

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: P195444

Luminaire Tested: **NAV-AF-06-D-UNV-5MQ-7050-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195444
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24129)
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-5MQ-7050-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 5000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V MEDIUM OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 30995 lumens
Efficiency: N/A
Efficacy: 124.5 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 - G3

Input Watts (W): 249
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

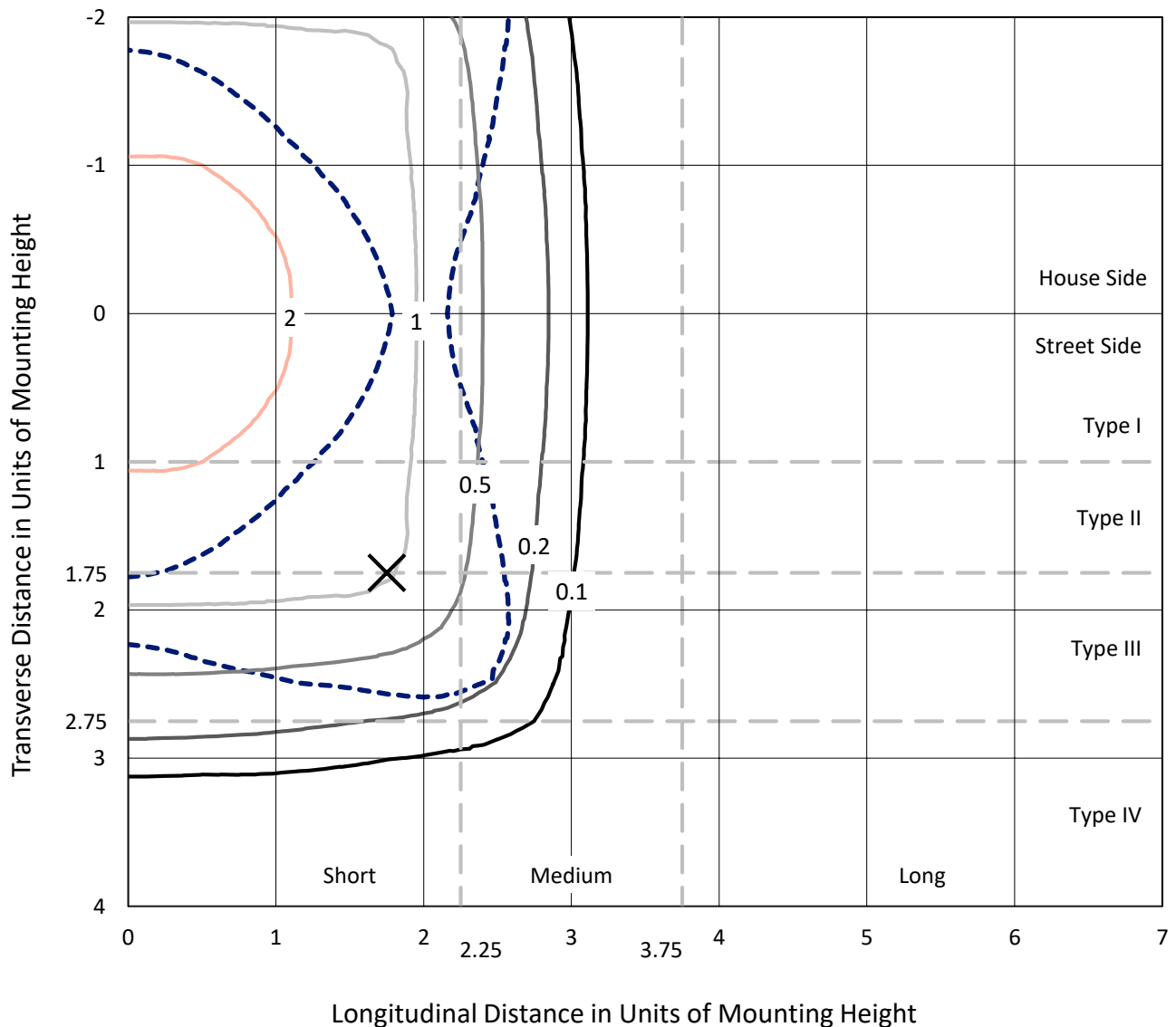


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Iso-Footcandle Lines of Horizontal Illumination

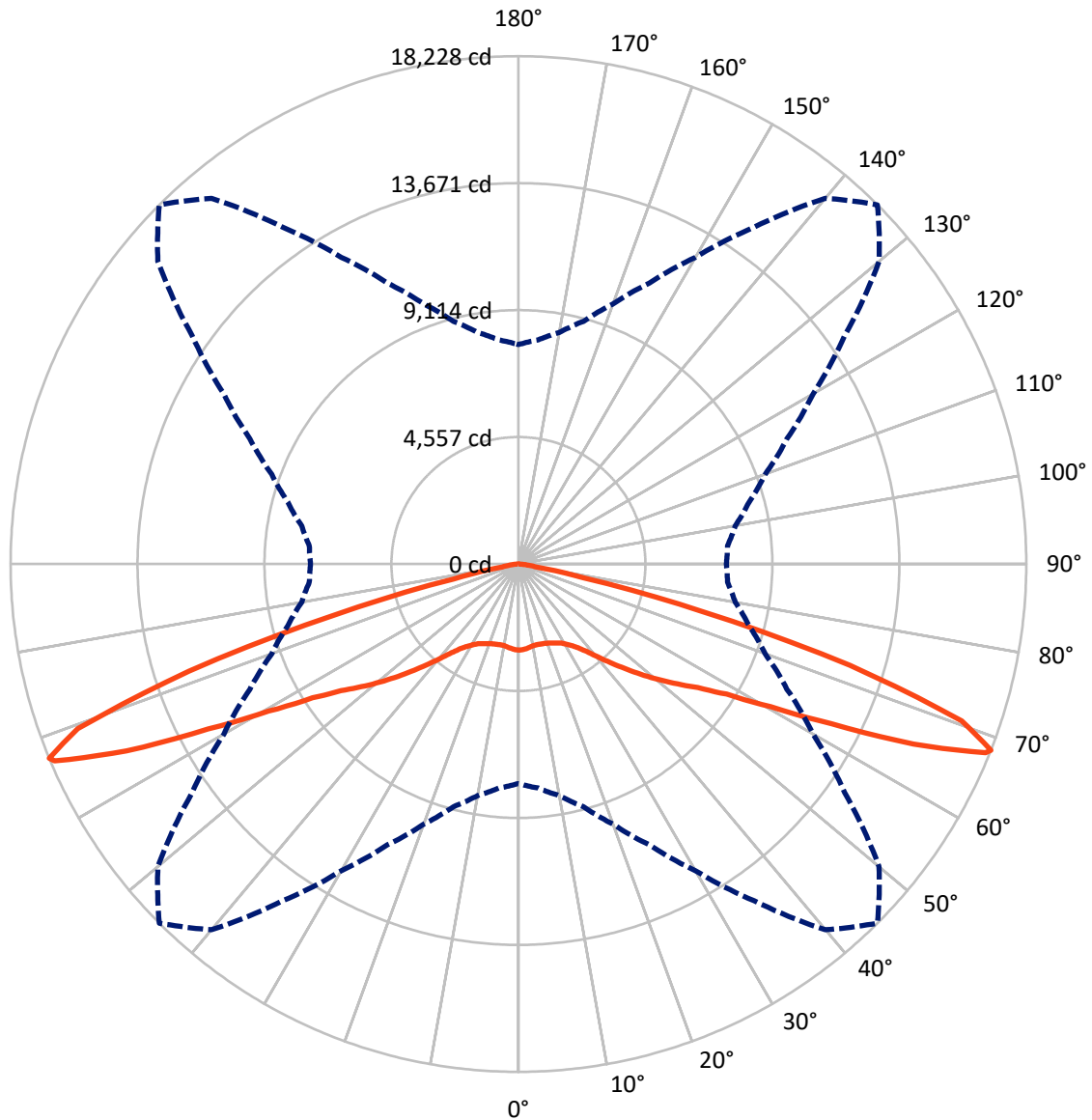
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 3.4 fc
 Type V - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 68-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	15497.5	0.0	15497.5
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	15497.5	0.0	15497.5
	% Fixture	50.0	0.0	50.0
Total	Lumens	30995.0	0.0	30995.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	289.3	0.9
10°-20°	839.1	2.7
20°-30°	1426.5	4.6
30°-40°	2334.4	7.5
40°-50°	4171.9	13.5
50°-60°	7045.7	22.7
60°-70°	10925.3	35.2
70°-80°	3756.4	12.1
80°-90°	206.4	0.7
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°	30995.0	100.0
