

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: P270648

Luminaire Tested: **NAV-AF-06-D-UNV-5NQ-7027-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270648
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24130)
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-5NQ-7027-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 2700K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V
NARROW OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 35293.1 lumens
Efficiency: N/A
Efficacy: 92.4 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type V - Short - Full Cutoff
BUG Rating: B5 - U0 - G3

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

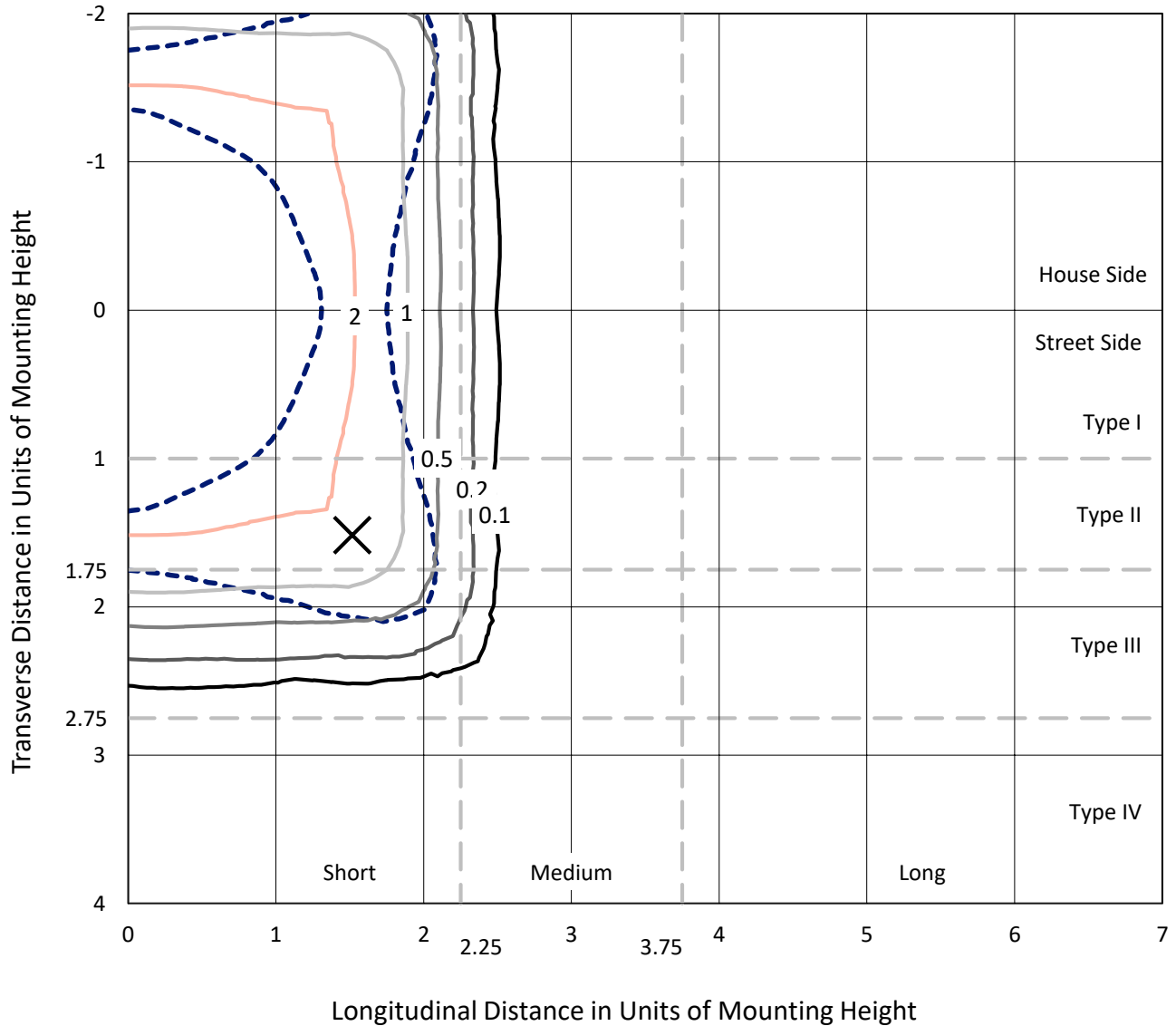


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Iso-Footcandle Lines of Horizontal Illumination

