

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: P196421

Luminaire Tested: **NAV-AF-05-D-UNV-5NQ-7030-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196421
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-7030-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 70 CRI, 3000K, 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: 19698.3 lumens
Efficiency: N/A
Efficacy: 121.6 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): 162
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

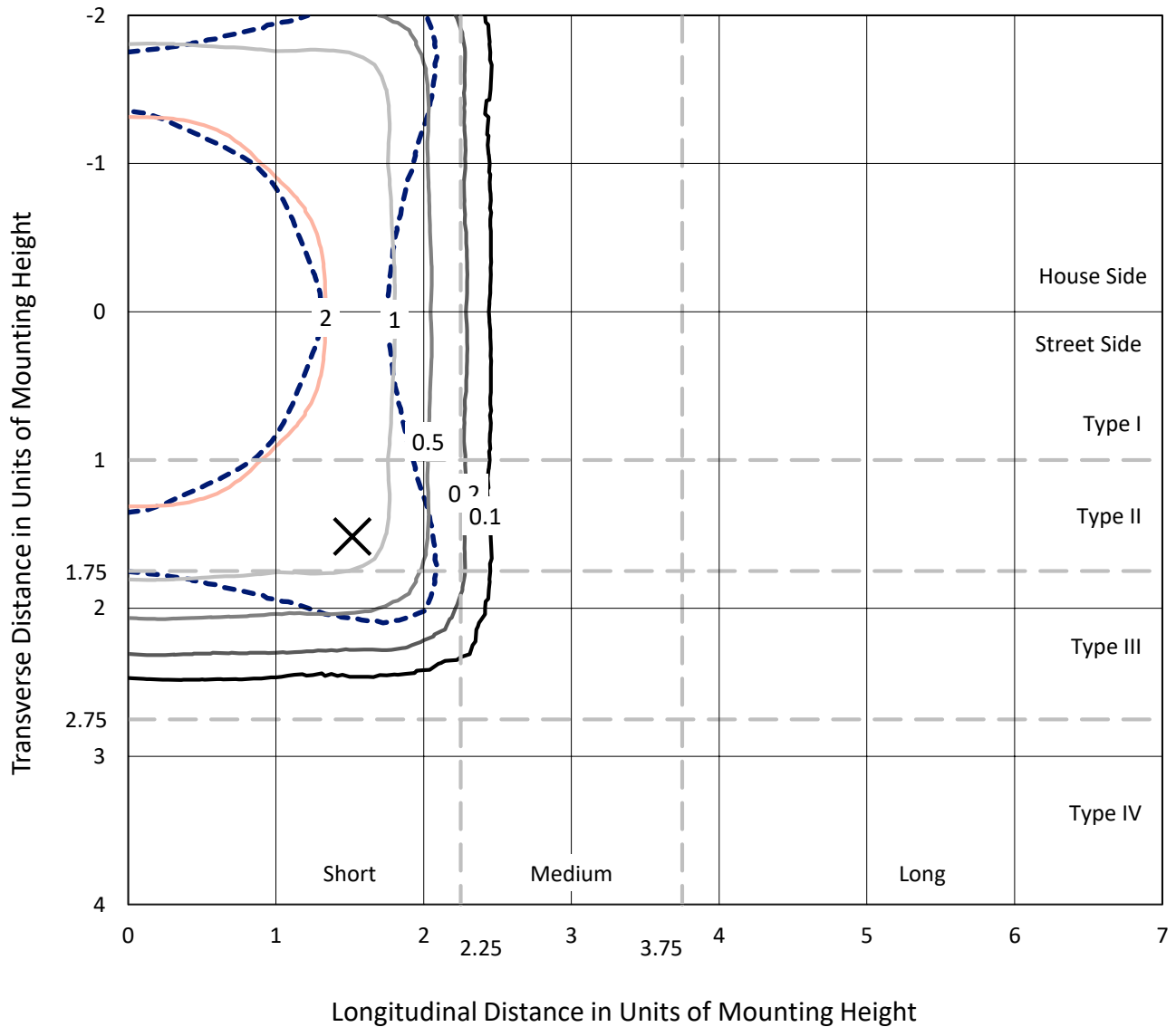


REPORT NUMBER: P196421

CATALOG NUMBER: NAV-AF-05-D-UNV-5NQ-7030-600

Iso-Footcandle Lines of Horizontal Illumination

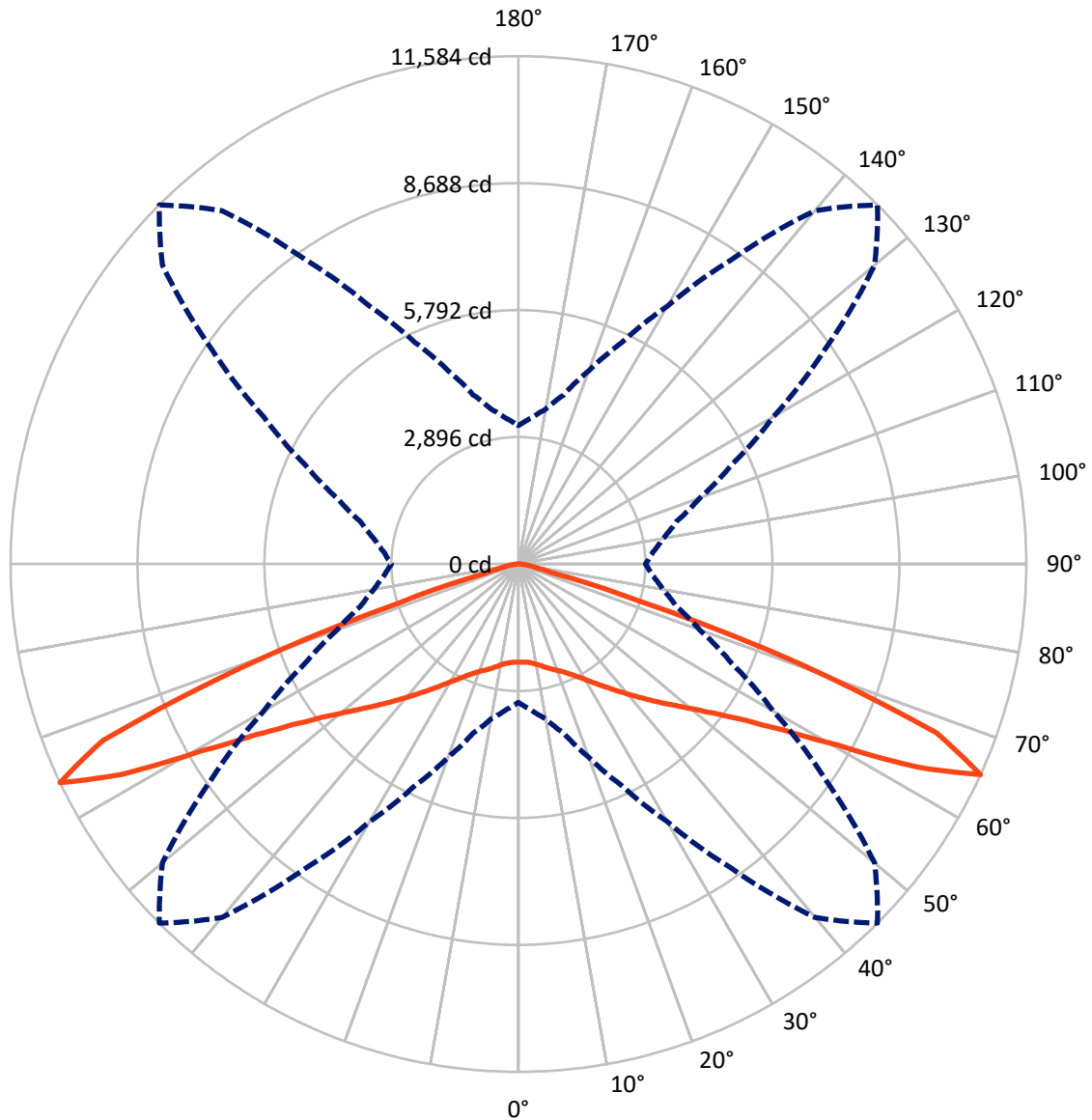
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.6 fc
 Type V - Short - Full Cutoff

REPORT NUMBER: P196421
CATALOG NUMBER: NAV-AF-05-D-UNV-5NQ-7030-600

Luminous Intensity Polar Plot



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

REPORT NUMBER: P196421

CATALOG NUMBER: NAV-AF-05-D-UNV-5NQ-7030-600

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	9849.2	0.0	9849.2
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	9849.2	0.0	9849.2
	% Fixture	50.0	0.0	50.0
Total	Lumens	19698.3	0.0	19698.3
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	218.2	1.1
10°-20°	699.3	3.6
20°-30°	1304.6	6.6
30°-40°	2199.7	11.2
40°-50°	3573.0	18.1
50°-60°	5598.3	28.4
60°-70°	5284.5	26.8
70°-80°	712.2	3.6
80°-90°	108.5	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°	19698.3	100.0
0°-180°	19698.3	100.0

