

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: P195023

Luminaire Tested: **NAV-AF-05-D-UNV-5WQ-7060-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195023
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24131)
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-5WQ-7060-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 70 CRI, 5700K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 34318 lumens
Efficiency: N/A
Efficacy: 107.2 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type V - Short - Semi-Cutoff
BUG Rating: B5 - U0 - G4

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

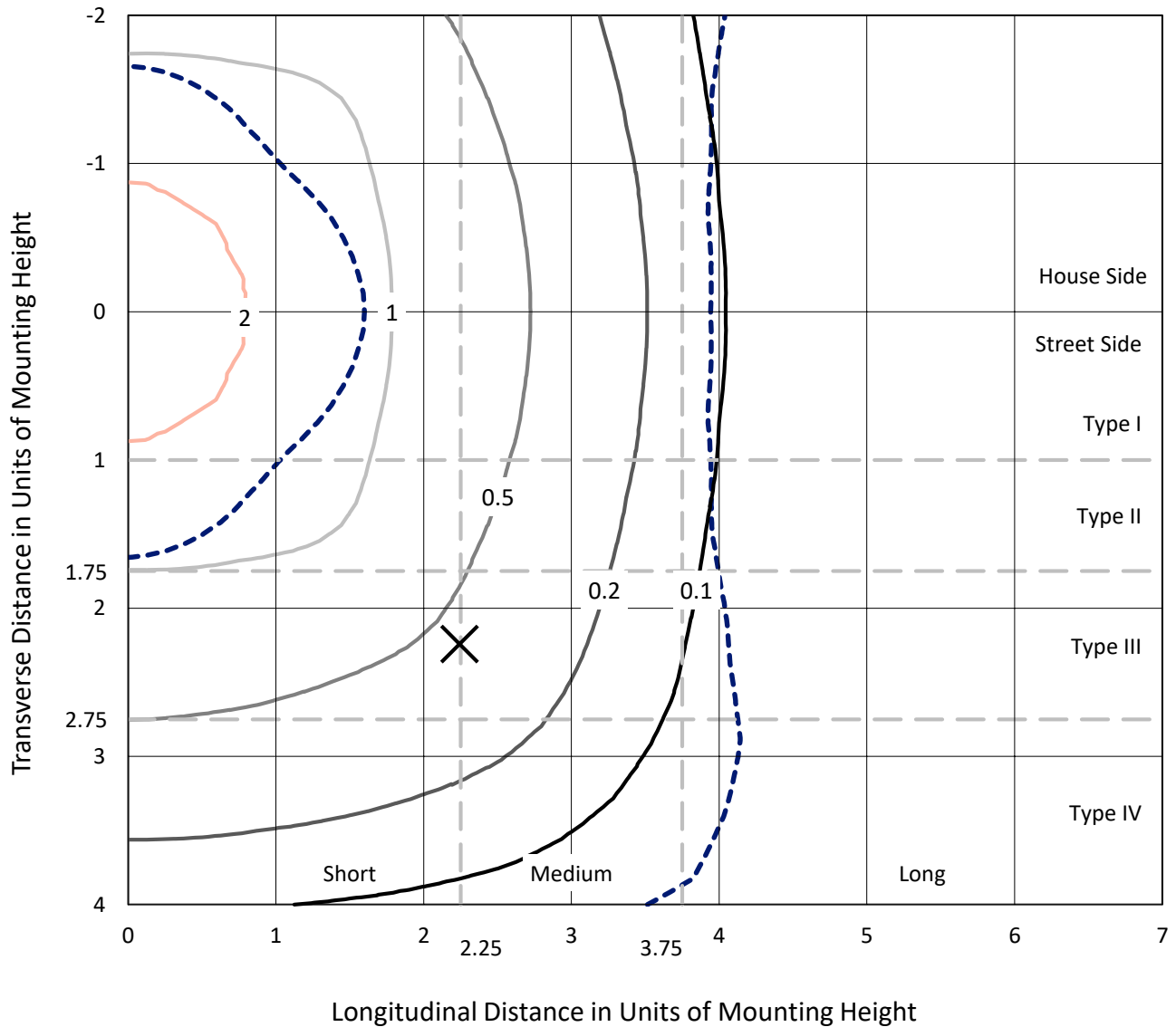


REPORT NUMBER: P195023

CATALOG NUMBER: NAV-AF-05-D-UNV-5WQ-7060-1200

Iso-Footcandle Lines of Horizontal Illumination

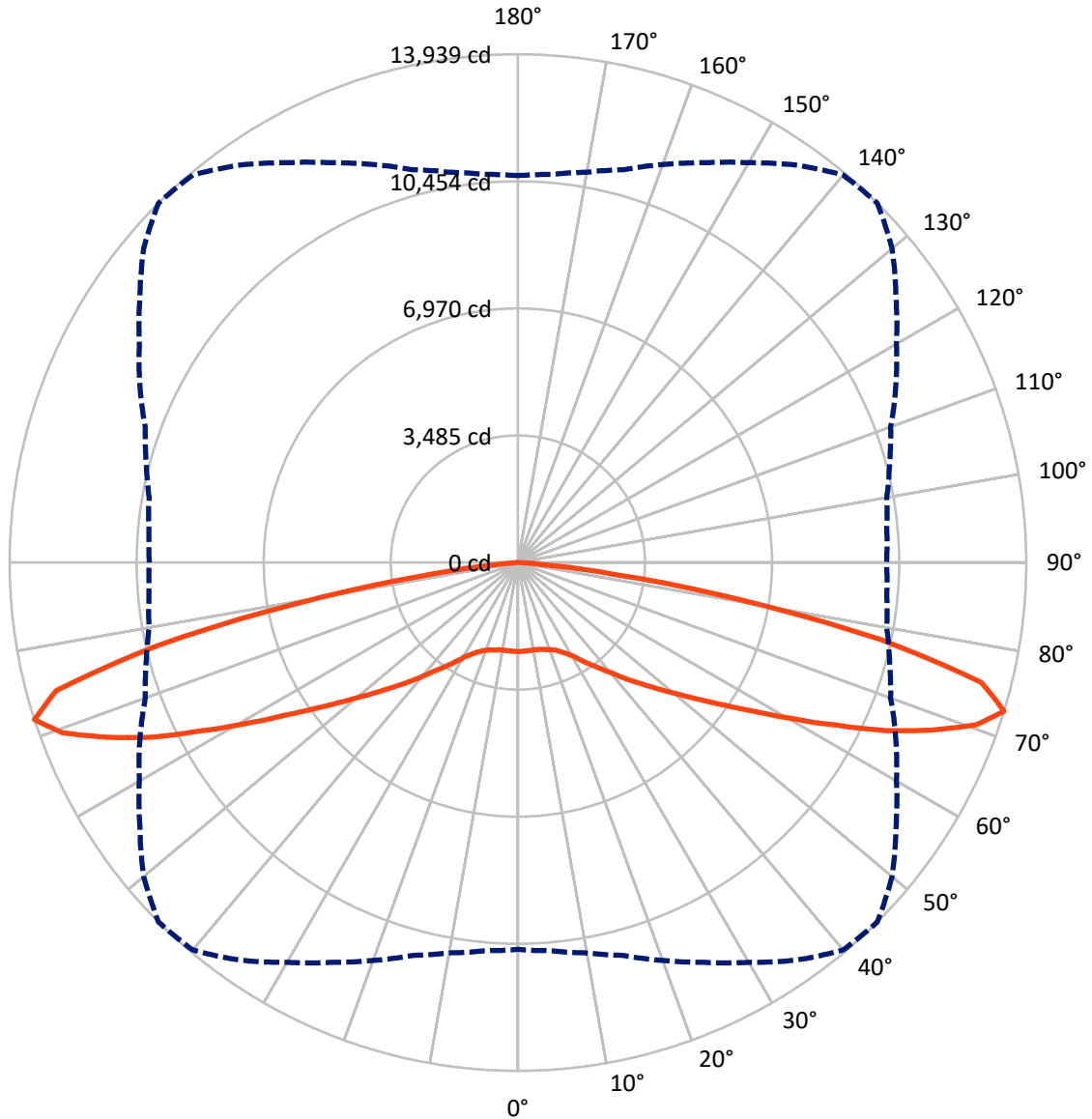
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 2.7 fc
 Type V - Short - Semi-Cutoff

REPORT NUMBER: P195023
CATALOG NUMBER: NAV-AF-05-D-UNV-5WQ-7060-1200

Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical

REPORT NUMBER: P195023

CATALOG NUMBER: NAV-AF-05-D-UNV-5WQ-7060-1200

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	17159.0	0.0	17159.0
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	17159.0	0.0	17159.0
	% Fixture	50.0	0.0	50.0
Total	Lumens	34318.0	0.0	34318.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	232.9	0.7
10°-20°	704.8	2.1
20°-30°	1272.3	3.7
30°-40°	2170.2	6.3
40°-50°	3694.8	10.8
50°-60°	5946.2	17.3
60°-70°	9888.7	28.8
70°-80°	9566.2	27.9
80°-90°	841.9	2.5
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°	34318.0	100.0
0°-180°	34318.0	100.0