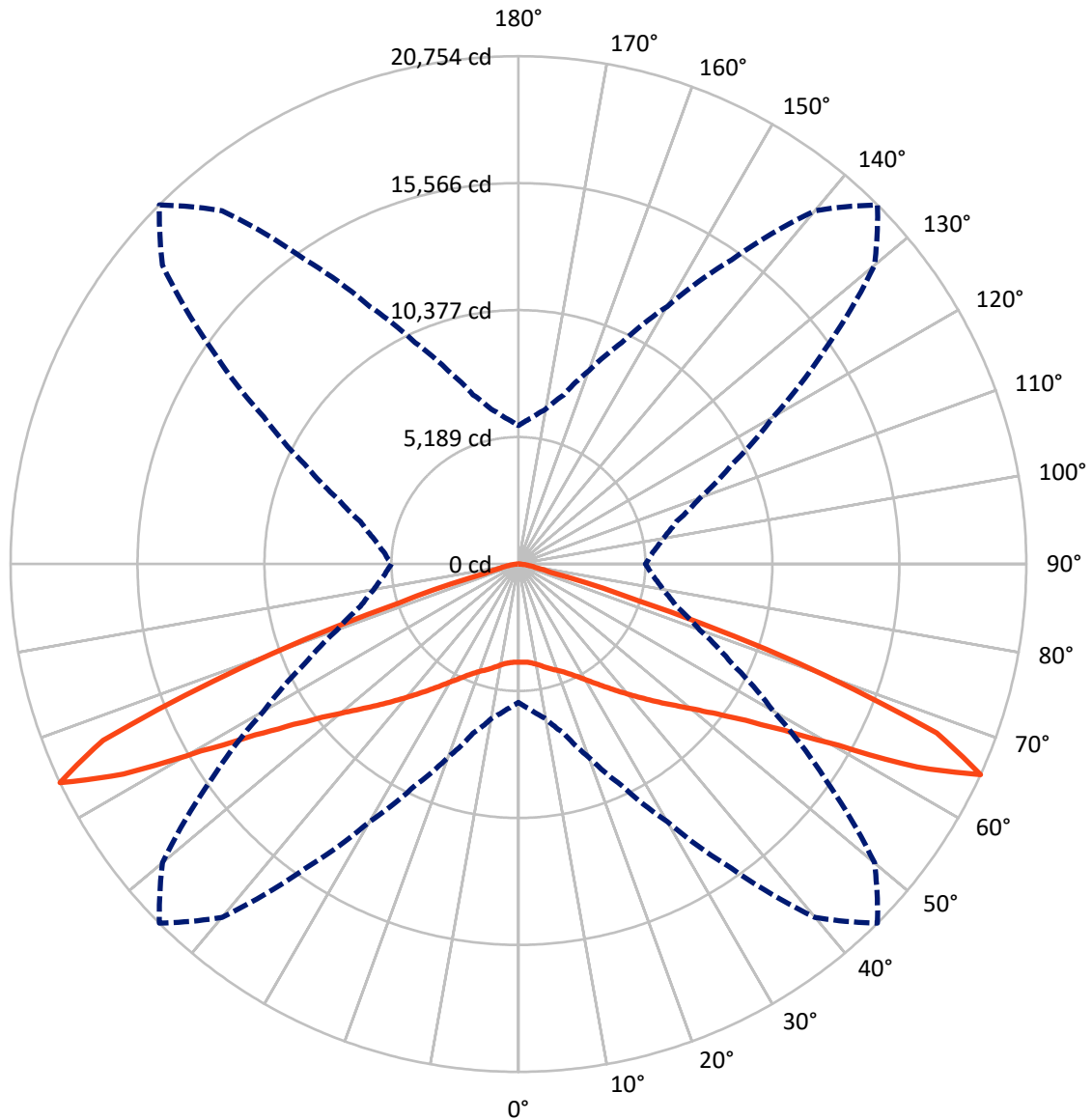
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 4.5 fc
 Type V - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	17646.5	0.0	17646.5
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	17646.5	0.0	17646.5
	% Fixture	50.0	0.0	50.0
Total	Lumens	35293.1	0.0	35293.1
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	390.9	1.1
10°-20°	1253.0	3.6
20°-30°	2337.4	6.6
30°-40°	3941.2	11.2
40°-50°	6401.7	18.1
50°-60°	10030.3	28.4
60°-70°	9468.2	26.8
70°-80°	1276.0	3.6
80°-90°	194.4	0.6
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°	35293.1	100.0
0°-180°	35293.1	100.0

