.1	16818.7	17880.2	19047.7	19674.1	16200.1
60°	14841.0	14841.0	14602.8	15420.9	17383.1	18076.9	18737.0	19562.8	20575.0	20725.1	16464.1
62.5°	15208.6	15304.4	15389.8	16736.0	19122.7	19984.8	20709.6	21501.7	22156.7	21242.9	15842.8
65°	15741.9	15946.4	16427.9	18255.5	21276.6	22405.2	23383.7	24049.1	23438.1	20831.3	13815.9
67.5°	16658.2	16961.1	17986.3	20518.0	24574.6	26265.0	27215.0	26065.6	23187.0	18240.0	10582.6
70°	17484.1	17911.3	19663.8	23389.0	28861.4	30616.5	30179.1	25597.1	20194.5	13370.7	6510.6
72°	16935.3	17401.2	19741.4	24639.2	31152.4	31980.8	29674.3	22684.8	15604.7	8159.6	3210.0
72.5°	16575.5	17059.5	19490.3	24608.2	31214.5	31807.3	28972.7	21527.6	14165.4	7139.7	2596.5
75°	13847.0	14261.2	16759.2	21809.8	27507.6	26420.3	22609.7	13932.4	6510.6	2306.5	1335.8
77.5°	9042.4	9358.2	11556.0	15110.2	19267.7	18221.8	13761.6	6523.6	2441.2	1400.5	1004.4
80°	4543.1	4768.4	6184.5	7944.7	10398.8	9567.9	6352.6	3155.6	1633.4	1012.2	789.5
82.5°	3160.8	3367.9	4258.4	4056.5	4346.4	4206.7	2987.3	2632.7	1221.9	639.4	414.2
85°	2650.9	2865.7	3523.2	2891.6	2366.1	2156.4	2140.8	2487.7	807.7	315.8	349.4
87.5°	2311.7	2637.9	2907.1	2112.4	1623.1	1431.5	1576.5	2280.7	256.2	173.5	106.2
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°	5889.3	5889.3	5889.3	5889.3	5889.3	5889.3	5889.3	5889.3	5889.3	5889.3	5889.3
2.5°	5775.4	5767.6	5728.8	5669.3	5625.2	5596.8	5542.4	5539.8	5545.0	5498.4	5516.6
5°	5612.3	5581.2	5480.3	5343.1	5231.8	5125.6	5009.2	4970.3	4936.7	4866.8	4874.6
7.5°	5441.5	5387.1	5211.0	4985.9	4770.9	4574.2	4380.1	4284.3	4211.8	4121.2	4121.2
10°	5340.5	5255.1	4985.9	4657.1	4315.3	4028.0	3738.1	3564.7	3437.8	3321.3	3313.5
12.5°	5335.3	5205.9	4830.5	4377.5	3908.9	3505.1	3109.1	2842.4	2653.4	2516.3	2503.3
15°	5376.7	5195.6	4701.1	4116.0	3525.8	3000.3	2511.0	2171.9	1931.1	1778.4	1763.0
17.5°	5412.9	5182.6	4561.3	3841.6	3153.0	2513.6	1970.0	1617.9	1390.1	1265.9	1252.9
20°	5446.6	5154.1	4382.6	3551.7	2741.4	2058.0	1540.3	1255.6	1105.4	1035.4	1027.8
22.5°	5495.8	5128.3	4196.2	3225.6	2337.6	1674.9	1271.0	1066.5	986.3	952.7	947.5
25°	5576.1	5130.8	4015.1	2891.6	1967.4	1395.3	1100.2	973.3	929.4	906.0	906.0
27.5°	5692.5	5161.9	3836.5	2552.5	1654.2	1203.7	999.2	924.1	895.7	877.6	872.4
30°	5863.5	5218.8	3647.4	2231.5	1405.6	1071.7	939.7	893.1	869.8	854.3	851.7
32.5°	6111.9	5319.8	3448.2	1938.9	1216.7	978.6	895.7	867.3	849.0	836.2	833.6
35°	6482.1	5498.4	3254.0	1690.4	1082.1	911.2	859.5	836.2	825.8	820.6	818.1
37.5°	7025.7	5785.7	3070.2	1496.3	994.1	867.3	823.2	810.3	805.1	805.1	805.1
40°	7709.2	6163.7	2904.6	1359.1	944.9	833.6	797.3	787.0	787.0	789.5	789.5
42.5°	8540.1	6637.4	2762.2	1265.9	916.4	810.3	779.2	774.1	771.4	771.4	774.1
45°	9505.7	7196.6	2674.1	1193.4	895.7	797.3	766.3	763.6	753.3	748.1	748.1
47.5°	10476.4	7794.6	2669.0	1151.9	869.8	781.7	753.3	753.3	732.6	722.2	724.9
50°	11382.5	8330.4	2725.9	1141.6	854.3	758.5	740.4	743.0	714.5	701.5	699.0
52.5°	12112.6	8739.5	2795.8	1154.6	854.3	737.8	717.1	730.0	699.0	683.4	680.9
55°	12676.8	9024.2	2821.7	1183.0	864.6	719.6	696.3	717.1	693.8	673.1	673.1
57.5°	13080.7	9114.8	2710.4	1195.9	880.1	717.1	675.7	714.5	701.5	675.7	675.7
60°	12933.2	8589.3	2296.2	1146.8	877.6	711.9	660.1	719.6	727.4	699.0	699.0
62.5°	11781.2	7186.2	1843.2	1035.4	833.6	693.8	642.0	714.5	745.5	735.2	730.0
65°	9591.1	5270.5	1429.0	903.5	758.5	654.9	603.1	667.9	704.1	714.5	717.1
67.5°	6759.0	3336.9	1110.5	768.8	665.3	598.0	559.1	590.2	603.1	608.3	618.7
70°	3696.6	1806.9	882.7	647.2	569.5	541.0	512.6	515.2	509.9	504.8	509.9
72°	1856.1	1180.5	745.5	561.7	504.8	486.7	473.7	466.0	466.0	458.2	460.8
72.5°	1597.2	1097.6	719.6	541.0	489.3	473.7	463.4	455.6	453.1	447.8	450.4
75°	1064.0	869.8	600.6	453.1	416.8	406.4	411.6	403.9	406.4	401.2	403.9
77.5°	859.5	748.1	509.9	383.1	357.2	341.7	352.1	354.7	359.9	354.7	352.1
80°	719.6	636.8	427.2	315.8	297.7	284.8	289.9	308.0	310.7	295.1	292.6
82.5°	466.0	512.6	336.6	245.9	227.8	222.6	235.6	253.7	258.9	238.1	233.0
85°	390.9	411.6	243.4	168.3	150.2	145.0	170.8	188.9	201.9	181.2	176.0
87.5°	108.7	201.9	119.1	80.2	67.3	67.3	82.9	98.4	116.5	119.1	119.1
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)