

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: P270627

Luminaire Tested: **NAV-AF-05-D-UNV-T3-7027-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270627
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (p24135)
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-T3-7027-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 70 CRI, 2700K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 21112.7 lumens
Efficiency: N/A
Efficacy: 100.5 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type III - Short - Semi-Cutoff
BUG Rating: B3 - U0 - G3

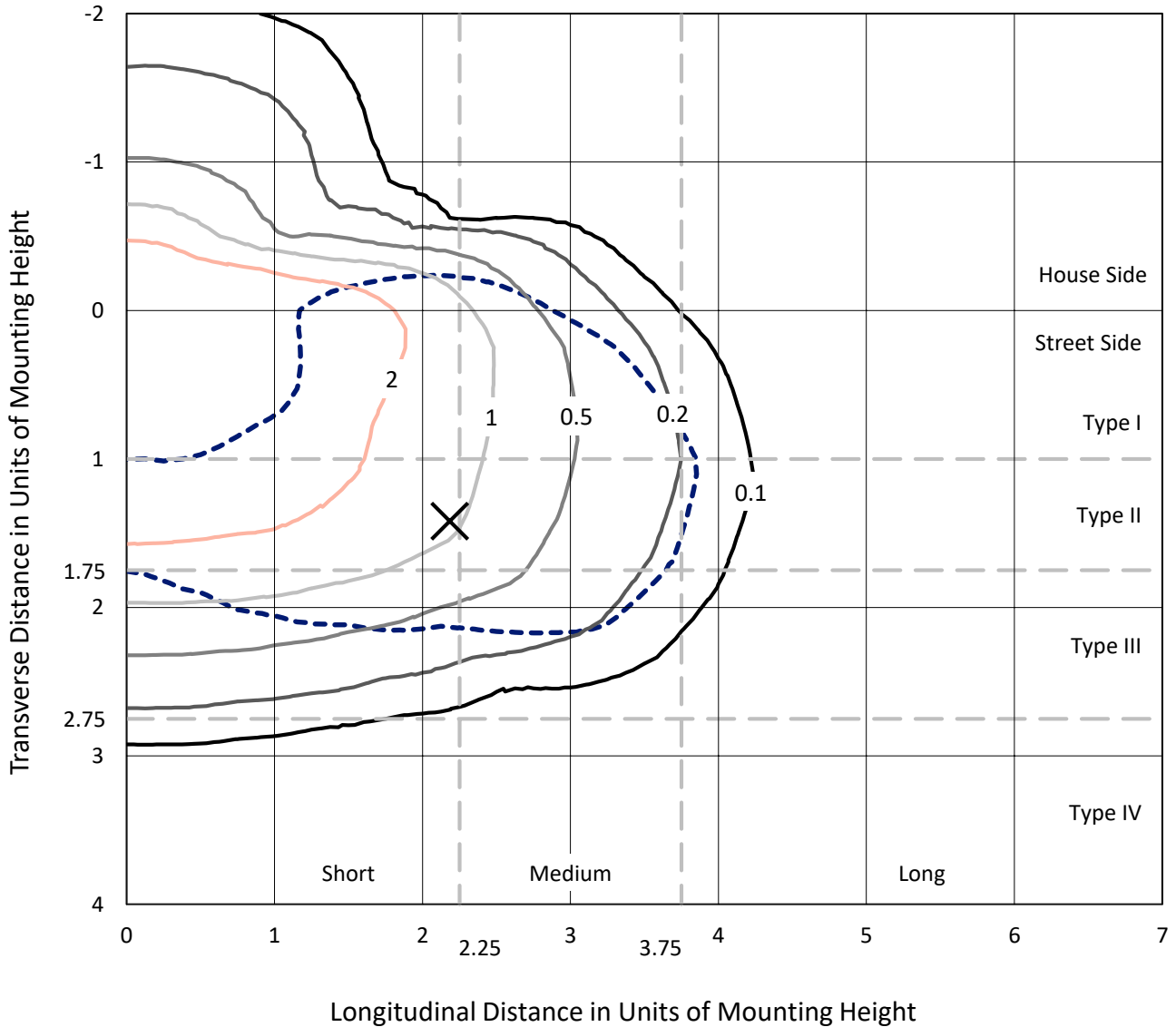
Input Watts (W): 210
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

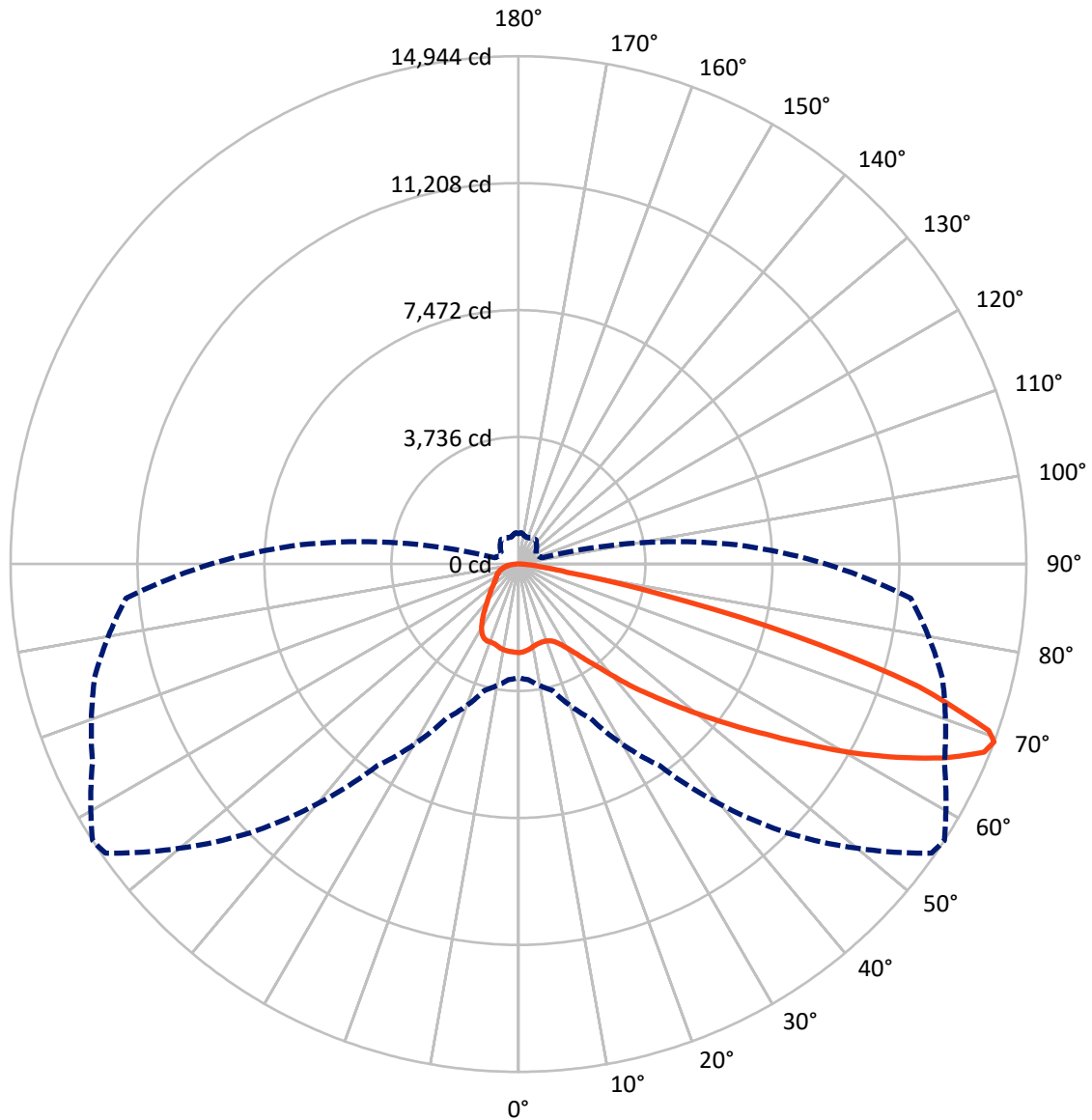
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.3 fc
 Type III - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 57-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4658.8	0.0	4658.8
	% Fixture	22.1	0.0	22.1
Street Side	Lumens	16453.8	0.0	16453.8
	% Fixture	77.9	0.0	77.9
Total	Lumens	21112.7	0.0	21112.7
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	244.2	1.2
10°-20°	694.4	3.3
20°-30°	1155.1	5.5
30°-40°	1886.3	8.9
40°-50°	3183.6	15.1
50°-60°	4952.2	23.5
60°-70°	5899.2	27.9
70°-80°	2748.2	13.0
80°-90°	349.5	1.7
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°	21112.7	100.0