0°-180°	30995.0	100.0



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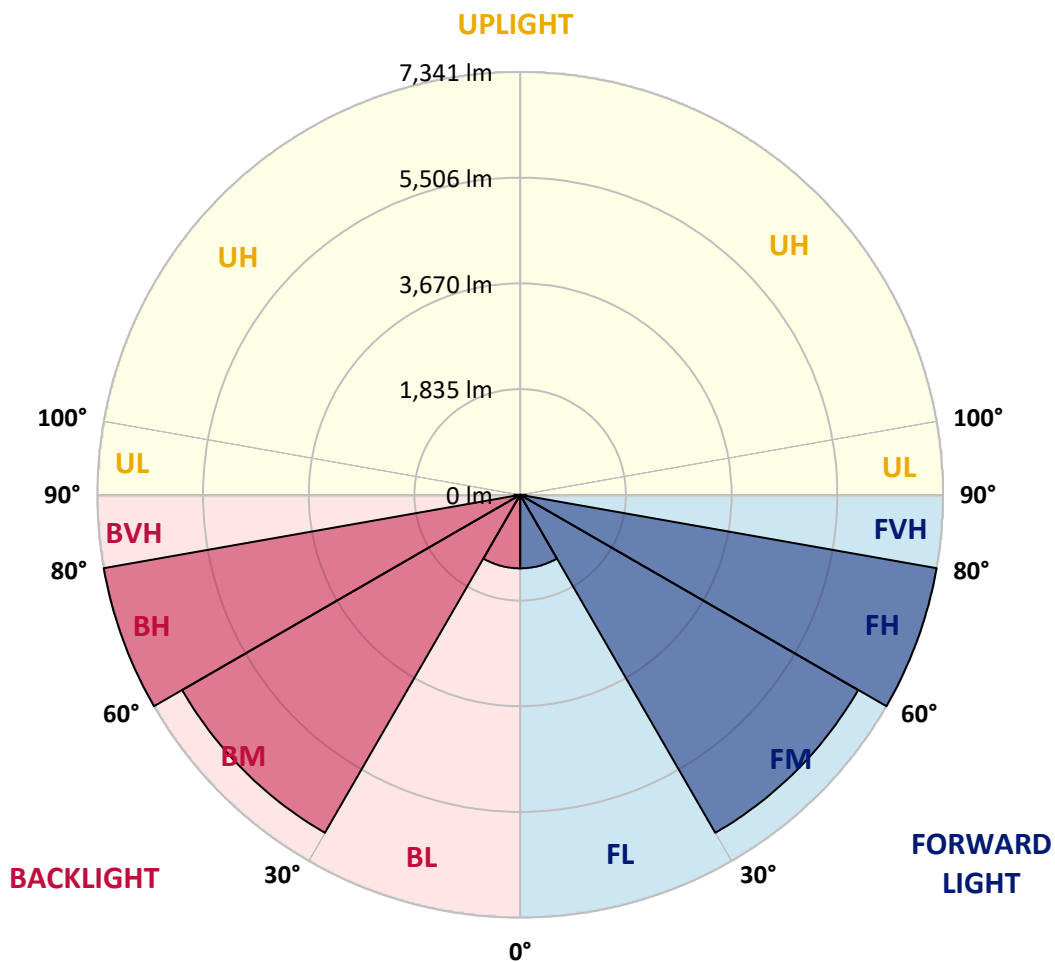
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1277.4	4.1			
FM	(30°-60°)	6776.0	21.9			
FH	(60°-80°)	7340.8	23.7			G3/7500
FVH	(80°-90°)	103.2	0.3			G2/225
BL	(0°-30°)	1277.4	4.1	B3/2500		
BM	(30°-60°)	6776.0	21.9	B4/8500		
BH	(60°-80°)	7340.8	23.7	B5		G3/7500
BVH	(80°-90°)	103.2	0.3			G2/225
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°	3091.8	3091.8	3091.8	3091.8	3091.8	3091.8	3091.8	3091.8	3091.8	3091.8	3091.8
2.5°	3105.1	3105.1	3108.9	3107.0	3101.3	3095.6	3089.9	3084.3	3080.5	3076.7	3072.9
5°	3072.9	3072.9	3078.6	3074.8	3071.0	3065.3	3061.5	3055.8	3052.0	3048.2	3050.1
7.5°	3031.1	3034.9	3038.7	3036.8	3029.2	3027.3	3021.6	3019.7	3015.9	3010.2	3012.1
10°	2995.0	2996.9	3000.7	2998.8	2996.9	2991.2	2989.4	2987.5	2985.6	2978.0	2976.1
12.5°	2959.0	2962.8	2966.6	2968.5	2966.6	2968.5	2970.4	2972.3	2970.4	2966.6	2966.6
15°	2930.5	2934.3	2940.0	2945.7	2947.6	2959.0	2966.6	2974.2	2979.9	2981.8	2976.1
17.5°	2915.3	2921.0	2928.6	2940.0	2949.5	2962.8	2976.1	2987.5	2996.9	2998.8	2993.1
20°	2913.4	2919.1	2930.5	2943.8	2960.9	2978.0	2998.8	3015.9	3025.4	3031.1	3025.4
22.5°	2926.7	2934.3	2949.5	2966.6	2987.5	3010.2	3036.8	3055.8	3074.8	3082.4	3076.7
25°	2964.7	2972.3	2989.4	3010.2	3033.0	3061.5	3088.0	3112.7	3131.7	3141.2	3133.6
27.5°	3044.4	3046.3	3065.3	3088.0	3114.6	3139.3	3173.5	3184.8	3200.0	3209.5	3200.0
