

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: P196439

Luminaire Tested: **NAV-AF-05-D-UNV-5NQ-7030-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196439
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-7030-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 70 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: 32796.4 lumens
Efficiency: N/A
Efficacy: 102.5 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 - G2

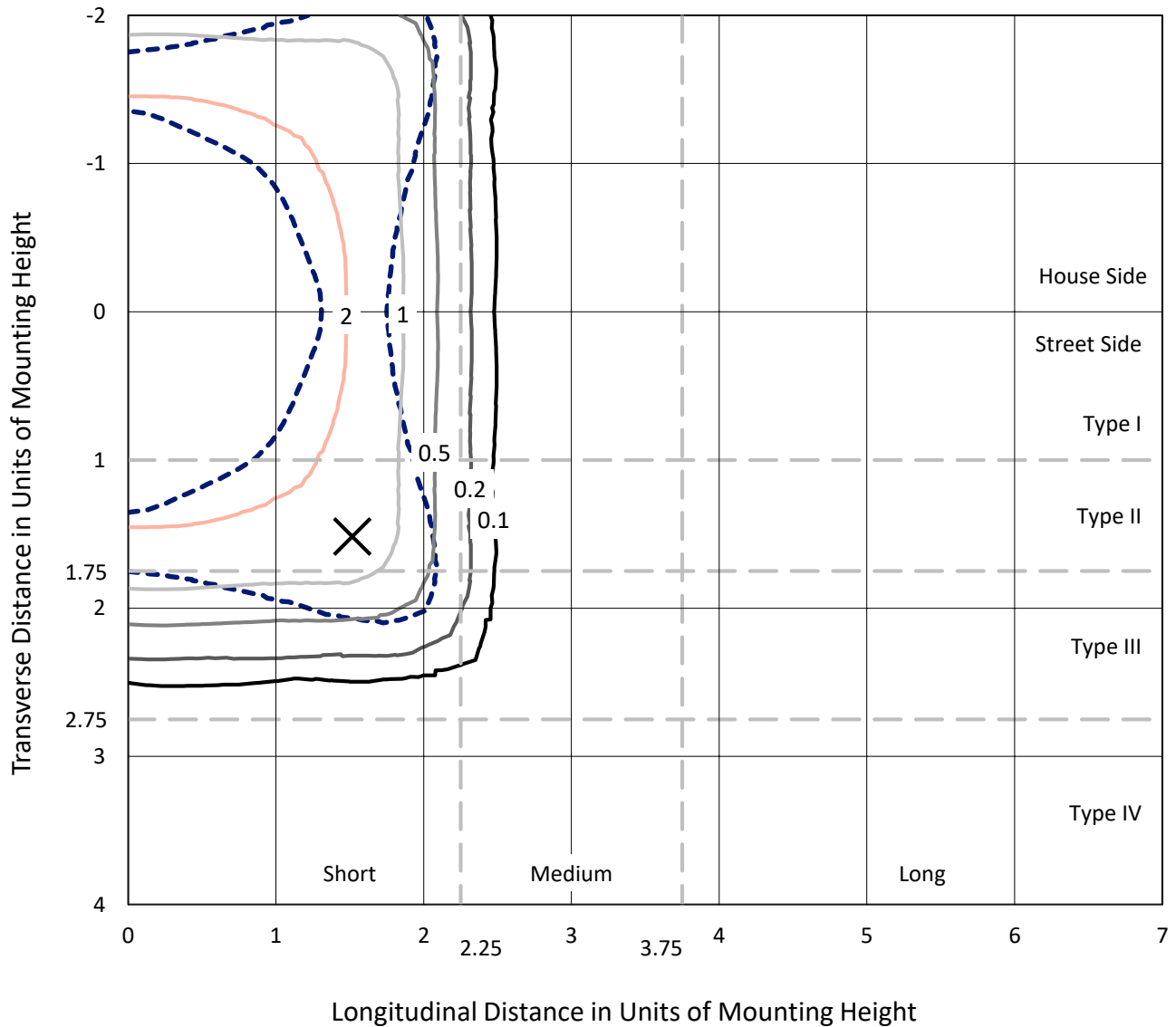
Input Watts (W): 320
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P196439
 CATALOG NUMBER: NAV-AF-05-D-UNV-5NQ-7030-1200

