

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: P196919

Luminaire Tested: **NAV-AF-05-D-UNV-5NQ-8030-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196919
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-05-D-UNV-5NQ-8030-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 80 CRI, 3000K, 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: 27671 lumens
Efficiency: N/A
Efficacy: 86.5 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type V - Short - Full Cutoff
BUG Rating: B4 - U0 - G2

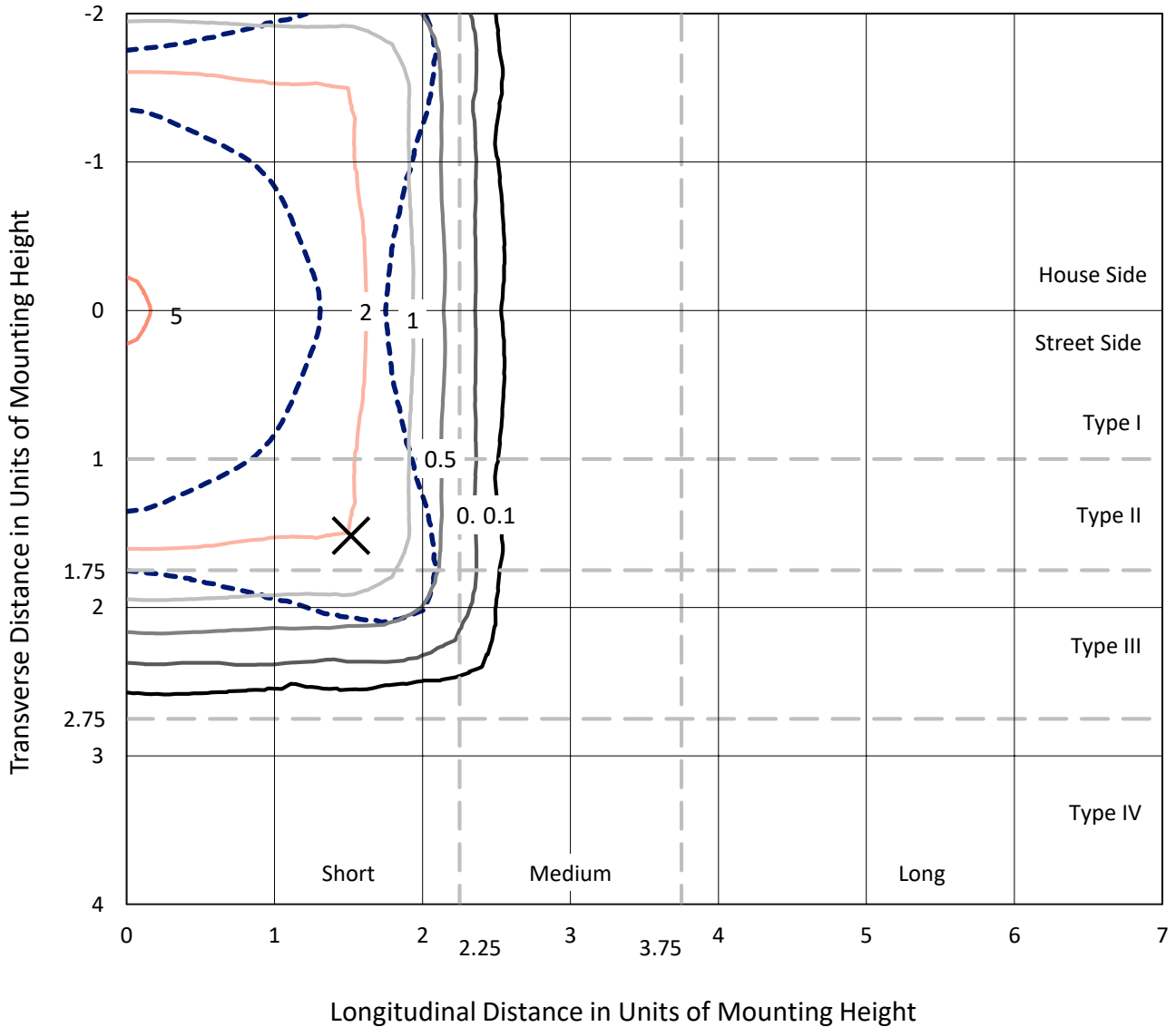
Input Watts (W): 320
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

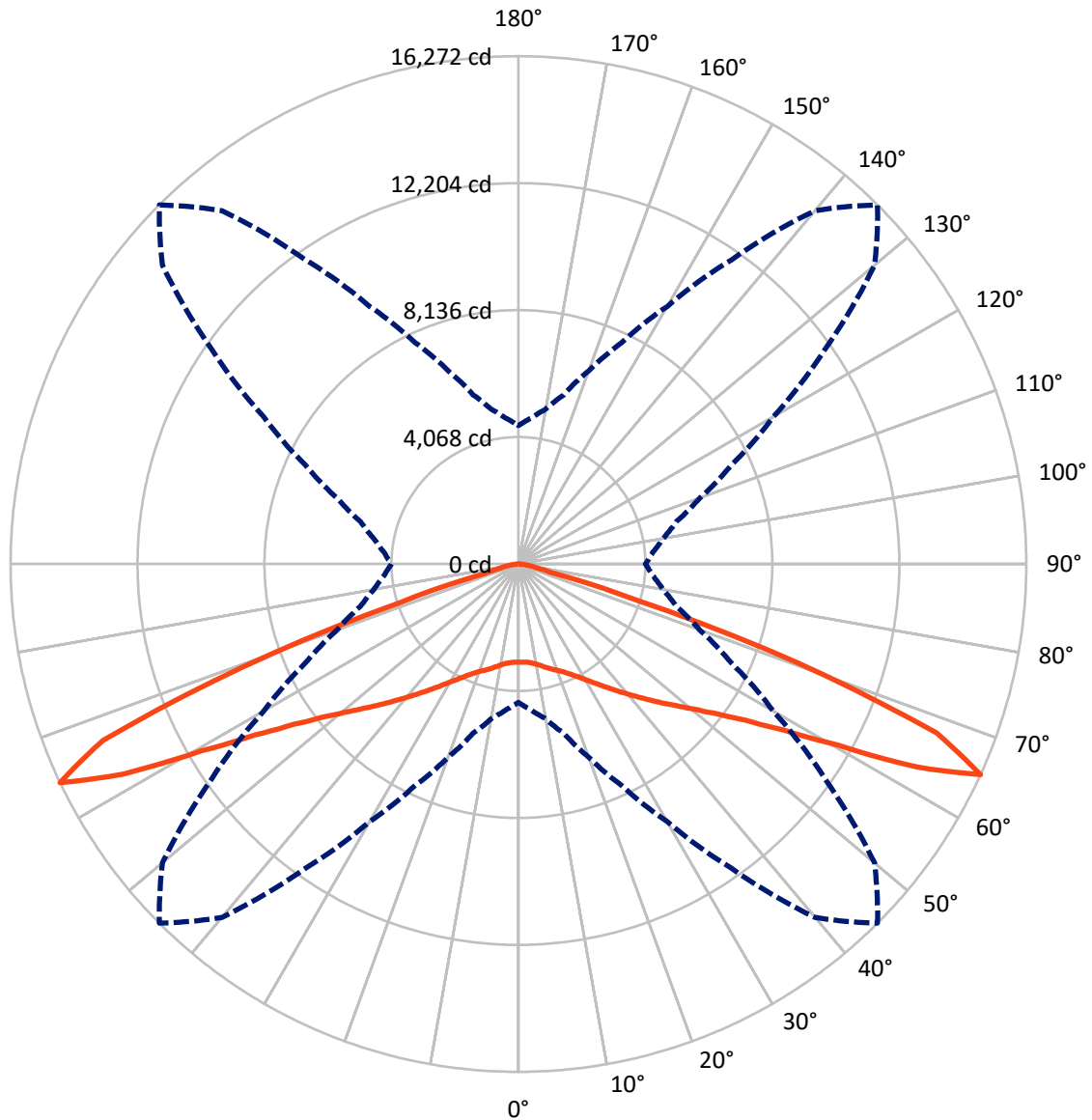
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 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	13835.5	0.0	13835.5
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	13835.5	0.0	13835.5
	% Fixture	50.0	0.0	50.0
Total	Lumens	27671.0	0.0	27671.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	306.5	1.1
10°-20°	982.4	3.6
20°-30°	1832.6	6.6
30°-40°	3090.0	11.2
40°-50°	5019.1	18.1
50°-60°	7864.1	28.4
60°-70°	7423.4	26.8
70°-80°	1000.4	3.6
80°-90°	152.4	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°	27671.0	100.0
0°-180°	27671.0	100.0



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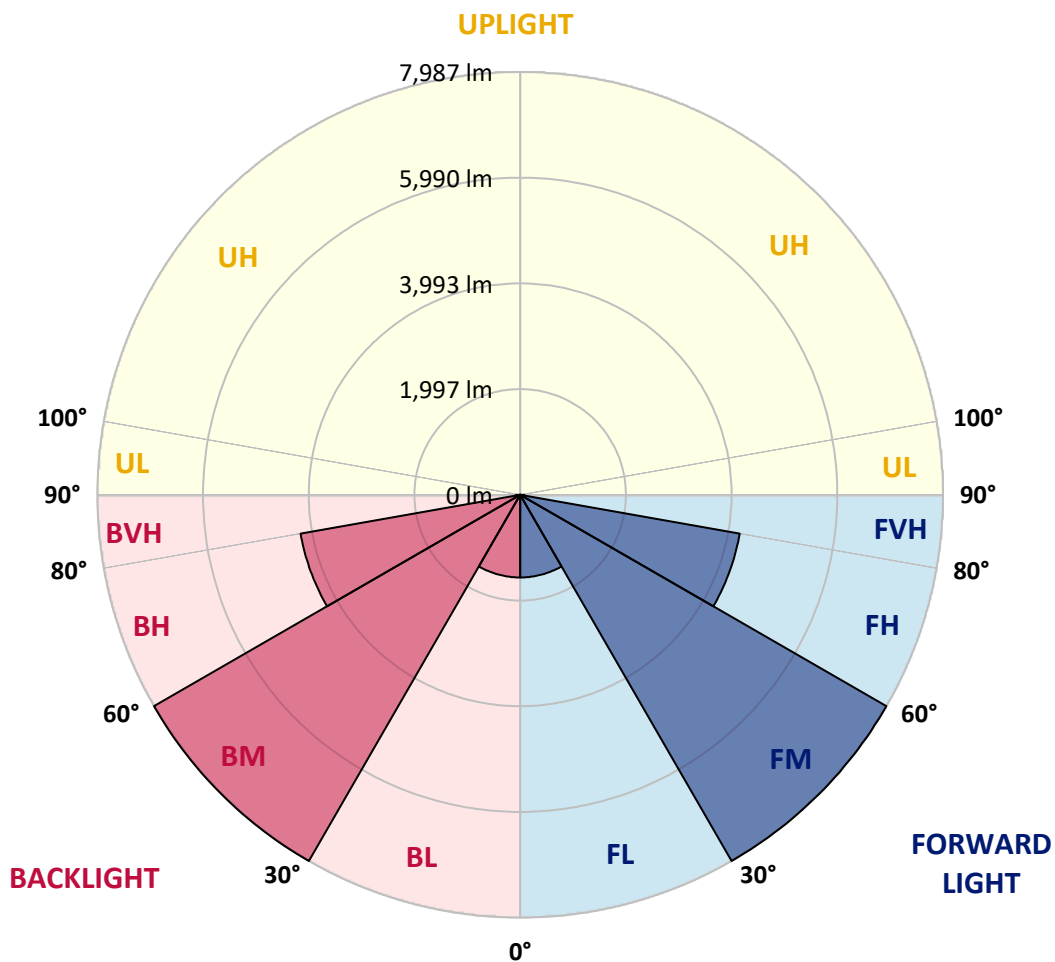
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1560.7	5.6			