30°	3156.4	3160.2	3177.3	3213.3	3238.0	3270.3	3289.2	3300.6	3317.7	3327.2	3315.8
32.5°	3327.2	3331.0	3346.2	3380.3	3403.1	3427.8	3450.6	3458.2	3475.2	3486.6	3473.3
35°	3568.2	3575.8	3589.1	3611.9	3630.9	3649.9	3666.9	3661.2	3672.6	3687.8	3674.5
37.5°	3898.5	3896.6	3900.4	3917.5	3936.5	3947.8	3974.4	3961.1	3972.5	3985.8	3978.2
40°	4283.8	4283.8	4281.9	4312.3	4319.9	4331.2	4359.7	4342.6	4357.8	4373.0	4359.7
42.5°	4722.2	4729.8	4739.3	4764.0	4784.9	4788.7	4801.9	4794.4	4813.3	4826.6	4813.3
45°	5227.1	5238.5	5249.9	5306.8	5316.3	5323.9	5333.4	5308.7	5329.6	5341.0	5337.2
47.5°	5750.9	5771.8	5796.5	5855.3	5893.3	5910.4	5918.0	5889.5	5891.4	5908.5	5910.4
50°	6343.1	6365.9	6390.6	6457.0	6493.1	6523.4	6532.9	6500.7	6504.4	6517.7	6521.5
52.5°	6889.7	6916.3	6969.5	7058.7	7109.9	7163.1	7166.9	7127.0	7144.1	7153.6	7146.0
55°	7404.1	7438.3	7508.5	7628.1	7721.1	7825.5	7872.9	7829.3	7829.3	7821.7	7817.9
57.5°	8003.9	8041.8	8114.0	8252.5	8381.6	8531.5	8660.6	8704.2	8783.9	8810.5	8768.8
60°	8907.3	8947.2	9021.2	9203.4	9366.6	9584.9	9797.5	9970.2	10251.1	10402.9	10266.3
62.5°	9732.9	9793.7	9968.3	10287.2	10640.2	11044.5	11513.3	11847.3	12357.9	12612.2	12268.7
65°	9545.0	9668.4	10010.1	10511.1	11240.0	12116.8	13071.5	13988.3	15043.6	15584.5	14886.0
67.5°	8337.9	8442.3	8810.5	9393.2	10302.3	11511.4	12995.6	14893.6	17070.6	18084.2	16848.6
68°	7876.7	8072.2	8438.5	9017.4	9934.1	11122.3	12707.1	14757.0	17133.3	18228.4	16894.1