Iso-Footcandle Lines of Horizontal Illumination

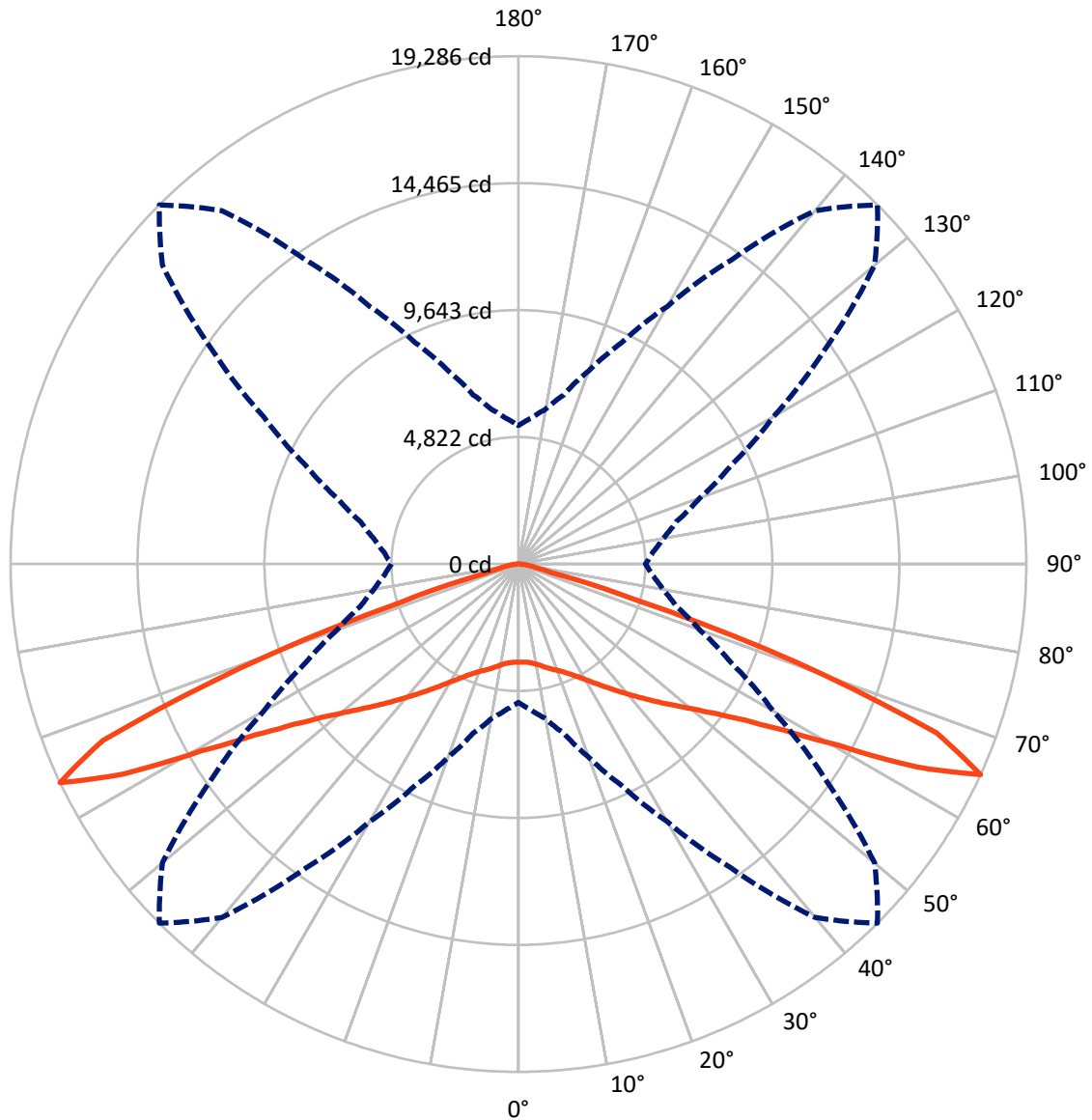
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 4.2 fc
 Type V - Short - Full Cutoff

REPORT NUMBER: P196439
CATALOG NUMBER: NAV-AF-05-D-UNV-5NQ-7030-1200

Luminous Intensity Polar Plot



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

REPORT NUMBER: P196439

CATALOG NUMBER: NAV-AF-05-D-UNV-5NQ-7030-1200

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	16398.2	0.0	16398.2
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	16398.2	0.0	16398.2
	% Fixture	50.0	0.0	50.0
Total	Lumens	32796.4	0.0	32796.4
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	363.3	1.1
10°-20°	1164.3	3.6
20°-30°	2172.0	6.6
30°-40°	3662.4	11.2
40°-50°	5948.8	18.1
50°-60°	9320.8	28.4
60°-70°	8798.4	26.8
70°-80°	1185.7	3.6
80°-90°	180.6	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°	32796.4	100.0
0°-180°	32796.4	100.0



