

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: P195953

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

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P195953  
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  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(5) 70 CRI, 4000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V  
NARROW OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 31621.5 lumens  
Efficiency: N/A  
Efficacy: 113.3 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): 279  
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

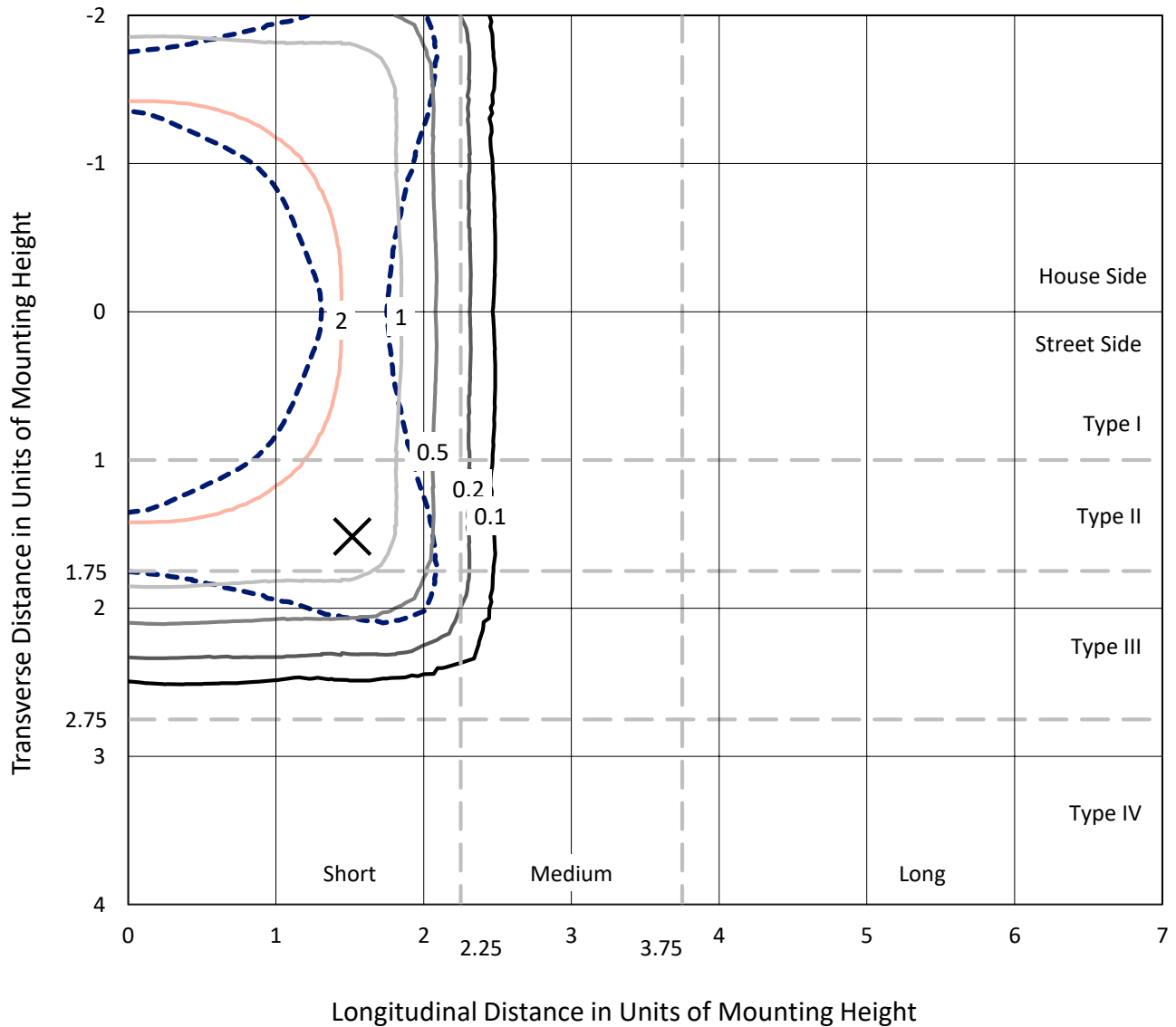


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### Iso-Footcandle Lines of Horizontal Illumination