0°-180°	21112.7	100.0



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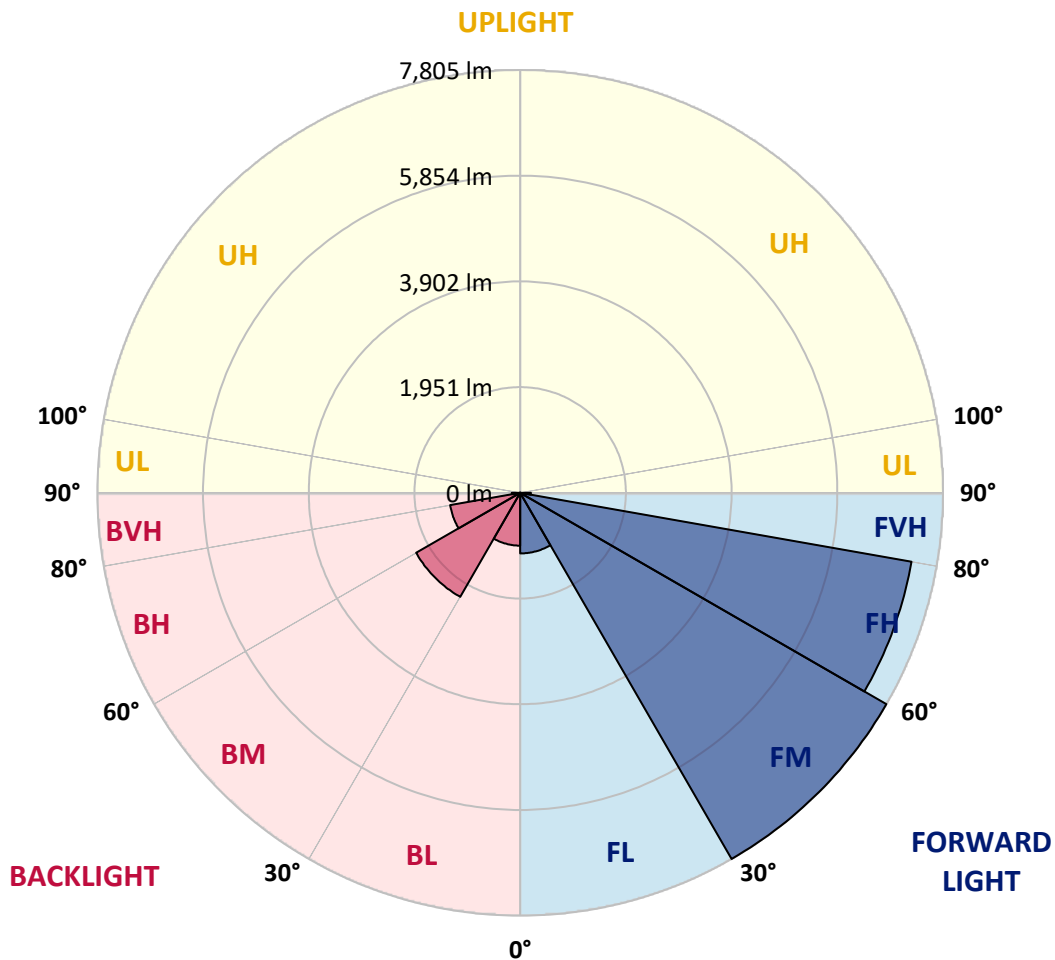
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1118.1	5.3			
FM	(30°-60°)	7804.7	37.0			
FH	(60°-80°)	7334.6	34.7			G3/7500
FVH	(80°-90°)	196.5	0.9			G2/225
BL	(0°-30°)	975.6	4.6	B2/1000		
BM	(30°-60°)	2217.3	10.5	B2/2500		
BH	(60°-80°)	1312.8	6.2	B3/2500		G3/2500
BVH	(80°-90°)	153.1	0.7			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G3

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	57°	65°	75°	85°
0°	2608.7	2608.7	2608.7	2608.7	2608.7	2608.7	2608.7	2608.7	2608.7	2608.7	2608.7
2.5°	2593.8	2593.8	2600.6	2600.6	2600.6	2597.9	2589.8	2592.5	2587.1	2582.9	2576.2
5°	2541.0	2543.8	2551.9	2554.6	2558.6	2560.0	2560.0	2558.6	2560.0	2560.0	2555.9
7.5°	2468.2	2470.8	2480.3	2485.7	2497.8	2508.6	2514.0	2514.0	2520.9	2526.3	2527.7
10°	2423.4	2423.4	2428.8	2428.8	2438.4	2443.7	2461.4	2460.0	2479.0	2496.5	2504.7
12.5°	2418.1	2418.1	2415.5	2405.9	2400.5	2399.2	2416.7	2419.4	2447.8	2479.0	2493.8
15°	2435.7	2435.7	2427.6	2408.6	2388.4	2378.9	2396.5	2401.9	2433.0	2469.4	2492.4
17.5°	2492.4	2491.1	2473.6	2435.7	2400.5	2385.7	2391.1	2396.5	2424.9	2466.7	2495.1
20°	2618.1	2618.1	2580.3	2511.3	2450.5	2415.5	2407.3	2411.3	2431.6	2470.8	2507.3