REPORT NUMBER: P196439

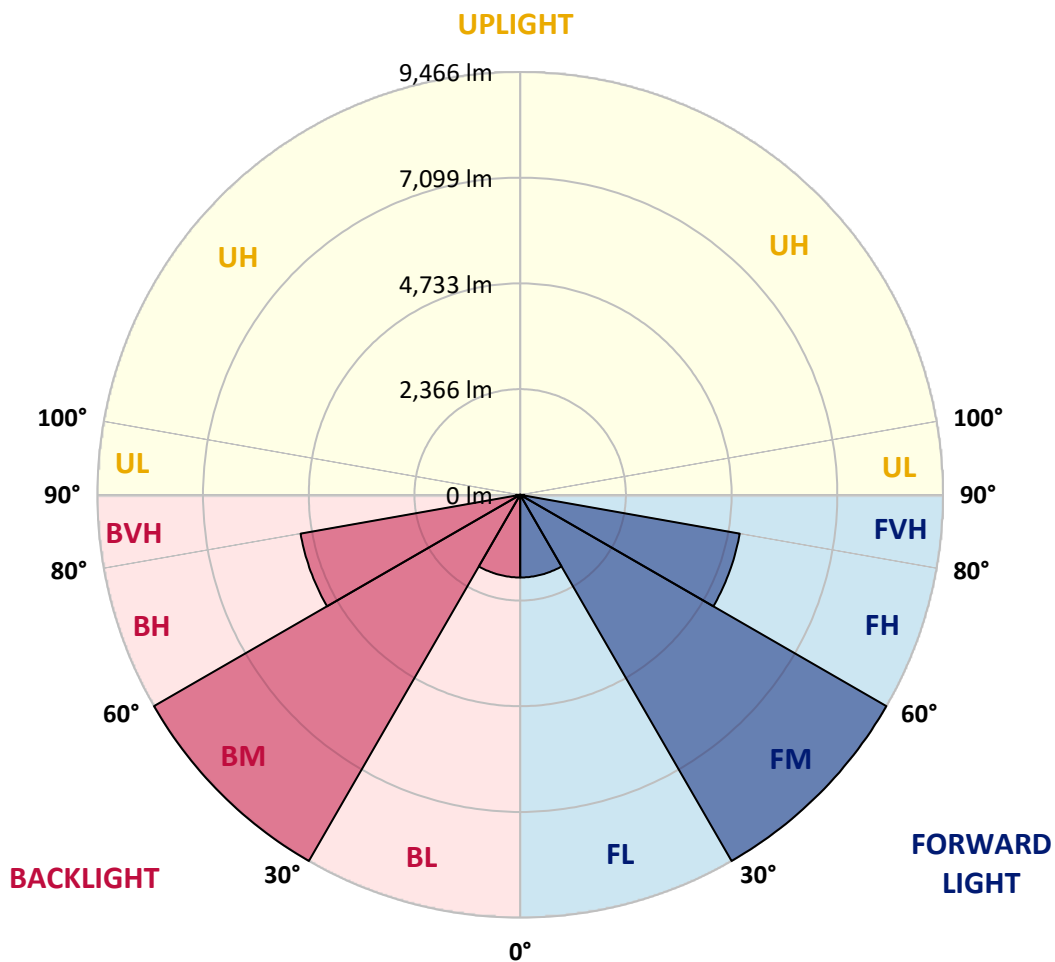
CATALOG NUMBER: NAV-AF-05-D-UNV-5NQ-7030-1200

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1849.8	5.6			
FM (30°-60°)	9466.0	28.9			
FH (60°-80°)	4992.1	15.2			G2/5000
FVH (80°-90°)	90.3	0.3			G1/100
BL (0°-30°)	1849.8	5.6	B3/2500		
BM (30°-60°)	9466.0	28.9	B5		
BH (60°-80°)	4992.1	15.2	B4/5000		G2/5000
BVH (80°-90°)	90.3	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-G2