Coefficient of Utilization



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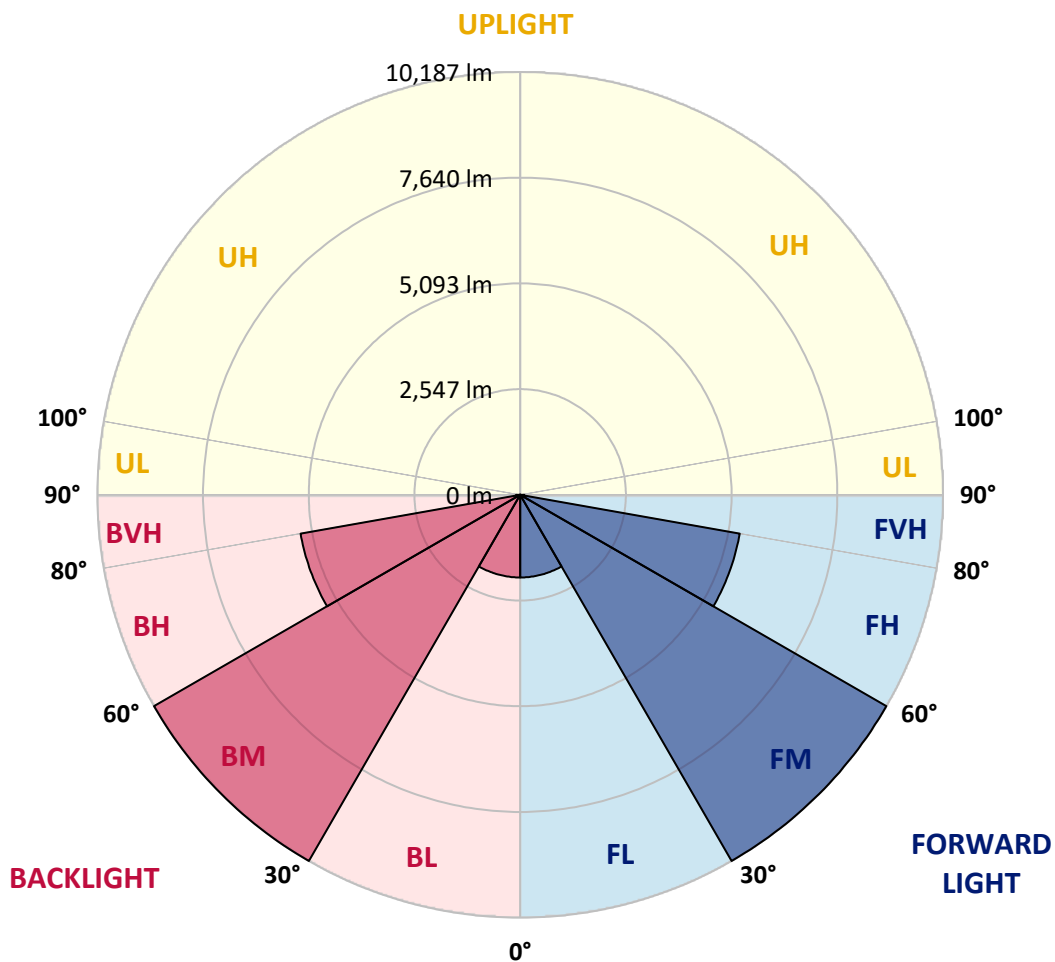
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1990.7	5.6			
FM	(30°-60°)	10186.6	28.9			
FH	(60°-80°)	5372.1	15.2			G3/7500
FVH	(80°-90°)	97.2	0.3			G1/100
BL	(0°-30°)	1990.7	5.6	B3/2500		
BM	(30°-60°)	10186.6	28.9	B5		
BH	(60°-80°)	5372.1	15.2	B5		G3/7500
BVH	(80°-90°)	97.2	0.3			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B5-U0-G3