Coefficient of Utilization



REPORT NUMBER: P196421

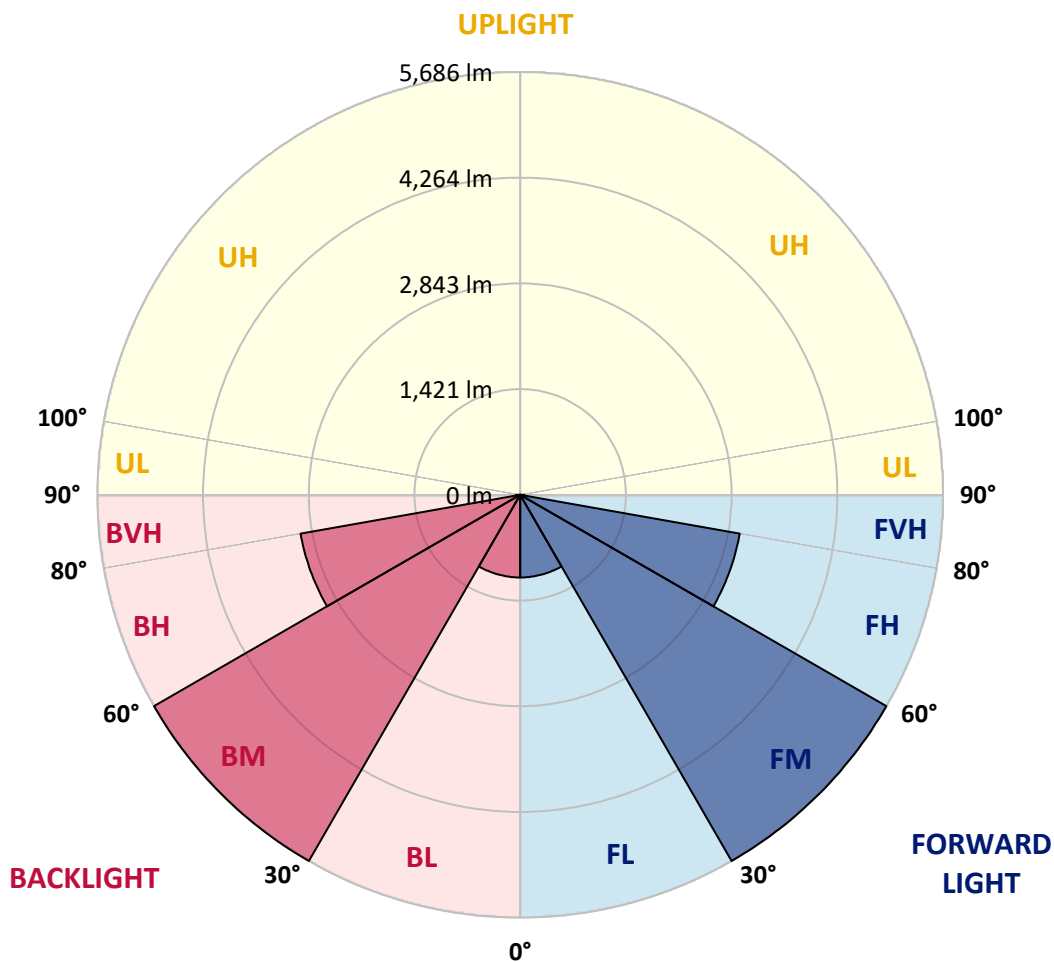
CATALOG NUMBER: NAV-AF-05-D-UNV-5NQ-7030-600

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1111.1	5.6			
FM	(30°-60°)	5685.5	28.9			
FH	(60°-80°)	2998.4	15.2			G2/5000
FVH	(80°-90°)	54.2	0.3			G1/100
BL	(0°-30°)	1111.1	5.6	B3/2500		
BM	(30°-60°)	5685.5	28.9	B4/8500		
BH	(60°-80°)	2998.4	15.2	B4/5000		G2/5000
BVH	(80°-90°)	54.2	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: P196421