70°	6039.4	6109.7	6460.8	6980.8	7969.7	9135.1	10735.1	13071.5	15757.2	16884.6	15512.4
72.5°	2869.8	2911.5	3139.3	3651.8	4280.0	5229.0	6641.1	8844.7	11264.6	12437.6	11069.1
75°	1051.5	1061.0	1114.1	1235.6	1471.0	1827.8	2505.4	3875.7	5737.7	6842.3	5760.4
77.5°	567.5	569.4	590.3	620.6	662.4	709.9	812.3	1089.5	1757.5	2391.5	1856.2
80°	356.8	354.9	375.8	400.5	428.9	451.7	461.2	493.5	556.1	651.0	597.9
82.5°	182.2	199.3	246.7	273.3	315.1	322.7	313.2	311.3	330.3	356.8	368.2
85°	100.6	89.2	131.0	174.6	189.8	195.5	197.4	186.0	182.2	178.4	187.9
87.5°	51.2	47.5	56.9	87.3	93.0	75.9	77.8	66.4	45.6	45.6	47.5
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°	3091.8	3091.8	3091.8	3091.8	3091.8	3091.8	3091.8	3091.8
2.5°	3069.1	3071.0	3067.2	3067.2	3067.2	3069.1	3067.2	3065.3
5°	3044.4	3048.2	3048.2	3050.1	3052.0	3052.0	3052.0	3052.0
7.5°	3008.3	3010.2	3014.0	3014.0	3014.0	3014.0	3014.0	3014.0
10°	2974.2	2970.4	2968.5	2964.7	2964.7	2959.0	2960.9	2962.8
12.5°	2957.1	2949.5	2945.7	2940.0	2936.2	2930.5	2930.5	2932.4
15°	2964.7	2953.3	2941.9	2938.1	2934.3	2930.5	2926.7	2928.6
17.5°	2979.9	2966.6	2953.3	2945.7	2938.1	2932.4	2930.5	2932.4
20°	3012.1	2993.1	2972.3	2959.0	2943.8	2940.0	2934.3	2940.0
22.5°	3055.8	3033.0	3006.4	2981.8	2964.7	2957.1	2949.5	2955.2
25°	3108.9	3084.3	3057.7	3029.2	3010.2	3004.5	2995.0	2995.0
27.5°	3182.9	3162.1	3139.3	3112.7	3093.7	3088.0	3072.9	3072.9
30°	3300.6	3279.7	3258.9	3236.1	3217.1	3211.4	3192.4	3192.4
32.5°	3456.3	3433.5	3420.2	3401.2	3386.0	3376.5	3353.8	3351.9
