

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: P196426

Luminaire Tested: **NAV-AF-04-D-UNV-5NQ-7030-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196426
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-04-D-UNV-5NQ-7030-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(4) 70 CRI, 3000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V NARROW OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 19597.8 lumens
Efficiency: N/A
Efficacy: 114.6 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type V - Short - Full Cutoff
BUG Rating: B4 - U0 - G2

Input Watts (W): 171
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

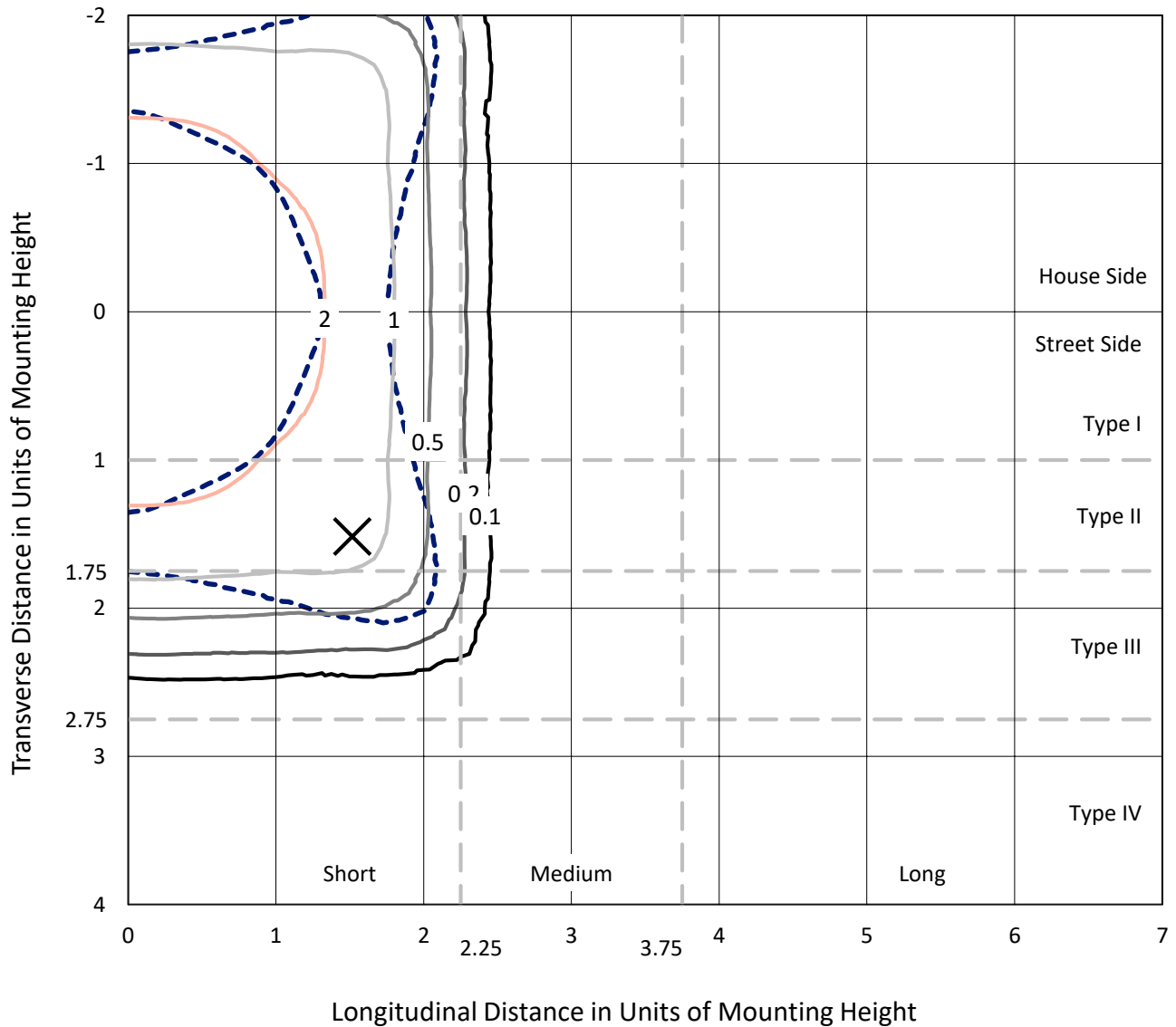


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Iso-Footcandle Lines of Horizontal Illumination