CATALOG NUMBER: NAV-AF-05-D-UNV-5NQ-7030-600

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2240.7	2240.7	2240.7	2240.7	2240.7	2240.7	2240.7	2240.7	2240.7	2240.7	2240.7
2.5°	2259.1	2259.1	2262.8	2261.5	2256.6	2252.9	2249.2	2244.3	2241.9	2239.5	2238.1
5°	2271.4	2271.4	2275.0	2273.8	2270.1	2265.2	2262.8	2259.1	2255.4	2252.9	2254.1
7.5°	2302.0	2303.3	2304.5	2303.3	2299.6	2295.9	2290.9	2289.7	2284.8	2281.2	2283.6
10°	2348.6	2348.6	2349.8	2351.2	2348.6	2340.0	2340.0	2337.6	2332.6	2327.8	2329.0
12.5°	2400.2	2400.2	2401.4	2401.4	2401.4	2396.5	2397.7	2396.5	2390.4	2387.9	2390.4
15°	2450.4	2451.8	2451.8	2454.2	2454.2	2455.4	2460.3	2460.3	2457.9	2456.5	2456.5
17.5°	2509.3	2511.9	2513.1	2516.8	2518.0	2520.4	2525.3	2526.6	2527.8	2524.1	2525.3
20°	2588.0	2589.1	2592.8	2594.1	2599.0	2599.0	2601.5	2600.2	2597.7	2592.8	2592.8
22.5°	2676.3	2678.7	2686.1	2686.1	2692.2	2688.6	2689.8	2686.1	2679.9	2677.5	2675.1
25°	2791.6	2795.3	2801.4	2799.0	2801.4	2795.3	2795.3	2795.3	2791.6	2788.0	2786.7
27.5°	2937.7	2931.5	2937.7	2932.7	2931.5	2926.6	2927.8	2925.4	2921.7	2920.5	2915.6
30°	3089.9	3082.4	3086.1	3087.3	3084.9	3083.7	3078.8	3075.1	3069.0	3070.1	3066.5
32.5°	3264.0	3256.7	3260.4	3261.6	3259.1	3261.6	3260.4	3251.8	3244.5	3249.4	3249.4
35°	3471.3	3466.6	3476.3	3480.0	3472.7	3469.0	3464.1	3454.2	3443.2	3450.6	3451.8
37.5°	3720.5	3714.4	3721.8	3731.5	3718.1	3710.7	3691.1	3676.3	3669.0	3672.6	3677.5
40°	3979.4	3980.7	4001.5	4004.1	3989.3	3980.7	3961.0	3938.9	3918.1	3918.1	3924.3
42.5°	4251.9	4255.5	4280.1	4288.7	4283.7	4267.7	4240.8	4213.8	4186.9	4191.7	4199.1
45°	4559.8	4554.9	4580.7	4601.6	4597.8	4593.0	4567.2	4518.1	4493.7	4492.4	4504.6
47.5°	4883.8	4893.6	4920.6	4956.2	4955.0	4942.7	4909.6	4864.2	4818.8	4822.4	4837.2
50°	5261.7	5275.2	5320.7	5356.2	5361.2	5357.4	5318.2	5265.4	5201.7	5205.3	5225.0
52.5°	5600.4	5620.1	5672.8	5746.5	5791.9	5812.7	5786.9	5737.9	5672.8	5676.6	5697.4
55°	5907.2	5937.9	6016.5	6117.0	6207.9	6292.5	6330.6	6329.3	6281.5	6292.5	6319.5
57.5°	6099.8	6142.8	6261.8	6423.8	6604.1	6774.7	6922.0	7060.7	7091.4	7149.1	7149.1
60°	5840.9	5941.5	6099.8	6377.1	6731.8	7114.6	7529.4	7933.1	8193.3	8398.2	8287.8
62.5°	4877.7	5026.2	5248.3	5614.0	6166.1	6849.6	7682.8	8621.5	9600.7	10199.6	9760.2
65°	3156.1	3342.6	3584.4	3995.4	4691.1	5571.0	6784.6	8471.9	10521.0	11583.6	10602.1
67.5°	1250.4	1376.7	1524.0	1816.1	2419.8	3283.7	4645.7	6726.9	9290.4	10292.8	9192.1
70°	597.5	618.4	646.7	709.3	860.2	1160.9	1866.3	3314.4	5697.4	6753.9	5561.2
72.5°	431.9	435.6	449.2	470.0	514.2	575.5	699.5	1013.6	1964.6	2856.7	1967.0
75°	327.7	332.5	339.9	350.9	374.2	403.7	450.3	540.0	672.5	775.5	671.2
77.5°	249.1	254.0	260.1	271.2	283.4	304.3	321.6	357.1	413.5	435.6	433.2
80°	181.6	190.2	200.1	209.8	218.4	228.3	229.5	246.6	278.5	299.4	293.3
82.5°	115.4	122.7	148.5	159.5	160.7	163.3	161.9	163.3	180.4	195.1	190.2
85°	73.6	78.5	92.0	104.4	101.8	106.7	106.7	104.4	96.9	83.5	99.4
87.5°	36.8	38.0	44.1	55.1	52.8	46.7	45.5	45.5	33.1	28.2	30.7
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: P196421