FM	(30°-60°)	7986.7	28.9			
FH	(60°-80°)	4211.9	15.2			G2/5000
FVH	(80°-90°)	76.2	0.3			G1/100
BL	(0°-30°)	1560.7	5.6	B3/2500		
BM	(30°-60°)	7986.7	28.9	B4/8500		
BH	(60°-80°)	4211.9	15.2	B4/5000		G2/5000
BVH	(80°-90°)	76.2	0.3			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B4-U0-G2

Type V Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	3147.5	3147.5	3147.5	3147.5	3147.5	3147.5	3147.5	3147.5	3147.5	3147.5	3147.5
2.5°	3173.4	3173.4	3178.6	3176.8	3170.0	3164.8	3159.6	3152.7	3149.3	3145.8	3144.1
5°	3190.6	3190.6	3195.8	3194.1	3188.9	3182.0	3178.6	3173.4	3168.2	3164.8	3166.5
7.5°	3233.7	3235.5	3237.2	3235.5	3230.3	3225.1	3218.2	3216.5	3209.6	3204.4	3207.9
10°	3299.2	3299.2	3301.0	3302.7	3299.2	3287.2	3287.2	3283.7	3276.8	3269.9	3271.7
12.5°	3371.6	3371.6	3373.4	3373.4	3373.4	3366.5	3368.2	3366.5	3357.8	3354.4	3357.8
15°	3442.3	3444.0	3444.0	3447.5	3447.5	3449.2	3456.1	3456.1	3452.6	3450.9	3450.9
17.5°	3525.0	3528.5	3530.2	3535.4	3537.1	3540.6	3547.5	3549.2	3550.9	3545.7	3547.5
20°	3635.4	3637.1	3642.3	3644.0	3650.9	3650.9	3654.3	3652.6	3649.2	3642.3	3642.3
22.5°	3759.5	3762.9	3773.3	3773.3	3781.9	3776.7	3778.4	3773.3	3764.6	3761.2	3757.7
25°	3921.5	3926.7	3935.3	3931.8	3935.3	3926.7	3926.7	3926.7	3921.5	3916.3	3914.6
27.5°	4126.6	4118.0	4126.6	4119.7	4118.0	4111.1	4112.8	4109.4	4104.2	4102.5	4095.6