35°	3665.0	3644.2	3642.3	3629.0	3613.8	3615.7	3592.9	3589.1
37.5°	3964.9	3947.8	3953.5	3942.1	3928.9	3940.2	3927.0	3927.0
40°	4348.3	4342.6	4348.3	4340.7	4342.6	4344.5	4333.1	4336.9
42.5°	4811.4	4796.2	4830.4	4826.6	4820.9	4836.1	4809.5	4790.6
45°	5344.8	5339.1	5373.2	5378.9	5367.5	5377.0	5329.6	5327.7
47.5°	5923.7	5923.7	5954.0	5950.2	5938.8	5940.7	5883.8	5847.7
50°	6527.2	6523.4	6553.8	6546.2	6531.0	6529.1	6470.3	6434.2
52.5°	7155.5	7155.5	7199.1	7178.2	7142.2	7125.1	7053.0	7005.5
55°	7850.1	7840.6	7853.9	7785.6	7715.4	7664.1	7574.9	7538.9
57.5°	8728.9	8618.8	8523.9	8436.6	8337.9	8277.2	8172.8	8134.8
60°	9975.9	9681.7	9554.5	9379.9	9216.7	9135.1	8996.5	8922.5
62.5°	11703.1	11215.3	10869.9	10484.6	10112.5	9850.6	9639.9	9546.9
65°	13699.8	12636.9	11758.1	10932.5	10232.1	9676.0	9366.6	9269.8
67.5°	14459.0	12507.8	10991.3	9807.0	8956.7	8294.3	7924.2	7846.3
68°	14297.6	12211.7	10636.4	9423.6	8569.5	7901.4	7533.2	7462.9
70°	12612.2	10302.3	8639.7	7432.6	6635.4	5999.6	5739.6	5627.6
72.5°	8597.9	6616.4	5075.3	4059.8	3463.9	3061.5	2822.3	2740.7
75°	3957.3	2674.3	1786.0	1334.3	1133.1	1036.3	962.3	943.3
77.5°	1154.0	838.9	721.2	668.1	628.2	594.1	569.4	567.5
80°	548.5	514.4	499.2	465.0	428.9	396.7	373.9	377.7
82.5°	368.2	358.7	358.7	324.6	267.6	229.7	189.8	170.8
85°	195.5	203.1	214.5	203.1	176.5	131.0	85.4	93.0
87.5°	66.4	75.9	79.7	77.8	70.2	53.1	39.9	39.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)