Type V Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	4014.5	4014.5	4014.5	4014.5	4014.5	4014.5	4014.5	4014.5	4014.5	4014.5	4014.5
2.5°	4047.6	4047.6	4054.1	4052.0	4043.1	4036.5	4029.9	4021.2	4016.7	4012.4	4010.2
5°	4069.5	4069.5	4076.1	4074.0	4067.3	4058.5	4054.1	4047.6	4040.9	4036.5	4038.7
7.5°	4124.5	4126.6	4128.9	4126.6	4120.0	4113.5	4104.6	4102.5	4093.7	4087.1	4091.5
10°	4208.0	4208.0	4210.3	4212.4	4208.0	4192.6	4192.6	4188.3	4179.5	4170.7	4172.8
12.5°	4300.4	4300.4	4302.5	4302.5	4302.5	4293.8	4296.0	4293.8	4282.8	4278.4	4282.8
15°	4390.5	4392.7	4392.7	4397.2	4397.2	4399.3	4408.2	4408.2	4403.8	4401.4	4401.4
17.5°	4496.0	4500.4	4502.7	4509.2	4511.4	4515.8	4524.7	4526.7	4529.1	4522.3	4524.7
20°	4636.7	4638.9	4645.6	4647.7	4656.5	4656.5	4660.9	4658.7	4654.3	4645.6	4645.6
22.5°	4795.1	4799.5	4812.6	4812.6	4823.5	4817.0	4819.1	4812.6	4801.6	4797.2	4792.8
25°	5001.8	5008.3	5019.3	5014.9	5019.3	5008.3	5008.3	5008.3	5001.8	4995.0	4992.9
27.5°	5263.3	5252.3	5263.3	5254.5	5252.3	5243.5	5245.7	5241.3	5234.8	5232.5	5223.7
30°	5536.0	5522.8	5529.3	5531.6	5527.1	5524.9	5516.1	5509.6	5498.5	5500.9	5494.2
32.5°	5848.1	5834.9	5841.6	5843.7	5839.3	5843.7	5841.6	5826.1	5812.9	5821.7	5821.7
35°	6219.7	6210.9	6228.5	6235.0	6221.9	6215.4	6206.5	6189.0	6169.1	6182.3	6184.6
37.5°	6666.1	6655.1	6668.2	6685.7	6661.7	6648.4	6613.2	6586.8	6573.6	6580.3	6589.1
40°	7129.8	7132.2	7169.5	7173.9	7147.5	7132.2	7096.9	7057.4	7020.0	7020.0	7030.9
42.5°	7617.9	7624.5	7668.6	7683.9	7675.1	7646.6	7598.1	7549.9	7501.4	7510.2	7523.5
45°	8169.7	8161.0	8207.2	8244.6	8237.9	8229.2	8183.0	8095.0	8051.1	8048.9	8070.8
47.5°	8750.2	8767.7	8816.1	8879.9	8877.7	8855.8	8796.5	8715.0	8633.7	8640.3	8666.7
50°	9427.4	9451.5	9533.0	9596.7	9605.4	9598.8	9528.5	9434.0	9319.6	9326.3	9361.3
52.5°	10034.2	10069.3	10164.0	10295.8	10377.1	10414.5	10368.3	10280.5	10164.0	10170.5	10207.9
55°	10583.8	10638.7	10779.5	10959.7	11122.5	11274.2	11342.3	11340.2	11254.3	11274.2	11322.5
57.5°	10929.0	11005.9	11219.2	11509.4	11832.6	12138.2	12402.0	12650.4	12705.4	12808.8	12808.8
60°	10465.1	10645.4	10929.0	11425.8	12061.3	12747.2	13490.2	14213.6	14679.7	15046.9	14849.1
62.5°	8739.3	9005.2	9403.2	10058.3	11047.6	12272.3	13765.1	15447.0	17201.5	18274.3	17487.2
65°	5654.7	5988.8	6422.0	7158.5	8405.0	9981.3	12155.8	15178.8	18850.4	20754.4	18995.5
67.5°	2240.4	2466.7	2730.6	3253.8	4335.5	5883.3	8323.8	12052.4	16645.2	18441.5	16469.3
70°	1070.7	1108.1	1158.6	1270.7	1541.2	2079.8	3344.0	5938.2	10207.9	12100.8	9963.8
72.5°	773.9	780.4	804.7	842.0	921.2	1031.2	1253.1	1816.1	3519.9	5118.3	3524.3
75°	587.0	595.8	609.1	628.8	670.6	723.3	806.9	967.4	1204.7	1389.5	1202.7