30°	4340.4	4330.0	4335.2	4336.9	4333.5	4331.8	4324.9	4319.7	4311.1	4312.8	4307.6
32.5°	4585.1	4574.8	4580.0	4581.7	4578.2	4581.7	4580.0	4567.9	4557.6	4564.5	4564.5
35°	4876.5	4869.6	4883.3	4888.5	4878.2	4873.0	4866.1	4852.3	4836.8	4847.1	4848.9
37.5°	5226.4	5217.8	5228.1	5241.9	5222.9	5212.6	5185.0	5164.3	5154.0	5159.1	5166.0
40°	5590.1	5591.8	5621.1	5624.6	5603.9	5591.8	5564.2	5533.2	5503.9	5503.9	5512.5
42.5°	5972.7	5977.9	6012.4	6024.5	6017.6	5995.2	5957.2	5919.3	5881.4	5888.3	5898.6
45°	6405.4	6398.5	6434.7	6464.0	6458.8	6451.9	6415.7	6346.8	6312.3	6310.6	6327.8
47.5°	6860.5	6874.3	6912.2	6962.2	6960.4	6943.2	6896.7	6832.9	6769.1	6774.3	6795.0
50°	7391.4	7410.3	7474.1	7524.1	7531.0	7525.8	7470.7	7396.6	7306.9	7312.1	7339.7
52.5°	7867.1	7894.7	7968.8	8072.3	8136.0	8165.3	8129.1	8060.2	7968.8	7974.0	8003.3
55°	8298.1	8341.2	8451.5	8592.8	8720.4	8839.3	8892.8	8891.0	8823.8	8839.3	8877.2
57.5°	8568.7	8629.0	8796.2	9023.8	9277.2	9516.8	9723.6	9918.4	9961.5	10042.5	10042.5
60°	8205.0	8346.3	8568.7	8958.3	9456.4	9994.2	10576.8	11144.0	11509.4	11797.3	11642.1
62.5°	6851.9	7060.4	7372.4	7886.1	8661.8	9621.9	10792.3	12111.0	13486.5	14327.7	13710.6
65°	4433.5	4695.5	5035.0	5612.5	6589.8	7825.8	9530.5	11900.7	14779.3	16272.1	14893.1
67.5°	1756.5	1934.0	2140.9	2551.1	3399.2	4612.7	6526.1	9449.5	13050.4	14458.7	12912.5
70°	839.5	868.8	908.4	996.3	1208.3	1630.7	2621.8	4655.8	8003.3	9487.4	7812.0