REPORT NUMBER: P195023

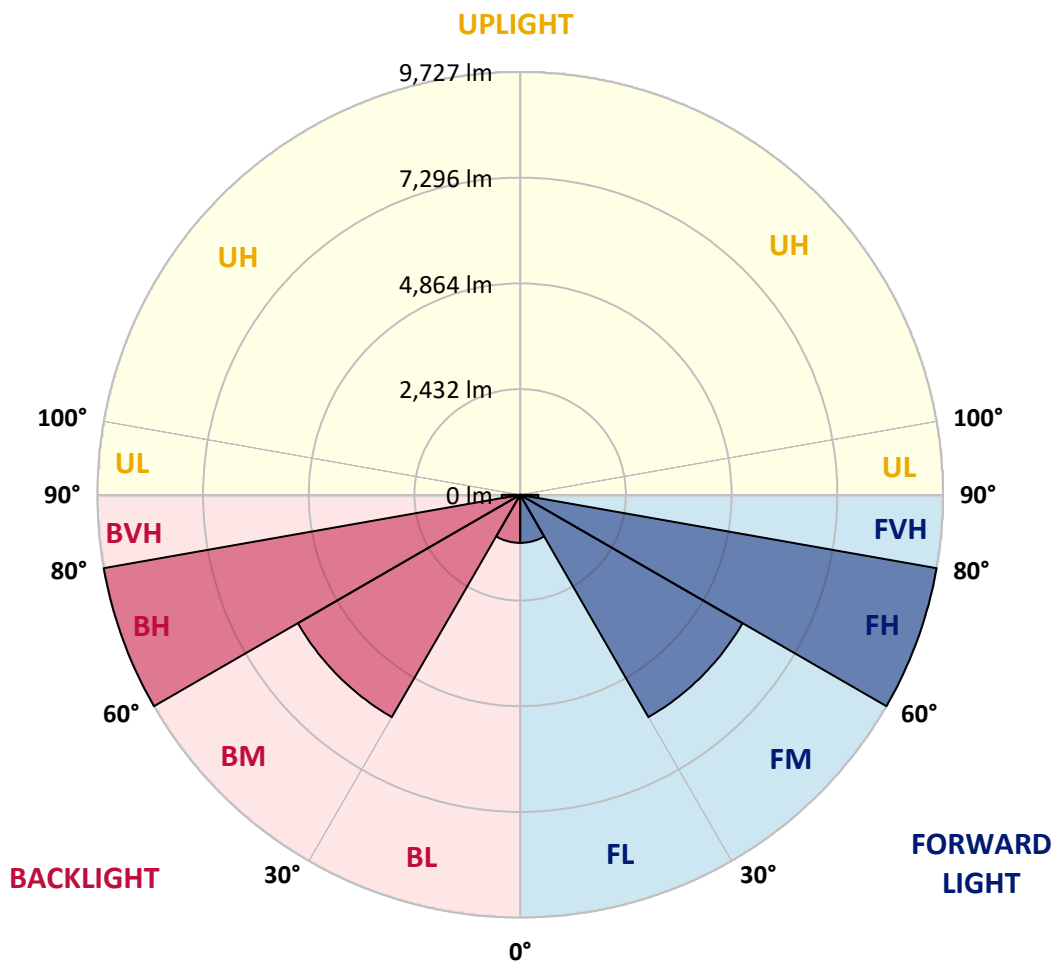
CATALOG NUMBER: NAV-AF-05-D-UNV-5WQ-7060-1200

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1105.0	3.2			
FM	(30°-60°)	5905.6	17.2			
FH	(60°-80°)	9727.4	28.3			G4/12000
FVH	(80°-90°)	421.0	1.2			G3/500
BL	(0°-30°)	1105.0	3.2	B3/2500		
BM	(30°-60°)	5905.6	17.2	B4/8500		
BH	(60°-80°)	9727.4	28.3	B5		G4/12000
BVH	(80°-90°)	421.0	1.2			G3/500
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B5-U0-G4