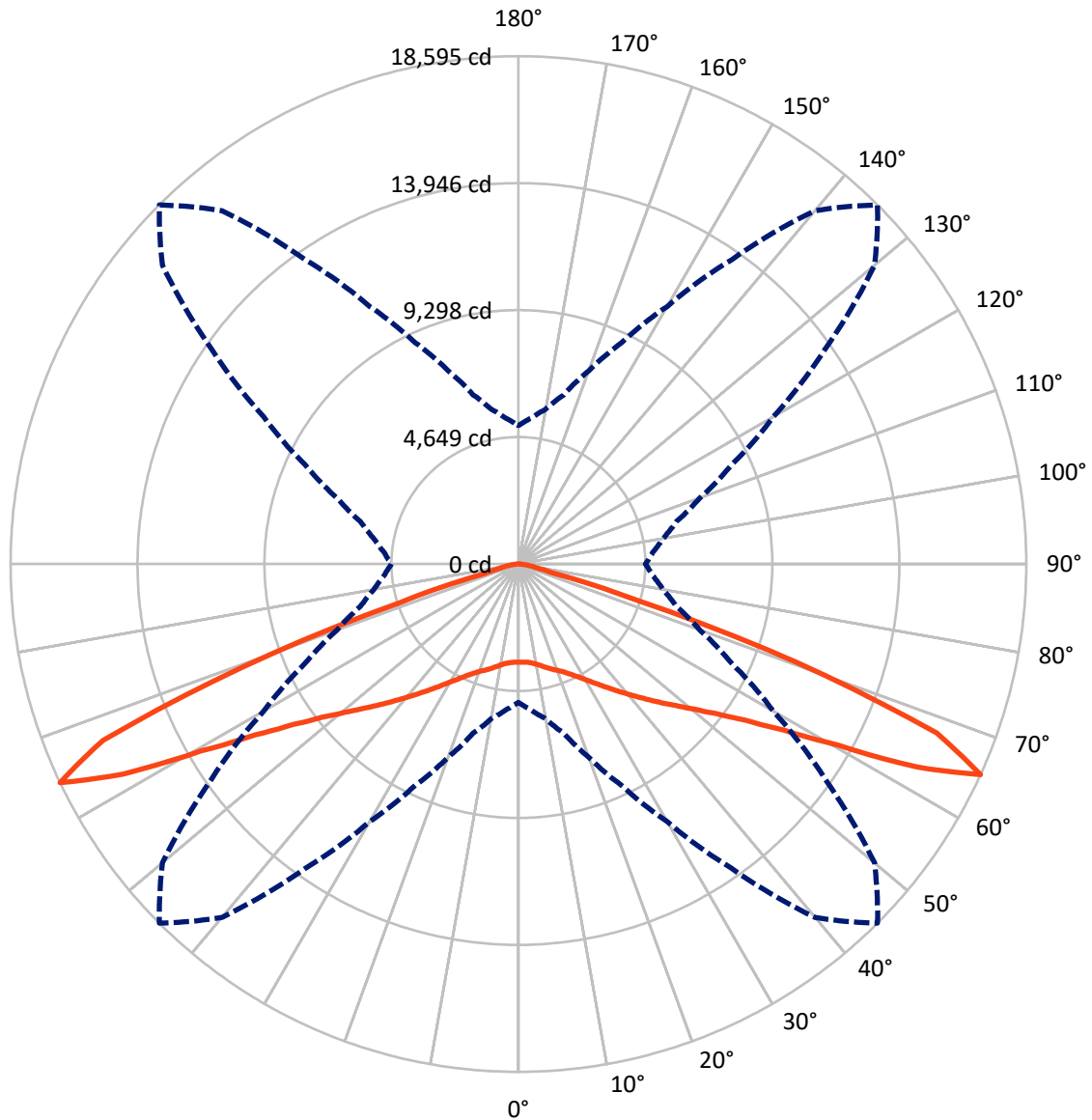
× Max cd  
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 4 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
<b>House Side</b>	Lumens	15810.7	0.0	15810.7
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	15810.7	0.0	15810.7
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	31621.5	0.0	31621.5
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	350.3	1.1
10°-20°	1122.6	3.6
20°-30°	2094.2	6.6
30°-40°	3531.2	11.2
40°-50°	5735.7	18.1
50°-60°	8986.9	28.4
60°-70°	8483.2	26.8
70°-80°	1143.3	3.6
80°-90°	174.1	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°	31621.5	100.0
0°-180°	31621.5	100.0