22.5°	2838.5	2842.4	2775.0	2661.4	2557.4	2482.9	2450.5	2454.6	2464.1	2501.9	2542.5
25°	3162.8	3152.1	3056.0	2895.1	2733.1	2606.0	2539.8	2543.8	2543.8	2578.9	2620.8
27.5°	3506.2	3508.9	3371.0	3198.0	2984.3	2795.2	2689.7	2688.4	2687.1	2720.8	2765.4
30°	3894.2	3895.4	3736.0	3535.9	3291.3	3049.2	2891.1	2889.8	2877.6	2919.5	2977.7
32.5°	4318.5	4317.2	4131.9	3906.3	3634.5	3360.2	3154.8	3153.4	3143.9	3200.8	3271.0
35°	4788.9	4788.9	4605.0	4326.5	4033.3	3727.8	3489.9	3488.6	3494.0	3571.0	3637.2
37.5°	5355.2	5367.5	5145.8	4807.8	4487.5	4161.7	3884.6	3876.5	3835.9	3965.7	4075.3
40°	5945.9	5979.7	5750.0	5355.2	5009.2	4672.7	4367.2	4361.8	4326.5	4464.4	4641.5
42.5°	6585.2	6662.3	6406.8	6004.0	5627.0	5263.3	4956.5	4941.5	4806.4	5021.3	5298.5
45°	7423.2	7473.2	7102.9	6737.9	6382.5	5967.5	5602.5	5522.8	5387.7	5663.4	6023.0
47.5°	7993.6	7969.4	7738.2	7493.5	7265.1	6867.7	6306.8	6205.4	6040.6	6405.5	6801.4
50°	8347.8	8365.3	8235.7	8223.4	8211.2	7934.2	7101.6	6979.9	6789.3	7221.8	7684.1
52.5°	8581.6	8501.9	8524.8	8800.5	9134.4	9001.9	8000.3	7865.2	7669.2	8101.8	8623.5
55°	8484.3	8378.9	8591.0	9134.4	9919.8	9949.4	8987.2	8847.9	8680.2	9037.0	9753.4
57.5°	8081.5	8134.2	8469.4	9225.0	10456.4	10798.3	10121.2	9979.2	9649.5	10011.6	10826.6
60°	7515.1	7621.8	8134.2	9081.8	10832.1	11459.3	11366.0	11271.4	10703.7	10960.5	11953.9