Type V Short





REPORT NUMBER: P195023

CATALOG NUMBER: NAV-AF-05-D-UNV-5WQ-7060-1200

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2439.8	2439.8	2439.8	2439.8	2439.8	2439.8	2439.8	2439.8	2439.8	2439.8	2439.8
2.5°	2458.8	2458.8	2460.9	2458.8	2454.5	2452.4	2446.1	2441.9	2437.6	2435.5	2431.3
5°	2460.9	2460.9	2463.0	2460.9	2456.7	2452.4	2448.2	2441.9	2437.6	2433.4	2431.3
7.5°	2469.3	2471.4	2473.5	2471.4	2463.0	2458.8	2452.4	2446.1	2437.6	2433.4	2429.2
10°	2486.2	2486.2	2486.2	2484.1	2477.8	2469.3	2460.9	2454.5	2444.0	2433.4	2427.1
12.5°	2498.9	2501.0	2501.0	2496.8	2488.3	2477.8	2469.3	2463.0	2454.5	2446.1	2439.8
15°	2517.9	2517.9	2515.8	2507.3	2494.7	2486.2	2482.0	2479.9	2477.8	2473.5	2467.2
17.5°	2555.9	2553.8	2547.5	2534.8	2520.0	2513.7	2509.5	2509.5	2509.5	2507.3	2503.1
20°	2610.9	2610.9	2602.4	2581.3	2568.6	2562.3	2555.9	2555.9	2555.9	2549.6	2543.3
22.5°	2699.6	2701.7	2689.0	2663.7	2646.8	2634.1	2625.6	2619.3	2613.0	2608.7	2598.2
25°	2820.0	2817.9	2803.1	2771.4	2758.7	2746.0	2729.1	2718.6	2710.1	2703.8	2691.1
27.5°	2946.7	2944.6	2927.7	2900.2	2891.8	2872.8	2860.1	2845.3	2834.8	2824.2	2811.5
30°	3109.4	3098.8	3086.1	3065.0	3060.8	3046.0	3029.1	3008.0	2991.1	2974.2	2959.4
32.5°	3255.1	3255.1	3236.1	3225.5	3234.0	3227.7	3229.8	3217.1	3206.5	3200.2	3185.4
35°	3457.9	3457.9	3449.5	3436.8	3438.9	3424.1	3422.0	3424.1	3432.6	3432.6	3415.7
37.5°	3728.3	3732.5	3705.0	3700.8	3690.3	3669.1	3658.6	3662.8	3681.8	3692.4	3669.1
40°	4064.1	4072.6	4064.1	4036.7	4024.0	3988.1	3967.0	3967.0	3981.8	3992.3	3983.9
42.5°	4395.8	4410.6	4395.8	4374.7	4364.1	4336.6	4326.1	4334.5	4353.5	4366.2	4353.5
45°	4765.4	4776.0	4757.0	4731.6	4719.0	4704.2	4697.8	4704.2	4725.3	4738.0	4733.8
47.5°	5128.8	5143.5	5120.3	5109.7	5109.7	5095.0	5111.9	5128.8	5147.8	5177.3	5164.7
50°	5483.6	5502.6	5487.9	5490.0	5506.9	5534.3	5566.0	5599.8	5633.6	5665.3	5669.5
52.5°	5800.5	5830.1	5832.2	5870.2	5923.0	5965.2	6054.0	6127.9	6208.2	6235.6	6223.0
55°	6134.2	6174.4	6227.2	6286.3	6370.8	6457.4	6607.4	6740.5	6846.1	6911.6	6901.0
57.5°	6611.6	6651.8	6706.7	6803.8	6930.6	7048.9	7253.8	7460.8	7621.3	7720.6	7672.0
60°	7230.5	7272.8	7344.6	7448.1	7612.9	7773.4	8054.4	8352.2	8601.4	8715.5	8626.8
62.5°	8050.1	8090.3	8136.7	8274.0	8457.8	8664.8	9017.6	9399.9	9716.8	9826.6	9702.0
65°	9218.2	9266.8	9281.6	9393.6	9573.1	9765.3	10145.6	10576.5	10937.7	11117.2	10868.0
67.5°	10534.2	10553.2	10612.4	10743.4	10927.1	11100.3	11400.3	11808.0	12154.4	12253.7	11987.5
70°	11305.2	11343.3	11446.8	11628.4	11848.1	12120.6	12448.0	12887.4	13280.3	13326.8	12988.8
72.5°	10608.2	10686.3	10870.1	11153.2	11613.6	12097.4	12661.4	13309.9	13873.8	13939.3	13396.5
75°	8508.5	8597.2	8816.9	9127.4	9672.4	10390.6	11206.0	12179.7	13024.7	13132.4	12414.2
77.5°	4535.2	4645.0	4964.0	5382.2	6159.6	7110.1	8092.4	9203.5	9921.7	10164.6	9647.1
80°	1142.8	1201.9	1356.1	1601.2	2127.1	2893.9	3741.0	4936.5	5827.9	6206.1	5827.9
82.5°	443.6	488.0	530.2	559.8	610.5	716.1	988.6	1611.7	2171.5	2674.2	2315.1
85°	171.1	181.7	261.9	297.8	297.8	327.4	376.0	443.6	549.2	599.9	502.7
87.5°	67.6	73.9	90.8	139.4	143.6	126.7	135.2	152.1	116.2	97.2	109.8
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: P195023