**Coefficient of Utilization**



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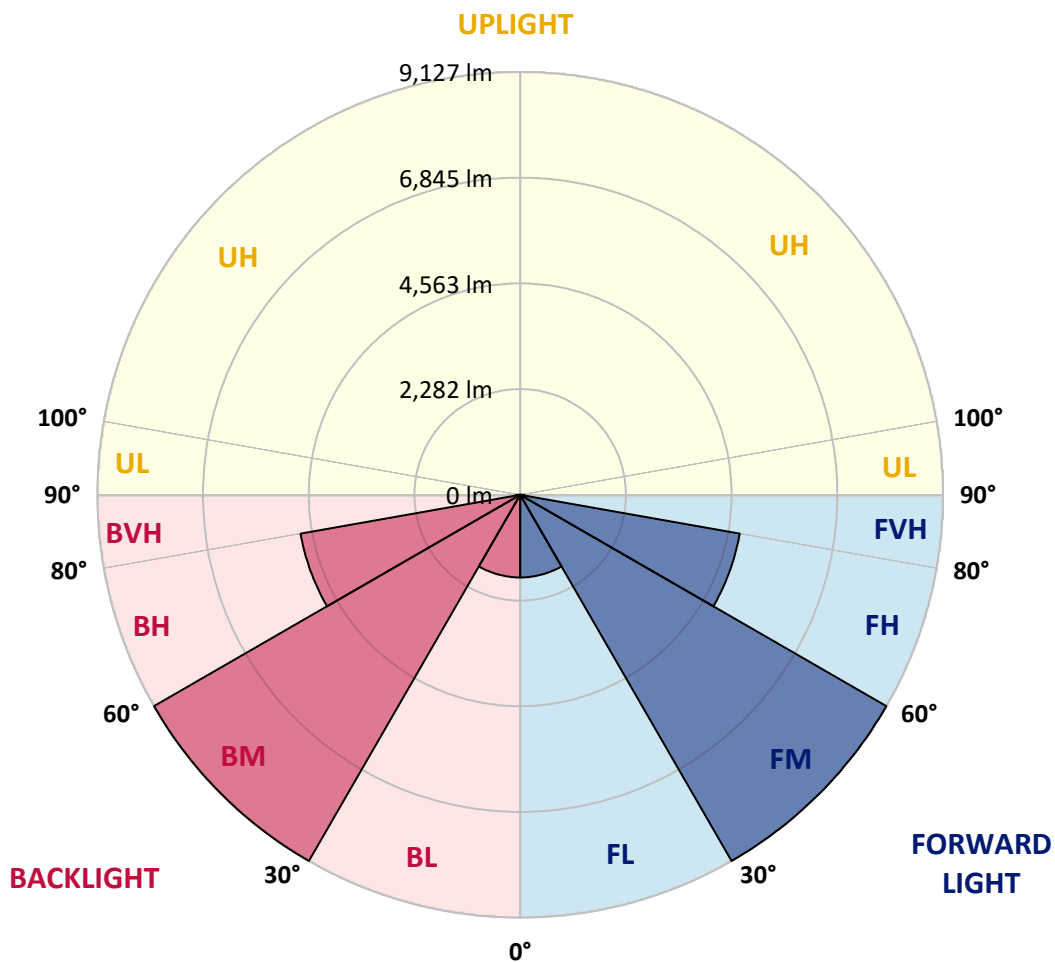
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1783.6	5.6			
FM (30°-60°)	9126.9	28.9			
FH (60°-80°)	4813.2	15.2			G2/5000
FVH (80°-90°)	87.1	0.3			G1/100
BL (0°-30°)	1783.6	5.6	B3/2500		
BM (30°-60°)	9126.9	28.9	B5		
BH (60°-80°)	4813.2	15.2	B4/5000		G2/5000
BVH (80°-90°)	87.1	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





