

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: P194982

Luminaire Tested: **NAV-AF-06-D-UNV-5NQ-7060-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P194982
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-7060-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 5700K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V NARROW OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 24398 lumens
Efficiency: N/A
Efficacy: 126.4 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): 193
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

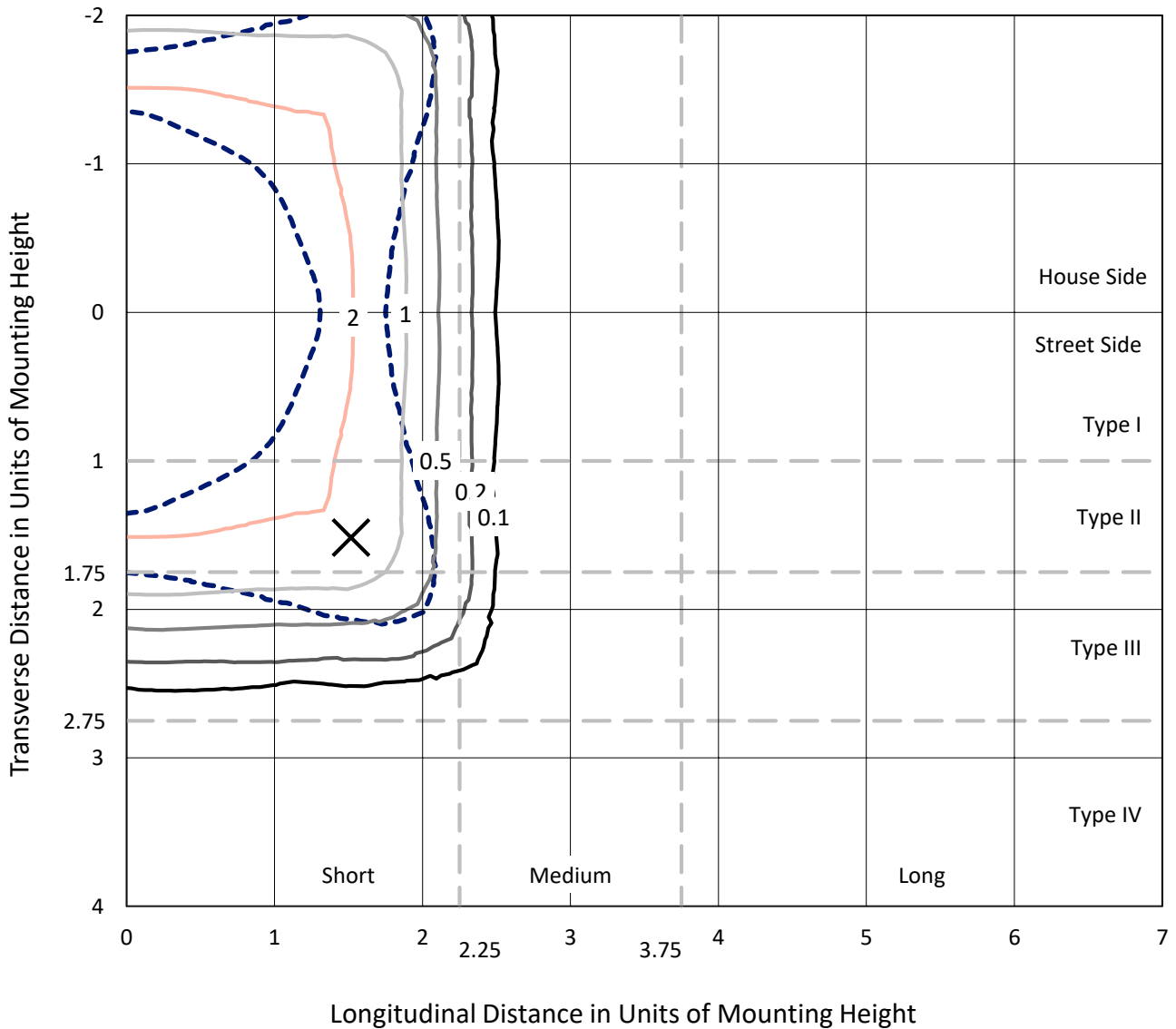


REPORT NUMBER: P194982

CATALOG NUMBER: NAV-AF-06-D-UNV-5NQ-7060-600

Iso-Footcandle Lines of Horizontal Illumination

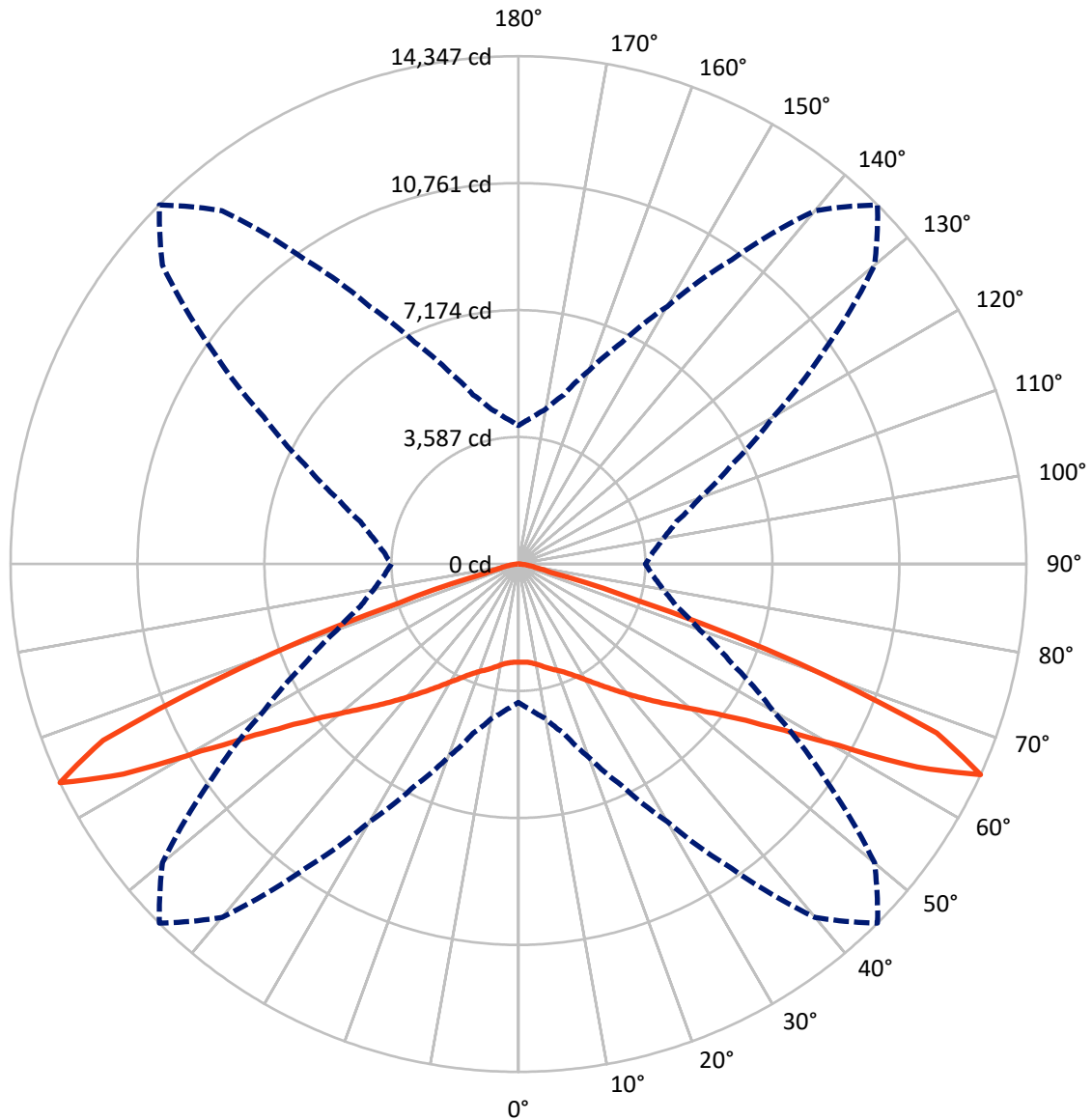
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.4 fc
 Type V - Short - Full Cutoff

REPORT NUMBER: P194982
CATALOG NUMBER: NAV-AF-06-D-UNV-5NQ-7060-600

Luminous Intensity Polar Plot



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

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CATALOG NUMBER: NAV-AF-06-D-UNV-5NQ-7060-600

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	12199.0	0.0	12199.0
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	12199.0	0.0	12199.0
	% Fixture	50.0	0.0	50.0
Total	Lumens	24398.0	0.0	24398.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	270.3	1.1
10°-20°	866.2	3.6
20°-30°	1615.8	6.6
30°-40°	2724.6	11.2
40°-50°	4425.5	18.1
50°-60°	6933.9	28.4
60°-70°	6545.3	26.8
70°-80°	882.1	3.6
80°-90°	134.4	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°	24398.0	100.0
0°-180°	24398.0	100.0