CATALOG NUMBER: NAV-AF-05-D-UNV-5NQ-7030-600

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	2240.7	2240.7	2240.7	2240.7	2240.7	2240.7	2240.7	2240.7
2.5°	2234.6	2237.0	2233.3	2233.3	2232.0	2234.6	2230.8	2230.8
5°	2251.8	2255.4	2254.1	2254.1	2256.6	2259.1	2257.9	2256.6
7.5°	2282.4	2284.8	2287.4	2288.6	2290.9	2289.7	2292.2	2290.9
10°	2329.0	2326.5	2330.3	2326.5	2327.8	2325.4	2326.5	2326.5
12.5°	2387.9	2384.2	2381.8	2379.3	2379.3	2374.4	2374.4	2375.7
15°	2455.4	2449.3	2444.3	2442.0	2439.4	2439.4	2435.7	2438.2
17.5°	2521.7	2515.5	2507.0	2507.0	2503.2	2500.8	2498.3	2504.4
20°	2591.6	2585.5	2580.6	2579.4	2572.0	2569.6	2570.8	2578.1
22.5°	2672.6	2668.8	2668.8	2666.5	2661.5	2657.8	2657.8	2666.5
25°	2781.8	2774.4	2775.6	2777.0	2774.4	2774.4	2772.0	2778.1
27.5°	2915.6	2909.5	2913.1	2915.6	2913.1	2916.7	2913.1	2918.0
30°	3072.6	3069.0	3072.6	3076.3	3070.1	3070.1	3067.7	3071.4
32.5°	3260.4	3255.5	3257.9	3257.9	3249.4	3241.9	3232.1	3239.5
35°	3466.6	3460.3	3465.2	3469.0	3459.1	3451.8	3437.1	3443.2
37.5°	3693.5	3696.0	3702.1	3718.1	3715.6	3703.4	3692.3	3697.3
40°	3947.5	3959.8	3986.8	3997.9	3995.4	3983.1	3968.4	3970.8
42.5°	4234.7	4250.6	4278.8	4297.2	4288.7	4271.5	4253.1	4260.4
45°	4547.6	4572.2	4609.0	4627.3	4616.3	4597.8	4572.2	4585.6
47.5°	4878.9	4928.0	4977.1	5001.6	4997.9	4972.2	4939.1	4942.7
50°	5275.2	5340.3	5402.9	5427.5	5409.0	5369.8	5323.1	5321.9
52.5°	5768.6	5838.5	5890.0	5883.9	5838.5	5777.1	5724.4	5721.9
55°	6384.6	6407.8	6400.5	6347.8	6267.9	6172.3	6104.8	6093.7
57.5°	7129.3	7050.8	6935.6	6775.9	6596.8	6415.2	6292.5	6247.1
60°	8039.9	7685.3	7273.0	6838.5	6442.3	6145.3	5957.5	5843.4
62.5°	8792.1	7765.0	6843.5	6088.8	5471.6	5104.7	4848.3	4690.0
65°	8534.4	6708.5	5373.4	4400.3	3726.7	3347.4	3076.3	2895.9
67.5°	6593.1	4482.6	3119.3	2162.1	1639.4	1387.8	1212.3	1098.3
70°	3324.2	1719.2	1041.8	735.0	628.2	584.1	554.6	537.4
72.5°	975.5	651.6	541.2	478.5	440.6	413.5	396.4	387.8
75°	540.0	440.6	389.0	353.5	328.9	310.4	299.4	292.0
77.5°	371.8	320.2	294.5	271.2	251.6	238.0	229.5	222.2
80°	260.1	234.4	223.3	211.1	196.3	185.3	173.0	168.2
82.5°	173.0	161.9	159.5	149.6	141.2	128.8	106.7	99.4
85°	101.8	100.6	100.6	96.9	90.8	79.8	63.8	63.8
87.5°	35.6	36.8	38.0	40.5	39.3	33.1	27.0	25.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)