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	3596.9	3596.9	3596.9	3596.9	3596.9	3596.9	3596.9	3596.9	3596.9	3596.9	3596.9
2.5°	3626.5	3626.5	3632.4	3630.4	3622.5	3616.6	3610.7	3602.8	3598.8	3595.0	3593.0
5°	3646.1	3646.1	3652.0	3650.1	3644.2	3636.3	3632.4	3626.5	3620.5	3616.6	3618.6
7.5°	3695.4	3697.4	3699.3	3697.4	3691.4	3685.6	3677.7	3675.7	3667.8	3661.9	3665.8
10°	3770.3	3770.3	3772.2	3774.2	3770.3	3756.5	3756.5	3752.5	3744.6	3736.7	3738.7
12.5°	3852.9	3852.9	3855.0	3855.0	3855.0	3847.1	3849.1	3847.1	3837.2	3833.3	3837.2
15°	3933.8	3935.7	3935.7	3939.7	3939.7	3941.6	3949.5	3949.5	3945.5	3943.6	3943.6
17.5°	4028.3	4032.3	4034.2	4040.1	4042.1	4046.0	4053.9	4055.9	4057.8	4051.9	4053.9
20°	4154.4	4156.4	4162.3	4164.2	4172.1	4172.1	4176.0	4174.0	4170.2	4162.3	4162.3
22.5°	4296.2	4300.2	4311.9	4311.9	4321.8	4315.9	4317.9	4311.9	4302.1	4298.1	4294.2
25°	4481.3	4487.3	4497.1	4493.2	4497.1	4487.3	4487.3	4487.3	4481.3	4475.4	4473.5
27.5°	4715.8	4705.9	4715.8	4707.9	4705.9	4698.0	4700.0	4696.1	4690.1	4688.2	4680.3
30°	4960.0	4948.2	4954.2	4956.1	4952.1	4950.2	4942.3	4936.4	4926.5	4928.5	4922.6
32.5°	5239.8	5227.9	5233.8	5235.8	5231.9	5235.8	5233.8	5220.0	5208.3	5216.1	5216.1
35°	5572.6	5564.8	5580.5	5586.4	5574.6	5568.7	5560.9	5545.1	5527.3	5539.2	5541.1
37.5°	5972.5	5962.7	5974.4	5990.2	5968.6	5956.7	5925.2	5901.6	5889.7	5895.7	5903.6
40°	6388.1	6390.1	6423.6	6427.5	6403.9	6390.1	6358.6	6323.2	6289.6	6289.6	6299.5
42.5°	6825.4	6831.4	6870.8	6884.6	6876.7	6851.0	6807.7	6764.4	6721.1	6729.0	6740.7
45°	7319.8	7312.0	7353.4	7386.8	7380.9	7373.0	7331.7	7252.9	7213.5	7211.5	7231.2
47.5°	7839.9	7855.6	7899.0	7956.1	7954.2	7934.4	7881.3	7808.4	7735.6	7741.4	7765.0
50°	8446.6	8468.3	8541.1	8598.3	8606.2	8600.3	8537.2	8452.5	8350.1	8356.0	8387.5
52.5°	8990.3	9021.8	9106.5	9224.7	9297.6	9331.1	9289.7	9211.0	9106.5	9112.4	9145.9
55°	9482.8	9532.0	9658.1	9819.6	9965.4	10101.2	10162.3	10160.4	10083.5	10101.2	10144.6
57.5°	9792.0	9860.9	10052.0	10312.1	10601.6	10875.4	11111.8	11334.4	11383.6	11476.2	11476.2
60°	9376.4	9537.9	9792.0	10237.2	10806.5	11421.0	12086.9	12734.9	13152.5	13481.5	13304.2
62.5°	7830.1	8068.4	8424.9	9012.0	9898.4	10995.6	12333.1	13840.0	15411.9	16373.1	15668.0
65°	5066.4	5365.8	5753.9	6413.8	7530.7	8943.0	10891.2	13599.7	16889.3	18595.2	17019.3
67.5°	2007.2	2210.2	2446.5	2915.3	3884.5	5271.3	7457.7	10798.6	14913.6	16522.9	14756.0
70°	959.3	992.8	1038.1	1138.5	1380.9	1863.4	2996.1	5320.5	9145.9	10841.9	8927.3
72.5°	693.4	699.3	721.0	754.4	825.3	923.8	1122.8	1627.1	3153.7	4585.8	3157.6
75°	525.9	533.8	545.6	563.3	600.8	648.0	722.9	866.7	1079.4	1244.9	1077.5