REPORT NUMBER: P194982

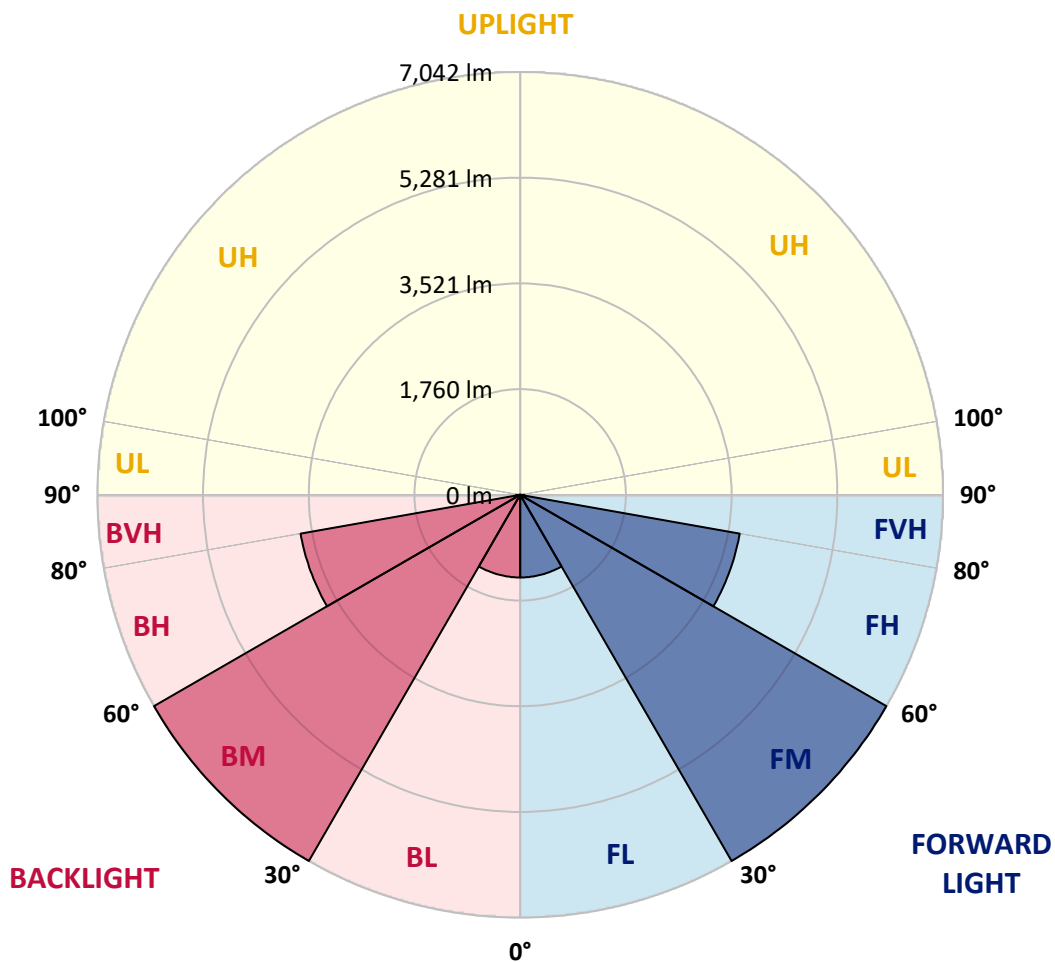
CATALOG NUMBER: NAV-AF-06-D-UNV-5NQ-7060-600

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1376.1	5.6			
FM	(30°-60°)	7042.0	28.9			
FH	(60°-80°)	3713.7	15.2			G2/5000
FVH	(80°-90°)	67.2	0.3			G1/100
BL	(0°-30°)	1376.1	5.6	B3/2500		
BM	(30°-60°)	7042.0	28.9	B4/8500		
BH	(60°-80°)	3713.7	15.2	B4/5000		G2/5000
BVH	(80°-90°)	67.2	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