CATALOG NUMBER: NAV-AF-05-D-UNV-5WQ-7060-1200

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	2439.8	2439.8	2439.8	2439.8	2439.8	2439.8	2439.8	2439.8
2.5°	2429.2	2427.1	2422.9	2425.0	2422.9	2422.9	2422.9	2422.9
5°	2427.1	2427.1	2422.9	2422.9	2422.9	2425.0	2422.9	2422.9
7.5°	2425.0	2422.9	2418.6	2416.5	2416.5	2414.4	2414.4	2414.4
10°	2420.7	2416.5	2412.3	2410.2	2410.2	2406.0	2406.0	2406.0
12.5°	2431.3	2425.0	2420.7	2418.6	2418.6	2418.6	2420.7	2420.7
15°	2460.9	2448.2	2441.9	2439.8	2441.9	2446.1	2448.2	2450.3
17.5°	2492.6	2479.9	2469.3	2465.1	2467.2	2473.5	2479.9	2484.1
20°	2532.7	2522.1	2509.5	2505.2	2505.2	2513.7	2517.9	2524.2
22.5°	2589.7	2581.3	2570.7	2564.4	2560.2	2570.7	2577.1	2581.3
25°	2680.6	2672.1	2663.7	2657.3	2655.2	2665.8	2670.0	2672.1
27.5°	2801.0	2792.5	2788.3	2786.2	2779.8	2784.1	2790.4	2788.3
30°	2957.3	2963.6	2957.3	2957.3	2946.7	2950.9	2946.7	2942.5
32.5°	3166.4	3160.1	3141.0	3128.4	3113.6	3113.6	3107.3	3100.9
35°	3375.5	3354.4	3343.8	3350.2	3343.8	3348.1	3337.5	3326.9
37.5°	3622.7	3610.0	3607.9	3626.9	3622.7	3626.9	3626.9	3612.1
40°	3950.1	3941.6	3956.4	3988.1	4000.8	3998.7	4002.9	3983.9
42.5°	4326.1	4311.3	4317.6	4345.1	4359.9	4364.1	4362.0	4345.1
45°	4702.1	4706.3	4706.3	4735.9	4750.7	4759.1	4744.3	4738.0
47.5°	5126.6	5133.0	5118.2	5137.2	5141.4	5156.2	5143.5	5133.0
50°	5616.7	5593.5	5559.7	5566.0	5566.0	5561.8	5547.0	5534.3
52.5°	6163.8	6111.0	6047.6	6026.5	6003.3	5980.0	5950.5	5927.2
55°	6786.9	6696.1	6582.1	6529.2	6484.9	6432.1	6364.5	6341.2
57.5°	7509.4	7353.1	7201.0	7105.9	6991.8	6922.1	6835.5	6831.3
60°	8367.0	8155.7	7887.5	7745.9	7631.9	7549.5	7484.0	7458.7
62.5°	9357.7	8994.3	8705.0	8552.9	8419.8	8369.1	8286.7	8297.3
65°	10373.7	10004.0	9723.1	9600.6	9476.0	9442.2	9366.1	9393.6
67.5°	11474.2	11170.1	10861.6	10747.6	10633.5	10599.7	10521.6	10544.8
70°	12460.7	12074.1	11723.5	11499.6	11305.2	11148.9	11049.6	11009.5
72.5°	12657.1	11987.5	11436.2	10876.4	10553.2	10270.2	10154.0	10109.7
75°	11372.8	10333.6	9547.8	8890.8	8527.5	8115.6	8071.2	8010.0
77.5°	8846.5	7663.6	6713.0	5868.1	5380.1	4877.4	4704.2	4573.2
80°	5276.6	4055.7	3143.2	2203.2	1797.6	1447.0	1360.3	1269.5
82.5°	1888.4	1210.4	815.4	635.8	568.2	523.9	490.1	445.7
85°	456.3	384.4	363.3	329.5	325.3	276.7	196.4	175.3
87.5°	145.8	133.1	135.2	128.9	135.2	101.4	82.4	73.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)