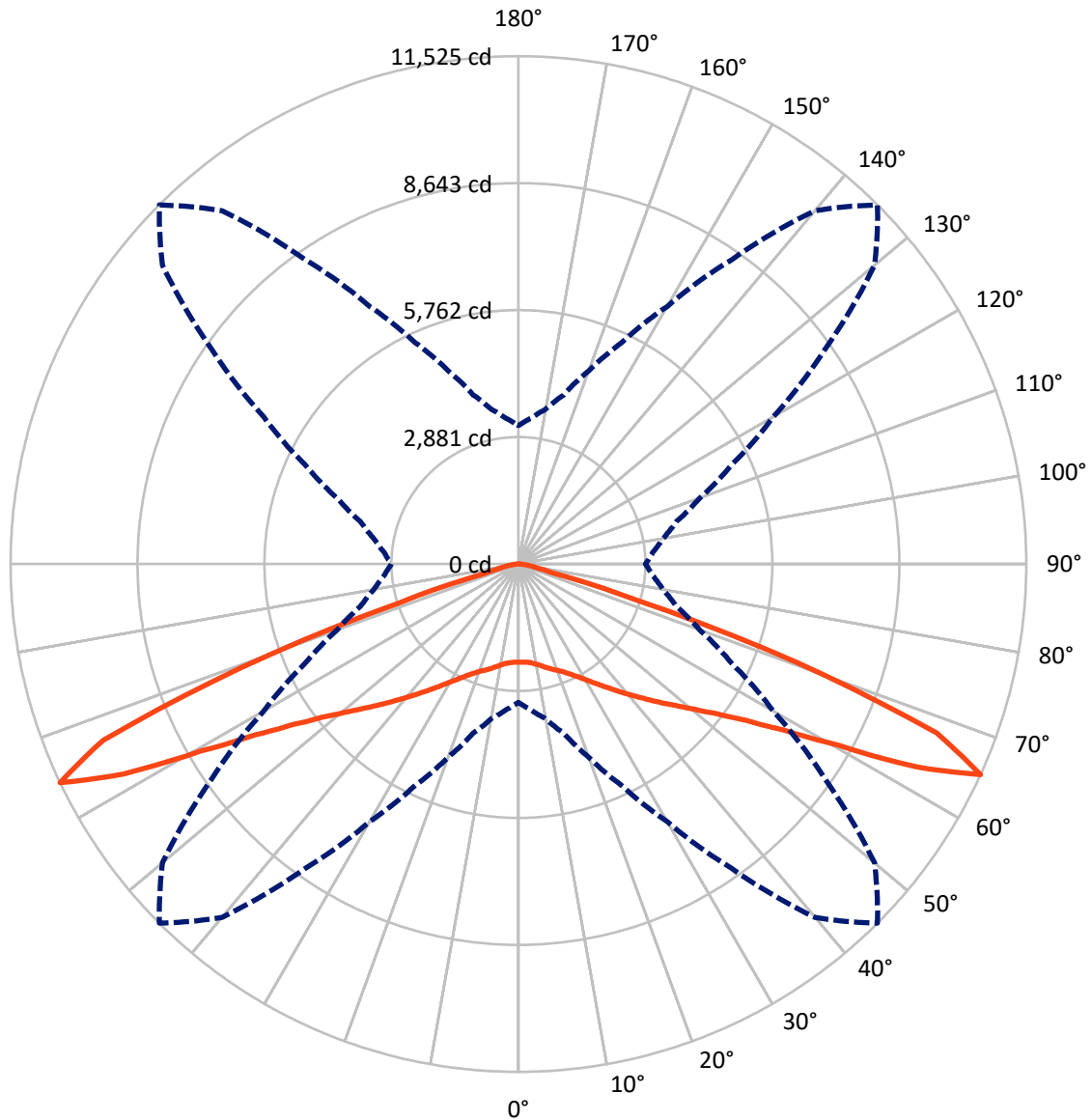
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.6 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
House Side	Lumens	9798.9	0.0	9798.9
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	9798.9	0.0	9798.9
	% Fixture	50.0	0.0	50.0
Total	Lumens	19597.8	0.0	19597.8
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	217.1	1.1
10°-20°	695.8	3.6
20°-30°	1297.9	6.6
30°-40°	2188.5	11.2
40°-50°	3554.8	18.1
50°-60°	5569.7	28.4
60°-70°	5257.6	26.8
70°-80°	708.6	3.6
80°-90°	107.9	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°	19597.8	100.0
0°-180°	19597.8	100.0