62.5°	6906.9	7012.3	7642.2	8837.0	10663.2	12044.6	12587.9	12529.7	11867.5	11874.2	12668.9
65°	6008.0	6051.3	6694.7	8169.4	10194.1	12572.9	13811.1	13759.8	12979.8	12654.2	12868.9
67.5°	4537.5	4591.5	5120.0	6448.8	8766.7	12286.5	14788.3	14780.3	13648.8	12943.4	12393.2
69°	3350.7	3417.0	3848.1	5006.6	7248.9	11194.3	14834.3	14943.8	13830.0	12913.7	11589.0
70°	2451.8	2527.7	2926.3	3973.8	6037.8	9988.7	14441.0	14676.1	13761.0	12725.7	10961.8
72.5°	1042.2	1067.7	1263.7	1793.6	3062.9	6023.0	11828.3	12322.9	12428.4	11402.5	8564.0
75°	652.9	661.0	738.0	920.5	1362.5	2491.1	7659.8	8334.3	9279.0	8846.5	5733.7
77.5°	492.0	498.7	543.4	633.9	846.2	929.9	3553.4	4237.5	5314.6	5203.8	2853.3
80°	377.1	381.2	411.0	460.9	596.0	582.6	1153.0	1449.0	2218.1	1957.1	1009.7
82.5°	296.0	297.3	323.0	332.6	416.4	392.0	578.5	644.8	896.1	744.8	493.3
85°	262.2	266.3	291.9	243.4	266.3	236.6	317.6	344.7	475.8	448.8	186.5
87.5°	133.8	140.6	244.7	208.1	133.8	112.2	139.1	150.0	193.2	209.6	90.5
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):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2608.7	2608.7	2608.7	2608.7	2608.7	2608.7	2608.7	2608.7	2608.7	2608.7	2608.7
2.5°	2577.5	2578.9	2582.9	2589.8	2600.6	2614.1	2630.2	2646.5	2656.0	2662.8	2660.1
5°	2555.9	2557.4	2565.4	2577.5	2591.2	2611.4	2638.4	2658.7	2673.5	2683.0	2681.7