77.5°	399.9	407.7	417.6	435.4	455.0	488.6	516.1	573.3	663.8	699.3	695.3
80°	291.5	305.4	321.1	336.9	350.7	366.4	368.4	396.0	447.1	480.7	470.8
82.5°	185.2	197.0	238.3	256.0	258.1	262.0	260.0	262.0	289.6	313.2	305.4
85°	118.2	126.0	147.7	167.5	163.5	171.3	171.3	167.5	155.6	133.9	159.6
87.5°	59.1	61.1	70.9	88.7	84.7	74.9	72.8	72.8	53.2	45.3	49.2
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):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	3596.9	3596.9	3596.9	3596.9	3596.9	3596.9	3596.9	3596.9
2.5°	3587.1	3591.0	3585.0	3585.0	3583.1	3587.1	3581.1	3581.1
5°	3614.6	3620.5	3618.6	3618.6	3622.5	3626.5	3624.5	3622.5
7.5°	3663.9	3667.8	3671.8	3673.7	3677.7	3675.7	3679.7	3677.7
10°	3738.7	3734.8	3740.7	3734.8	3736.7	3732.8	3734.8	3734.8
12.5°	3833.3	3827.4	3823.5	3819.5	3819.5	3811.6	3811.6	3813.6
15°	3941.6	3931.8	3923.9	3919.9	3916.1	3916.1	3910.1	3914.0
17.5°	4048.0	4038.1	4024.4	4024.4	4018.5	4014.5	4010.6	4020.4
20°	4160.2	4150.4	4142.5	4140.6	4128.7	4124.8	4126.8	4138.7
22.5°	4290.3	4284.3	4284.3	4280.4	4272.6	4266.6	4266.6	4280.4
25°	4465.6	4453.8	4455.8	4457.7	4453.8	4453.8	4449.8	4459.7
27.5°	4680.3	4670.5	4676.3	4680.3	4676.3	4682.3	4676.3	4684.3
30°	4932.5	4926.5	4932.5	4938.4	4928.5	4928.5	4924.6	4930.5
32.5°	5233.8	5225.9	5229.9	5229.9	5216.1	5204.3	5188.5	5200.4
35°	5564.8	5554.9	5562.8	5568.7	5553.0	5541.1	5517.5	5527.3
37.5°	5929.2	5933.1	5942.9	5968.6	5964.6	5945.0	5927.2	5935.1
40°	6337.0	6356.6	6400.0	6417.7	6413.8	6394.1	6370.4	6374.3
42.5°	6797.9	6823.5	6868.8	6898.4	6884.6	6856.9	6827.4	6839.2
45°	7300.2	7339.6	7398.7	7428.3	7410.5	7380.9	7339.6	7361.3
47.5°	7832.0	7910.8	7989.7	8029.0	8023.1	7981.8	7928.6	7934.4
50°	8468.3	8572.6	8673.2	8712.6	8683.0	8620.0	8545.1	8543.2
52.5°	9260.2	9372.5	9455.1	9445.3	9372.5	9274.0	9189.3	9185.3
55°	10249.0	10286.4	10274.6	10189.9	10061.8	9908.2	9799.9	9782.2
57.5°	11444.7	11318.6	11133.5	10877.3	10589.8	10298.3	10101.2	10028.4
60°	12906.3	12337.0	11675.1	10977.8	10341.6	9864.9	9563.5	9380.4
62.5°	14113.8	12465.1	10985.7	9774.3	8783.5	8194.4	7782.8	7528.7
65°	13700.2	10769.0	8625.8	7063.8	5982.3	5373.7	4938.4	4648.8
67.5°	10583.9	7195.7	5007.3	3470.9	2631.6	2227.9	1946.2	1763.0
70°	5336.2	2759.7	1672.4	1180.0	1008.5	937.6	890.4	862.8
72.5°	1566.0	1046.0	868.7	768.2	707.2	663.8	636.3	622.5
75°	866.7	707.2	624.4	567.3	527.9	498.4	480.7	468.8
77.5°	596.9	514.1	472.8	435.4	403.9	382.2	368.4	356.5
80°	417.6	376.2	358.5	338.8	315.2	297.5	277.7	269.9
82.5°	277.7	260.0	256.0	240.3	226.5	206.8	171.3	159.6
85°	163.5	161.5	161.5	155.6	145.8	128.1	102.4	102.4
87.5°	57.1	59.1	61.1	65.0	63.0	53.2	43.4	41.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)