Coefficient of Utilization



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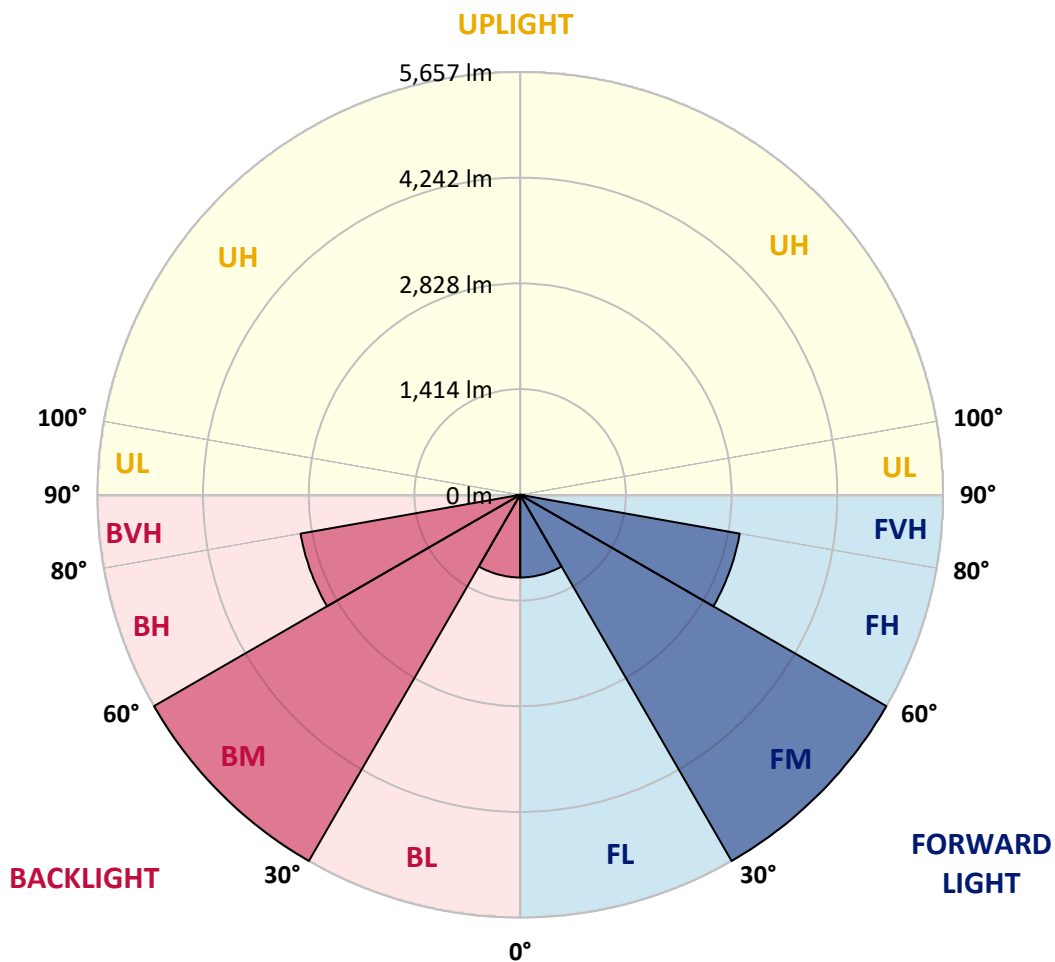
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1105.4	5.6			
FM	(30°-60°)	5656.5	28.9			
FH	(60°-80°)	2983.1	15.2			G2/5000
FVH	(80°-90°)	54.0	0.3			G1/100
BL	(0°-30°)	1105.4	5.6	B3/2500		
BM	(30°-60°)	5656.5	28.9	B4/8500		
BH	(60°-80°)	2983.1	15.2	B4/5000		G2/5000
BVH	(80°-90°)	54.0	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