7.5°	2528.9	2533.0	2549.2	2562.8	2581.6	2597.9	2619.5	2638.4	2653.2	2662.8	2661.4
10°	2508.6	2512.6	2533.0	2550.6	2566.7	2569.5	2565.4	2560.0	2558.6	2565.4	2562.8
12.5°	2499.2	2507.3	2526.3	2538.4	2531.7	2505.9	2476.2	2464.1	2460.0	2473.6	2474.9
15°	2501.9	2508.6	2524.9	2516.7	2480.3	2437.0	2420.8	2430.3	2438.4	2446.4	2447.8
17.5°	2508.6	2512.6	2516.7	2487.0	2435.7	2407.3	2401.9	2392.5	2368.1	2354.5	2353.2
20°	2520.9	2526.3	2519.4	2472.1	2426.2	2388.4	2323.5	2265.3	2209.9	2180.1	2168.0
22.5°	2562.8	2566.7	2546.4	2500.5	2430.3	2307.2	2176.1	2076.2	1991.0	1945.0	1927.5
25°	2645.1	2651.9	2623.5	2565.4	2381.5	2166.7	1981.5	1846.3	1739.6	1684.1	1669.3
27.5°	2789.7	2796.6	2765.4	2614.1	2268.1	1978.7	1754.4	1620.6	1528.7	1481.5	1474.7
30°	3006.1	3015.5	2987.1	2612.7	2095.0	1739.6	1532.8	1454.4	1401.6	1369.1	1367.8
32.5°	3306.1	3341.2	3225.1	2566.7	1881.5	1497.7	1365.2	1338.1	1312.5	1290.9	1290.9
35°	3687.4	3769.7	3460.2	2470.8	1646.4	1332.7	1271.9	1246.2	1213.8	1190.9	1188.1
37.5°	4142.9	4271.3	3627.9	2300.5	1443.5	1253.0	1215.1	1173.2	1121.9	1077.2	1066.5
40°	4768.7	4798.3	3710.3	2023.4	1292.2	1209.7	1162.3	1109.6	1044.8	994.9	989.5
42.5°	5397.0	5299.8	3694.0	1726.1	1205.6	1170.5	1108.4	1050.2	992.1	950.1	950.1
45°	6112.2	5737.7	3571.0	1427.3	1127.3	1125.9	1058.4	1002.9	958.3	927.2	920.5
47.5°	6796.0	6131.0	3358.9	1207.1	1046.2	1081.3	1026.0	981.3	940.7	911.1	905.6
