

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: P195093

Luminaire Tested: **NAV-AF-03-D-UNV-RW-7060-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195093
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24161)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-03-D-UNV-RW-7060-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 70 CRI, 5700K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND RECTANGULAR WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 20305 lumens
Efficiency: N/A
Efficacy: 106.3 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type II - Medium - Full Cutoff
BUG Rating: B4 - U0 - G4

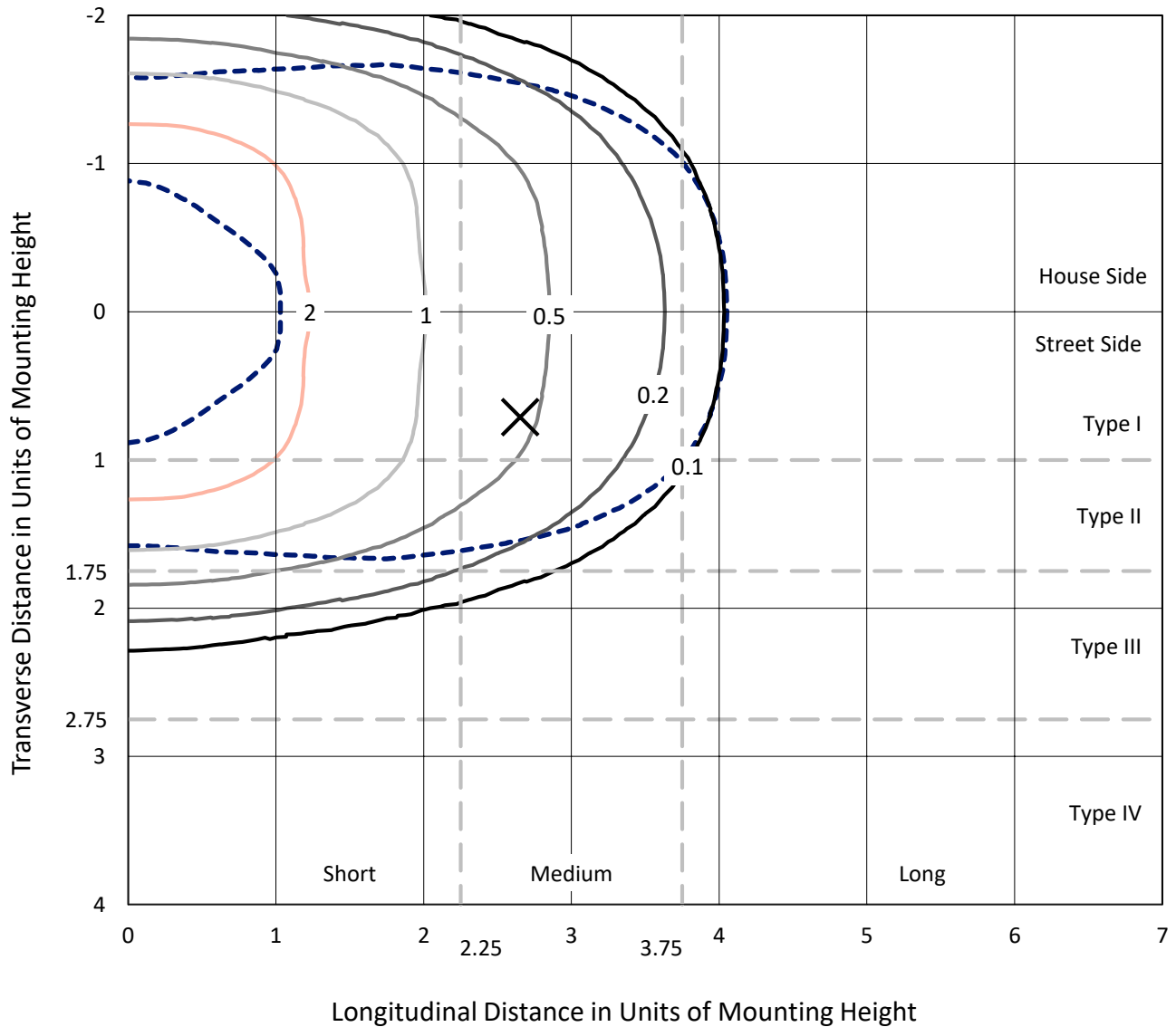
Input Watts (W): 191
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