Type V Short





REPORT NUMBER: P196439

CATALOG NUMBER: NAV-AF-05-D-UNV-5NQ-7030-1200

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	3730.5	3730.5	3730.5	3730.5	3730.5	3730.5	3730.5	3730.5	3730.5	3730.5	3730.5
2.5°	3761.1	3761.1	3767.4	3765.3	3757.1	3751.0	3744.9	3736.6	3732.7	3728.5	3726.5
5°	3781.6	3781.6	3787.8	3785.8	3779.6	3771.4	3767.4	3761.1	3755.0	3751.0	3753.0
7.5°	3832.7	3834.8	3836.7	3834.8	3828.7	3822.4	3814.3	3812.3	3804.1	3798.0	3802.0
10°	3910.3	3910.3	3912.3	3914.4	3910.3	3896.0	3896.0	3892.0	3883.7	3875.7	3877.6
12.5°	3996.1	3996.1	3998.3	3998.3	3998.3	3990.0	3992.0	3990.0	3979.8	3975.7	3979.8
15°	4079.8	4081.9	4081.9	4086.1	4086.1	4088.1	4096.2	4096.2	4092.2	4090.1	4090.1
17.5°	4178.0	4182.0	4184.1	4190.2	4192.3	4196.3	4204.6	4206.6	4208.5	4202.4	4204.6
20°	4308.7	4310.8	4317.0	4318.9	4327.1	4327.1	4331.1	4329.2	4325.0	4317.0	4317.0
22.5°	4455.8	4459.9	4472.2	4472.2	4482.4	4476.3	4478.3	4472.2	4461.9	4457.9	4453.7
25°	4647.9	4654.0	4664.2	4660.1	4664.2	4654.0	4654.0	4654.0	4647.9	4641.8	4639.7
27.5°	4891.0	4880.7	4891.0	4882.8	4880.7	4872.6	4874.6	4870.6	4864.4	4862.4	4854.2
30°	5144.4	5132.0	5138.1	5140.2	5136.2	5134.1	5125.9	5119.8	5109.6	5111.5	5105.4
32.5°	5434.4	5422.2	5428.3	5430.3	5426.3	5430.3	5428.3	5414.1	5401.8	5409.9	5409.9
35°	5779.7	5771.5	5787.9	5794.0	5781.8	5775.6	5767.5	5751.1	5732.8	5745.0	5747.0
37.5°	6194.5	6184.2	6196.4	6212.8	6190.3	6178.1	6145.4	6120.9	6108.5	6114.7	6122.9
40°	6625.5	6627.5	6662.3	6666.4	6641.9	6627.5	6594.9	6558.1	6523.4	6523.4	6533.6
42.5°	7079.0	7085.1	7126.0	7140.3	7132.1	7105.5	7060.7	7015.7	6970.7	6978.9	6991.2
45°	7591.9	7583.6	7626.7	7661.3	7655.1	7647.0	7604.1	7522.4	7481.5	7479.5	7499.9
47.5°	8131.2	8147.6	8192.5	8251.7	8249.7	8229.3	8174.1	8098.6	8022.9	8029.0	8053.6
50°	8760.4	8783.0	8858.5	8917.7	8925.9	8919.8	8854.5	8766.5	8660.3	8666.5	8699.1
52.5°	9324.3	9357.0	9444.8	9567.4	9643.0	9677.7	9634.8	9553.2	9444.8	9451.0	9485.7
55°	9835.1	9886.1	10016.9	10184.4	10335.6	10476.6	10539.9	10537.8	10458.2	10476.6	10521.5
57.5°	10155.8	10227.3	10425.5	10695.2	10995.6	11279.5	11524.6	11755.5	11806.5	11902.6	11902.6
60°	9724.7	9892.4	10155.8	10617.6	11208.1	11845.5	12536.0	13208.2	13641.2	13982.4	13798.6
62.5°	8121.0	8368.1	8738.0	9346.8	10266.1	11404.2	12791.3	14354.3	15984.5	16981.5	16250.1
65°	5254.6	5565.1	5967.6	6652.0	7810.4	9275.2	11295.9	14105.0	17516.8	19286.1	17651.6
67.5°	2081.8	2292.3	2537.4	3023.6	4028.8	5467.2	7734.9	11199.8	15467.7	17136.8	15304.3
70°	995.0	1029.7	1076.6	1180.9	1432.2	1932.7	3107.5	5518.1	9485.7	11244.8	9258.9
72.5°	719.2	725.3	747.8	782.6	856.0	958.2	1164.4	1687.5	3270.9	4756.2	3274.9
75°	545.5	553.6	566.0	584.3	623.1	672.2	749.7	898.8	1119.6	1291.2	1117.5
77.5°	414.7	423.0	433.1	451.5	471.9	506.6	535.3	594.5	688.5	725.3	721.2
80°	302.3	316.7	333.0	349.3	363.7	380.0	382.1	410.6	463.8	498.6	488.3
82.5°	192.1	204.4	247.3	265.6	267.6	271.7	269.7	271.7	300.4	324.8	316.7
85°	122.6	130.8	153.2	173.6	169.6	177.8	177.8	173.6	161.3	139.0	165.5
87.5°	61.3	63.4	73.5	91.9	87.9	77.7	75.6	75.6	55.1	47.0	51.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P196439