50°	7626.0	6586.6	3133.1	1053.0	967.7	1042.2	1012.4	989.5	950.1	898.8	893.5
52.5°	8450.4	7119.1	2958.7	936.8	898.8	1011.0	1020.5	1023.2	986.7	886.6	879.9
55°	9335.8	7688.1	2775.0	846.2	842.2	996.2	1039.3	1036.7	1019.1	889.4	878.5
57.5°	10177.8	8259.8	2500.5	782.7	797.4	981.3	1043.6	1000.3	969.1	902.8	885.3
60°	10875.3	8733.0	2097.7	738.0	759.6	951.6	1016.4	951.6	898.8	900.2	884.0
62.5°	11214.6	8865.5	1604.5	686.7	728.5	902.8	977.3	915.1	866.4	905.6	896.1
65°	10956.4	8488.4	1143.5	639.4	690.6	846.2	954.3	884.0	850.2	932.6	921.8
67.5°	10029.1	7461.1	829.9	597.5	654.1	788.1	911.1	855.5	833.9	952.9	928.6
69°	9043.9	6441.9	719.1	573.1	628.5	756.9	882.7	840.8	821.8	924.5	889.4
70°	8224.7	5656.6	663.7	558.2	606.9	739.3	860.9	831.2	809.6	890.7	848.8
72.5°	5897.3	3656.2	558.2	513.7	550.1	700.1	813.7	796.1	763.6	804.3	777.3
75°	3562.9	1908.4	474.5	467.7	490.7	646.2	758.3	736.6	704.2	708.3	694.7
77.5°	1636.8	881.2	397.4	413.6	428.5	578.5	690.6	666.4	636.5	625.8	627.1
80°	717.7	515.0	332.6	352.8	360.8	520.4	617.8	590.6	558.2	616.3	571.7
82.5°	387.9	298.6	259.5	273.1	296.0	452.7	536.6	501.4	470.4	547.3	442.0
85°	156.8	152.7	175.7	189.3	205.4	325.7	448.8	412.2	374.5	335.2	327.2
87.5°	67.6	73.0	86.4	91.8	109.5	202.7	301.4	263.6	264.9	227.1	223.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)