REPORT NUMBER: P194982

CATALOG NUMBER: NAV-AF-06-D-UNV-5NQ-7060-600

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2775.2	2775.2	2775.2	2775.2	2775.2	2775.2	2775.2	2775.2	2775.2	2775.2	2775.2
2.5°	2798.0	2798.0	2802.6	2801.1	2795.0	2790.4	2785.9	2779.8	2776.8	2773.7	2772.2
5°	2813.2	2813.2	2817.8	2816.3	2811.7	2805.6	2802.6	2798.0	2793.5	2790.4	2792.0
7.5°	2851.2	2852.8	2854.3	2852.8	2848.2	2843.6	2837.6	2836.0	2830.0	2825.4	2828.4
10°	2909.0	2909.0	2910.5	2912.0	2909.0	2898.4	2898.4	2895.3	2889.2	2883.2	2884.7
12.5°	2972.8	2972.8	2974.3	2974.3	2974.3	2968.3	2969.8	2968.3	2960.7	2957.6	2960.7
15°	3035.1	3036.7	3036.7	3039.7	3039.7	3041.2	3047.3	3047.3	3044.3	3042.7	3042.7
17.5°	3108.1	3111.1	3112.6	3117.2	3118.7	3121.8	3127.8	3129.4	3130.9	3126.3	3127.8
20°	3205.4	3206.9	3211.4	3213.0	3219.0	3219.0	3222.1	3220.6	3217.5	3211.4	3211.4
22.5°	3314.8	3317.8	3326.9	3326.9	3334.5	3330.0	3331.5	3326.9	3319.3	3316.3	3313.3
25°	3457.7	3462.2	3469.8	3466.8	3469.8	3462.2	3462.2	3462.2	3457.7	3453.1	3451.6
27.5°	3638.5	3630.9	3638.5	3632.4	3630.9	3624.8	3626.4	3623.3	3618.8	3617.2	3611.2
30°	3827.0	3817.9	3822.4	3823.9	3820.9	3819.4	3813.3	3808.7	3801.1	3802.7	3798.1
32.5°	4042.8	4033.7	4038.2	4039.8	4036.7	4039.8	4038.2	4027.6	4018.5	4024.6	4024.6
35°	4299.7	4293.6	4305.7	4310.3	4301.2	4296.6	4290.5	4278.4	4264.7	4273.8	4275.3
37.5°	4608.2	4600.6	4609.7	4621.9	4605.1	4596.0	4571.7	4553.5	4544.3	4548.9	4555.0
40°	4928.9	4930.4	4956.2	4959.3	4941.0	4930.4	4906.1	4878.7	4852.9	4852.9	4860.5
42.5°	5266.3	5270.8	5301.2	5311.9	5305.8	5286.0	5252.6	5219.2	5185.7	5191.8	5200.9
45°	5647.8	5641.7	5673.6	5699.4	5694.9	5688.8	5656.9	5596.1	5565.7	5564.2	5579.4
47.5°	6049.0	6061.2	6094.6	6138.7	6137.1	6121.9	6080.9	6024.7	5968.4	5973.0	5991.2
50°	6517.1	6533.8	6590.1	6634.1	6640.2	6635.7	6587.0	6521.7	6442.6	6447.2	6471.5
52.5°	6936.6	6960.9	7026.3	7117.5	7173.7	7199.5	7167.6	7106.8	7026.3	7030.8	7056.7
55°	7316.6	7354.5	7451.8	7576.4	7688.9	7793.8	7840.9	7839.4	7780.1	7793.8	7827.2
57.5°	7555.2	7608.4	7755.8	7956.4	8179.8	8391.1	8573.5	8745.2	8783.2	8854.6	8854.6
60°	7234.5	7359.1	7555.2	7898.7	8337.9	8812.1	9325.8	9825.8	10148.0	10401.8	10265.1
62.5°	6041.4	6225.3	6500.4	6953.3	7637.2	8483.8	9515.8	10678.5	11891.3	12633.0	12088.9
65°	3909.1	4140.1	4439.5	4948.6	5810.4	6900.1	8403.2	10493.0	13031.2	14347.4	13131.5
67.5°	1548.7	1705.3	1887.7	2249.4	2997.1	4067.1	5754.1	8331.8	11506.8	12748.5	11385.2
70°	740.2	766.0	801.0	878.5	1065.4	1437.8	2311.7	4105.1	7056.7	8365.2	6888.0
72.5°	535.0	539.5	556.3	582.1	636.8	712.8	866.3	1255.4	2433.3	3538.2	2436.3
75°	405.8	411.9	421.0	434.7	463.6	500.0	557.8	668.7	832.9	960.5	831.4
77.5°	308.5	314.6	322.2	335.9	351.1	376.9	398.2	442.3	512.2	539.5	536.5
80°	224.9	235.6	247.7	259.9	270.5	282.7	284.2	305.5	345.0	370.8	363.2
82.5°	142.9	152.0	183.9	197.6	199.1	202.1	200.6	202.1	223.4	241.7	235.6
85°	91.2	97.3	114.0	129.2	126.1	132.2	132.2	129.2	120.1	103.3	123.1
87.5°	45.6	47.1	54.7	68.4	65.4	57.8	56.2	56.2	41.0	35.0	38.0
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: P194982