72.5°	606.8	611.9	630.9	660.2	722.2	808.4	982.5	1423.8	2759.7	4012.9	2763.1
75°	460.2	467.1	477.5	493.0	525.7	567.1	632.6	758.4	944.6	1089.4	942.9
77.5°	349.9	356.8	365.4	380.9	398.2	427.5	451.6	501.6	580.9	611.9	608.5
80°	255.1	267.2	281.0	294.8	306.8	320.6	322.3	346.5	391.3	420.6	412.0
82.5°	162.0	172.4	208.6	224.1	225.8	229.3	227.5	229.3	253.4	274.1	267.2
85°	103.4	110.3	129.3	146.5	143.1	150.0	150.0	146.5	136.2	117.2	139.6
87.5°	51.7	53.4	62.1	77.6	74.1	65.5	63.8	63.8	46.5	39.6	43.1
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°	3147.5	3147.5	3147.5	3147.5	3147.5	3147.5	3147.5	3147.5
2.5°	3138.9	3142.4	3137.2	3137.2	3135.5	3138.9	3133.8	3133.8
5°	3163.1	3168.2	3166.5	3166.5	3170.0	3173.4	3171.7	3170.0
7.5°	3206.2	3209.6	3213.0	3214.8	3218.2	3216.5	3219.9	3218.2
10°	3271.7	3268.2	3273.4	3268.2	3269.9	3266.5	3268.2	3268.2
12.5°	3354.4	3349.2	3345.8	3342.3	3342.3	3335.4	3335.4	3337.2
15°	3449.2	3440.6	3433.7	3430.2	3426.8	3426.8	3421.6	3425.1
17.5°	3542.3	3533.7	3521.6	3521.6	3516.4	3513.0	3509.5	3518.1
20°	3640.5	3631.9	3625.0	3623.3	3613.0	3609.5	3611.2	3621.6
22.5°	3754.3	3749.1	3749.1	3745.7	3738.8	3733.6	3733.6	3745.7
25°	3907.7	3897.4	3899.1	3900.8	3897.4	3897.4	3893.9	3902.5
27.5°	4095.6	4087.0	4092.2	4095.6	4092.2	4097.3	4092.2	4099.0
30°	4316.2	4311.1	4316.2	4321.4	4312.8	4312.8	4309.3	4314.5