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2229.2	2229.2	2229.2	2229.2	2229.2	2229.2	2229.2	2229.2	2229.2	2229.2	2229.2
2.5°	2247.6	2247.6	2251.2	2249.9	2245.1	2241.5	2237.7	2232.9	2230.4	2228.1	2226.8
5°	2259.7	2259.7	2263.5	2262.2	2258.5	2253.7	2251.2	2247.6	2243.8	2241.5	2242.6
7.5°	2290.3	2291.5	2292.7	2291.5	2287.8	2284.2	2279.2	2278.0	2273.1	2269.6	2271.9
10°	2336.6	2336.6	2337.9	2339.1	2336.6	2328.1	2328.1	2325.7	2320.7	2315.9	2317.2
12.5°	2388.0	2388.0	2389.2	2389.2	2389.2	2384.2	2385.4	2384.2	2378.1	2375.8	2378.1
15°	2438.0	2439.2	2439.2	2441.6	2441.6	2442.9	2447.7	2447.7	2445.3	2444.1	2444.1
17.5°	2496.6	2499.1	2500.3	2503.9	2505.1	2507.6	2512.4	2513.7	2514.9	2511.3	2512.4
20°	2574.7	2575.9	2579.6	2580.8	2585.7	2585.7	2588.2	2586.9	2584.5	2579.6	2579.6
22.5°	2662.6	2665.1	2672.4	2672.4	2678.5	2674.8	2676.1	2672.4	2666.3	2663.8	2661.4
25°	2777.4	2781.0	2787.1	2784.7	2787.1	2781.0	2781.0	2781.0	2777.4	2773.8	2772.5
27.5°	2922.6	2916.5	2922.6	2917.8	2916.5	2911.6	2912.9	2910.4	2906.9	2905.5	2900.8
30°	3074.0	3066.7	3070.4	3071.6	3069.2	3067.9	3063.1	3059.4	3053.2	3054.6	3050.8
32.5°	3247.4	3240.1	3243.7	3245.0	3242.5	3245.0	3243.7	3235.1	3227.8	3232.8	3232.8
35°	3453.6	3448.9	3458.6	3462.3	3454.9	3451.3	3446.4	3436.6	3425.6	3432.9	3434.2
37.5°	3701.6	3695.4	3702.8	3712.5	3699.1	3691.8	3672.2	3657.6	3650.3	3653.9	3658.8
40°	3959.1	3960.3	3981.1	3983.6	3969.0	3960.3	3940.9	3918.8	3898.2	3898.2	3904.2
42.5°	4230.2	4233.8	4258.3	4266.8	4261.8	4246.1	4219.1	4192.3	4165.5	4170.3	4177.6
45°	4536.6	4531.7	4557.3	4578.1	4574.4	4569.6	4543.9	4495.0	4470.7	4469.5	4481.7
47.5°	4858.9	4868.7	4895.5	4930.9	4929.7	4917.5	4884.6	4839.3	4794.2	4797.9	4812.6
50°	5234.9	5248.4	5293.5	5328.9	5333.8	5330.1	5291.1	5238.6	5175.1	5178.8	5198.2
52.5°	5571.9	5591.4	5643.9	5717.1	5762.4	5783.1	5757.4	5708.6	5643.9	5647.5	5668.3
55°	5877.0	5907.5	5985.8	6085.8	6176.2	6260.4	6298.2	6297.0	6249.4	6260.4	6287.3
57.5°	6068.7	6111.4	6229.9	6391.0	6570.6	6740.2	6886.7	7024.6	7055.2	7112.6	7112.6
60°	5811.2	5911.3	6068.7	6344.6	6697.5	7078.4	7491.1	7892.7	8151.5	8355.4	8245.5
62.5°	4852.8	5000.5	5221.5	5585.4	6134.7	6814.6	7643.6	8577.5	9551.8	10147.6	9710.4
65°	3140.0	3325.6	3566.0	3975.0	4667.2	5542.5	6749.9	8428.6	10467.4	11524.5	10548.0
67.5°	1244.0	1369.8	1516.3	1806.8	2407.4	3267.0	4622.1	6692.5	9242.9	10240.4	9145.2
70°	594.6	615.3	643.4	705.6	855.8	1154.9	1856.9	3297.5	5668.3	6719.5	5532.8
72.5°	429.7	433.4	446.9	467.6	511.6	572.5	695.9	1008.4	1954.5	2842.1	1957.0
75°	325.9	330.8	338.1	349.2	372.3	401.6	448.1	537.1	669.0	771.6	667.8