CATALOG NUMBER: NAV-AF-05-D-UNV-5NQ-7030-1200

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	3730.5	3730.5	3730.5	3730.5	3730.5	3730.5	3730.5	3730.5
2.5°	3720.3	3724.4	3718.3	3718.3	3716.2	3720.3	3714.2	3714.2
5°	3748.9	3755.0	3753.0	3753.0	3757.1	3761.1	3759.2	3757.1
7.5°	3800.0	3804.1	3808.2	3810.2	3814.3	3812.3	3816.3	3814.3
10°	3877.6	3873.6	3879.7	3873.6	3875.7	3871.5	3873.6	3873.6
12.5°	3975.7	3969.6	3965.4	3961.4	3961.4	3953.2	3953.2	3955.3
15°	4088.1	4077.9	4069.7	4065.6	4061.5	4061.5	4055.3	4059.4
17.5°	4198.4	4188.2	4173.9	4173.9	4167.8	4163.7	4159.6	4169.8
20°	4314.8	4304.6	4296.5	4294.4	4282.2	4278.0	4280.1	4292.4
22.5°	4449.7	4443.6	4443.6	4439.4	4431.3	4425.2	4425.2	4439.4
25°	4631.5	4619.3	4621.3	4623.3	4619.3	4619.3	4615.2	4625.4
27.5°	4854.2	4844.0	4850.1	4854.2	4850.1	4856.2	4850.1	4858.3
30°	5115.7	5109.6	5115.7	5121.8	5111.5	5111.5	5107.6	5113.7
32.5°	5428.3	5420.2	5424.1	5424.1	5409.9	5397.6	5381.3	5393.6
35°	5771.5	5761.3	5769.4	5775.6	5759.3	5747.0	5722.5	5732.8
37.5°	6149.4	6153.6	6163.8	6190.3	6186.3	6165.8	6147.5	6155.5
40°	6572.4	6592.8	6637.7	6656.2	6652.0	6631.6	6607.1	6611.2
42.5°	7050.5	7077.0	7124.0	7154.7	7140.3	7111.6	7081.1	7093.3
45°	7571.4	7612.3	7673.6	7704.2	7685.9	7655.1	7612.3	7634.7
47.5°	8123.0	8204.8	8286.4	8327.3	8321.1	8278.2	8223.2	8229.3
50°	8783.0	8891.2	8995.5	9036.3	9005.5	8940.2	8862.6	8860.6
52.5°	9604.2	9720.7	9806.4	9796.3	9720.7	9618.5	9530.6	9526.6
55°	10629.9	10668.6	10656.4	10568.5	10435.7	10276.4	10164.0	10145.6
57.5°	11869.9	11739.2	11547.2	11281.6	10983.3	10680.8	10476.6	10401.1
60°	13385.8	12795.4	12108.9	11385.7	10725.9	10231.5	9918.9	9728.9
62.5°	14638.2	12928.2	11393.9	10137.4	9109.8	8498.9	8072.0	7808.4
65°	14209.1	11169.1	8946.3	7326.3	6204.7	5573.4	5121.8	4821.5
67.5°	10977.2	7463.2	5193.3	3599.8	2729.6	2310.7	2018.4	1828.5
70°	5534.5	2862.3	1734.5	1223.8	1046.0	972.5	923.5	894.9
72.5°	1624.2	1084.8	901.0	796.8	733.4	688.5	659.9	645.6
75°	898.8	733.4	647.7	588.4	547.5	516.9	498.6	486.2
77.5°	619.1	533.1	490.3	451.5	418.8	396.4	382.1	369.8
80°	433.1	390.2	371.8	351.4	326.9	308.5	288.1	279.9
82.5°	288.1	269.7	265.6	249.2	234.9	214.4	177.8	165.5
85°	169.6	167.5	167.5	161.3	151.3	132.8	106.2	106.2
87.5°	59.2	61.3	63.4	67.4	65.3	55.1	44.9	42.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)