32.5°	4580.0	4573.1	4576.5	4576.5	4564.5	4554.1	4540.3	4550.7
35°	4869.6	4860.9	4867.8	4873.0	4859.2	4848.9	4828.2	4836.8
37.5°	5188.4	5191.9	5200.5	5222.9	5219.5	5202.2	5186.7	5193.6
40°	5545.3	5562.5	5600.4	5615.9	5612.5	5595.2	5574.6	5578.0
42.5°	5948.6	5971.0	6010.7	6036.5	6024.5	6000.3	5974.5	5984.8
45°	6388.2	6422.6	6474.4	6500.2	6484.7	6458.8	6422.6	6441.6
47.5°	6853.6	6922.5	6991.5	7026.0	7020.8	6984.6	6938.0	6943.2
50°	7410.3	7501.7	7589.6	7624.1	7598.2	7543.1	7477.6	7475.8
52.5°	8103.3	8201.5	8273.9	8265.3	8201.5	8115.4	8041.2	8037.8
55°	8968.6	9001.4	8991.0	8916.9	8804.8	8670.4	8575.6	8560.1
57.5°	10014.9	9904.6	9742.6	9518.5	9266.8	9011.7	8839.3	8775.5
60°	11293.9	10795.8	10216.6	9606.4	9049.6	8632.5	8368.7	8208.4
62.5°	12350.6	10907.8	9613.3	8553.2	7686.1	7170.7	6810.5	6588.1
65°	11988.6	9423.7	7548.2	6181.3	5235.0	4702.4	4321.4	4068.0
67.5°	9261.6	6296.8	4381.7	3037.2	2302.9	1949.5	1703.1	1542.7
70°	4669.6	2415.0	1463.5	1032.5	882.6	820.5	779.1	755.0
72.5°	1370.4	915.3	760.2	672.3	618.8	580.9	556.8	544.7
75°	758.4	618.8	546.4	496.4	462.0	436.1	420.6	410.2
77.5°	522.3	449.9	413.7	380.9	353.4	334.4	322.3	312.0
80°	365.4	329.2	313.7	296.5	275.8	260.3	243.0	236.2
82.5°	243.0	227.5	224.1	210.3	198.2	181.0	150.0	139.6
85°	143.1	141.3	141.3	136.2	127.6	112.0	89.6	89.6
87.5°	50.0	51.7	53.4	56.9	55.2	46.5	37.9	36.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)