CATALOG NUMBER: NAV-AF-06-D-UNV-5NQ-7060-600

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	2775.2	2775.2	2775.2	2775.2	2775.2	2775.2	2775.2	2775.2
2.5°	2767.6	2770.7	2766.1	2766.1	2764.6	2767.6	2763.1	2763.1
5°	2788.9	2793.5	2792.0	2792.0	2795.0	2798.0	2796.5	2795.0
7.5°	2826.9	2830.0	2833.0	2834.5	2837.6	2836.0	2839.1	2837.6
10°	2884.7	2881.6	2886.2	2881.6	2883.2	2880.1	2881.6	2881.6
12.5°	2957.6	2953.1	2950.0	2947.0	2947.0	2940.9	2940.9	2942.4
15°	3041.2	3033.6	3027.5	3024.5	3021.5	3021.5	3016.9	3019.9
17.5°	3123.3	3115.7	3105.1	3105.1	3100.5	3097.5	3094.4	3102.0
20°	3209.9	3202.3	3196.2	3194.7	3185.6	3182.6	3184.1	3193.2
22.5°	3310.2	3305.7	3305.7	3302.6	3296.6	3292.0	3292.0	3302.6
25°	3445.5	3436.4	3437.9	3439.4	3436.4	3436.4	3433.3	3440.9
27.5°	3611.2	3603.6	3608.1	3611.2	3608.1	3612.7	3608.1	3614.2
30°	3805.7	3801.1	3805.7	3810.3	3802.7	3802.7	3799.6	3804.2
32.5°	4038.2	4032.2	4035.2	4035.2	4024.6	4015.4	4003.3	4012.4
35°	4293.6	4286.0	4292.1	4296.6	4284.5	4275.3	4257.1	4264.7
37.5°	4574.7	4577.8	4585.4	4605.1	4602.1	4586.9	4573.2	4579.3
40°	4889.4	4904.6	4938.0	4951.7	4948.6	4933.4	4915.2	4918.2
42.5°	5245.0	5264.8	5299.7	5322.5	5311.9	5290.6	5267.8	5276.9
45°	5632.6	5663.0	5708.6	5731.3	5717.7	5694.9	5663.0	5679.7
47.5°	6042.9	6103.7	6164.5	6194.9	6190.3	6158.4	6117.4	6121.9
50°	6533.8	6614.4	6691.9	6722.3	6699.5	6650.9	6593.1	6591.6
52.5°	7144.8	7231.4	7295.3	7287.7	7231.4	7155.4	7090.1	7087.1
55°	7907.8	7936.6	7927.5	7862.2	7763.4	7644.8	7561.2	7547.6
57.5°	8830.3	8733.0	8590.2	8392.6	8170.7	7945.8	7793.8	7737.5
60°	9958.0	9518.8	9008.1	8470.1	7979.2	7611.4	7378.9	7237.5
62.5°	10889.7	9617.6	8476.2	7541.5	6777.0	6322.6	6004.9	5808.9
65°	10570.5	8309.0	6655.4	5450.2	4615.8	4146.1	3810.3	3586.8
67.5°	8166.1	5552.0	3863.5	2678.0	2030.5	1718.9	1501.6	1360.3
70°	4117.3	2129.3	1290.4	910.4	778.2	723.4	687.0	665.7
72.5°	1208.3	807.0	670.3	592.7	545.6	512.2	490.9	480.3
75°	668.7	545.6	481.8	437.7	407.3	384.5	370.8	361.7
77.5°	460.5	396.7	364.8	335.9	311.6	294.9	284.2	275.1
80°	322.2	290.3	276.6	261.4	243.2	229.5	214.3	208.2
82.5°	214.3	200.6	197.6	185.4	174.8	159.6	132.2	123.1
85°	126.1	124.6	124.6	120.1	112.5	98.8	79.0	79.0
87.5°	44.1	45.6	47.1	50.2	48.6	41.0	33.4	31.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)