77.5°	247.8	252.7	258.8	269.8	282.0	302.7	319.9	355.3	411.5	433.4	430.9
80°	180.8	189.2	199.0	208.8	217.3	227.0	228.3	245.4	277.1	297.8	291.8
82.5°	114.7	122.1	147.7	158.8	159.9	162.4	161.1	162.4	179.5	194.2	189.2
85°	73.2	78.1	91.6	103.8	101.3	106.2	106.2	103.8	96.4	83.0	98.9
87.5°	36.6	37.8	43.9	54.9	52.5	46.4	45.2	45.2	33.0	28.1	30.5
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°	2229.2	2229.2	2229.2	2229.2	2229.2	2229.2	2229.2	2229.2
2.5°	2223.1	2225.6	2221.9	2221.9	2220.7	2223.1	2219.5	2219.5
5°	2240.3	2243.8	2242.6	2242.6	2245.1	2247.6	2246.4	2245.1
7.5°	2270.7	2273.1	2275.7	2276.9	2279.2	2278.0	2280.5	2279.2
10°	2317.2	2314.6	2318.4	2314.6	2315.9	2313.4	2314.6	2314.6
12.5°	2375.8	2372.0	2369.7	2367.2	2367.2	2362.3	2362.3	2363.5
15°	2442.9	2436.8	2431.9	2429.5	2426.9	2426.9	2423.4	2425.8
17.5°	2508.8	2502.7	2494.2	2494.2	2490.4	2488.1	2485.6	2491.6
20°	2578.4	2572.3	2567.4	2566.2	2558.9	2556.4	2557.6	2565.0
22.5°	2659.0	2655.3	2655.3	2652.9	2648.0	2644.3	2644.3	2652.9
25°	2767.6	2760.3	2761.5	2762.7	2760.3	2760.3	2757.8	2763.9
27.5°	2900.8	2894.6	2898.2	2900.8	2898.2	2901.9	2898.2	2903.1
30°	3057.0	3053.2	3057.0	3060.6	3054.6	3054.6	3052.0	3055.8
32.5°	3243.7	3238.9	3241.2	3241.2	3232.8	3225.5	3215.6	3222.9
35°	3448.9	3442.8	3447.5	3451.3	3441.5	3434.2	3419.5	3425.6
37.5°	3674.7	3677.1	3683.2	3699.1	3696.7	3684.4	3673.6	3678.3
40°	3927.5	3939.6	3966.4	3977.5	3975.0	3962.9	3948.2	3950.6
42.5°	4213.0	4229.0	4257.1	4275.4	4266.8	4249.7	4231.4	4238.7
45°	4524.4	4548.8	4585.4	4603.7	4592.7	4574.4	4548.8	4562.2
47.5°	4854.1	4902.8	4951.6	4976.1	4972.4	4946.8	4913.8	4917.5
50°	5248.4	5313.1	5375.3	5399.7	5381.4	5342.3	5295.9	5294.7
52.5°	5739.1	5808.7	5860.0	5853.9	5808.7	5747.7	5695.1	5692.7
55°	6352.0	6375.2	6367.8	6315.3	6236.0	6140.8	6073.6	6062.6
57.5°	7093.0	7014.9	6900.2	6741.4	6563.2	6382.5	6260.4	6215.2
60°	7998.9	7646.1	7235.8	6803.7	6409.3	6113.9	5927.1	5813.5
62.5°	8747.2	7725.4	6808.6	6057.8	5443.7	5078.6	4823.5	4666.0
65°	8490.9	6674.2	5346.0	4377.9	3707.6	3330.4	3060.6	2881.1
67.5°	6559.5	4459.6	3103.3	2151.1	1631.0	1380.7	1206.2	1092.6
70°	3307.2	1710.4	1036.5	731.3	625.1	581.1	551.8	534.8
72.5°	970.6	648.2	538.4	476.2	438.2	411.5	394.3	385.8
75°	537.1	438.2	387.0	351.6	327.2	308.8	297.8	290.5
77.5°	370.0	318.6	293.1	269.8	250.3	236.9	228.3	220.9
80°	258.8	233.2	222.3	210.0	195.3	184.3	172.1	167.2
82.5°	172.1	161.1	158.8	148.9	140.4	128.2	106.2	98.9
85°	101.3	100.1	100.1	96.4	90.3	79.3	63.5	63.5
87.5°	35.4	36.6	37.8	40.3	39.2	33.0	26.9	25.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)