77.5°	446.3	455.1	466.1	485.9	507.8	545.2	576.1	639.8	740.9	780.4	776.0
80°	325.4	340.7	358.3	375.9	391.3	408.9	411.2	441.8	499.1	536.5	525.5
82.5°	206.7	219.8	266.0	285.8	287.9	292.4	290.2	292.4	323.2	349.6	340.7
85°	132.0	140.8	164.8	186.8	182.4	191.2	191.2	186.8	173.7	149.5	178.0
87.5°	65.9	68.1	79.1	99.0	94.5	83.5	81.3	81.3	59.4	50.6	54.9
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):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	4014.5	4014.5	4014.5	4014.5	4014.5	4014.5	4014.5	4014.5
2.5°	4003.6	4008.0	4001.4	4001.4	3999.2	4003.6	3997.0	3997.0
5°	4034.4	4040.9	4038.7	4038.7	4043.1	4047.6	4045.3	4043.1
7.5°	4089.4	4093.7	4098.1	4100.4	4104.6	4102.5	4107.0	4104.6
10°	4172.8	4168.4	4175.1	4168.4	4170.7	4166.2	4168.4	4168.4
12.5°	4278.4	4271.8	4267.4	4262.9	4262.9	4254.3	4254.3	4256.3
15°	4399.3	4388.3	4379.4	4375.1	4370.8	4370.8	4364.1	4368.5
17.5°	4518.0	4507.1	4491.6	4491.6	4485.1	4480.7	4476.3	4487.3
20°	4643.2	4632.3	4623.5	4621.3	4608.1	4603.8	4606.0	4619.2
22.5°	4788.4	4781.9	4781.9	4777.5	4768.7	4762.1	4762.1	4777.5
25°	4984.1	4971.0	4973.0	4975.4	4971.0	4971.0	4966.5	4977.5
27.5°	5223.7	5212.8	5219.3	5223.7	5219.3	5225.9	5219.3	5228.1
30°	5505.2	5498.5	5505.2	5511.8	5500.9	5500.9	5496.4	5502.9
32.5°	5841.6	5832.8	5837.1	5837.1	5821.7	5808.6	5791.0	5804.2
35°	6210.9	6199.9	6208.6	6215.4	6197.6	6184.6	6158.2	6169.1
37.5°	6617.6	6622.0	6633.1	6661.7	6657.2	6635.2	6615.4	6624.2
40°	7072.7	7094.8	7143.1	7162.8	7158.5	7136.5	7110.2	7114.4
42.5°	7587.2	7615.8	7666.3	7699.4	7683.9	7653.1	7620.1	7633.3
45°	8147.7	8191.7	8257.7	8290.7	8271.0	8237.9	8191.7	8216.0
47.5°	8741.4	8829.4	8917.4	8961.3	8954.7	8908.5	8849.2	8855.8
50°	9451.5	9568.0	9680.1	9724.2	9691.2	9620.8	9537.2	9535.1
52.5°	10335.4	10460.8	10553.0	10542.0	10460.8	10350.8	10256.2	10251.8
55°	11439.0	11480.8	11467.7	11373.1	11230.3	11058.7	10937.8	10918.0
57.5°	12773.5	12632.9	12426.2	12140.4	11819.4	11494.1	11274.2	11192.8
60°	14405.0	13769.5	13030.9	12252.5	11542.4	11010.3	10673.9	10469.4
62.5°	15752.6	13912.4	12261.2	10909.1	9803.4	9146.0	8686.5	8402.8
65°	15290.9	12019.4	9627.5	7884.0	6677.0	5997.7	5511.8	5188.6
67.5°	11812.8	8031.2	5588.7	3873.9	2937.3	2486.6	2172.1	1967.6
70°	5955.9	3080.2	1866.6	1316.9	1125.7	1046.5	993.7	963.0
72.5°	1747.8	1167.4	969.6	857.4	789.3	740.9	710.1	694.7
75°	967.4	789.3	696.9	633.1	589.2	556.2	536.5	523.3
77.5°	666.2	573.7	527.7	485.9	450.7	426.5	411.2	397.9
80°	466.1	419.9	400.1	378.1	351.7	332.0	309.9	301.2
82.5°	309.9	290.2	285.8	268.2	252.9	230.9	191.2	178.0
85°	182.4	180.3	180.3	173.7	162.8	142.9	114.4	114.4
87.5°	63.8	65.9	68.1	72.6	70.3	59.4	48.4	46.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)