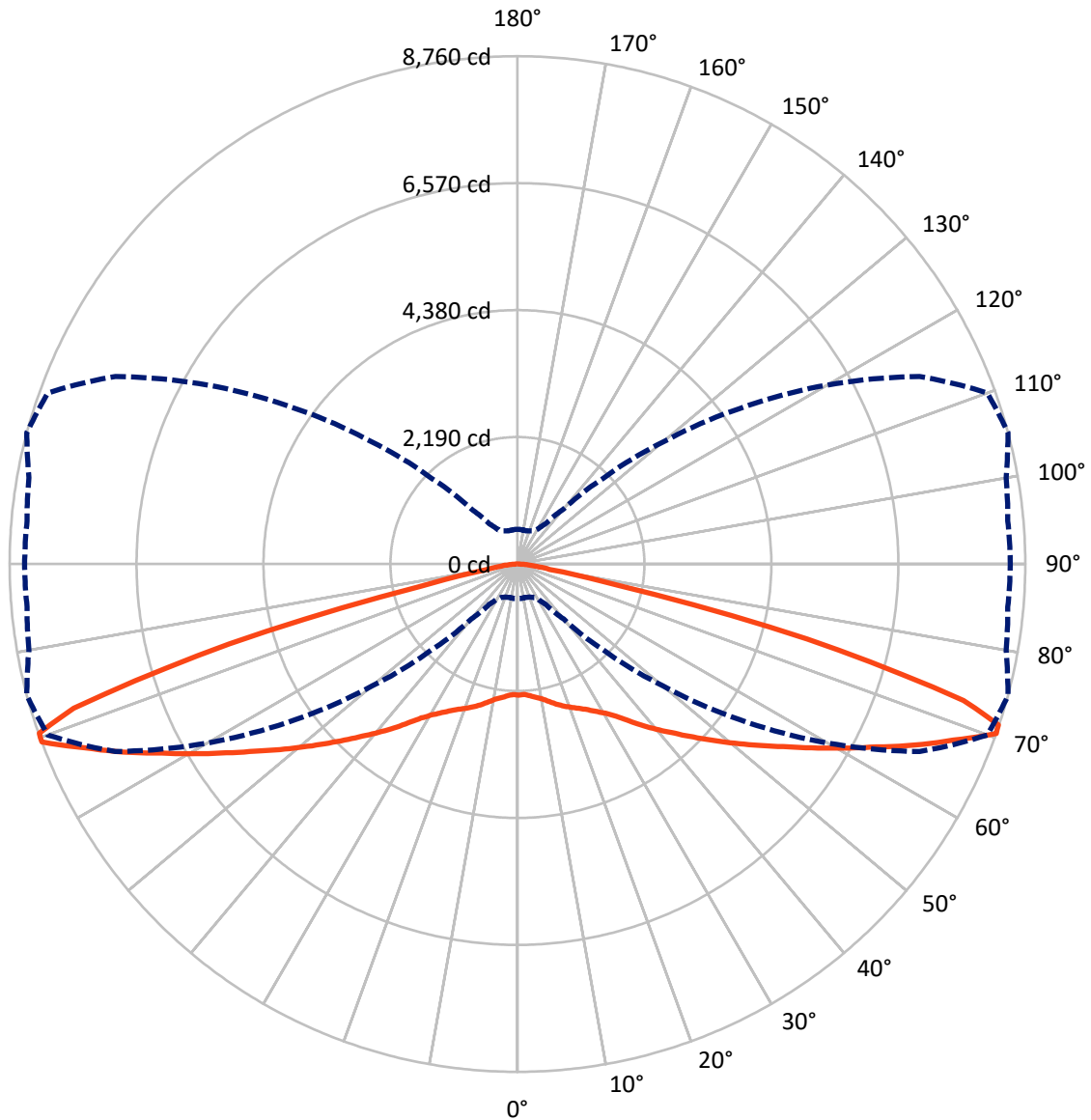
× Max cd
 - - - 1/2 Max cd



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

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Luminous Intensity Polar Plot



— Vertical Plane Through 75-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	10152.5	0.0	10152.5
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	10152.5	0.0	10152.5
	% Fixture	50.0	0.0	50.0
Total	Lumens	20305.0	0.0	20305.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	216.9	1.1
10°-20°	672.6	3.3
20°-30°	1263.3	6.2
30°-40°	2225.4	11.0
40°-50°	3688.2	18.2
50°-60°	5130.8	25.3
60°-70°	4843.6	23.9
70°-80°	2068.7	10.2
80°-90°	195.5	1.0
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°	20305.0	100.0
0°-180°	20305.0	100.0



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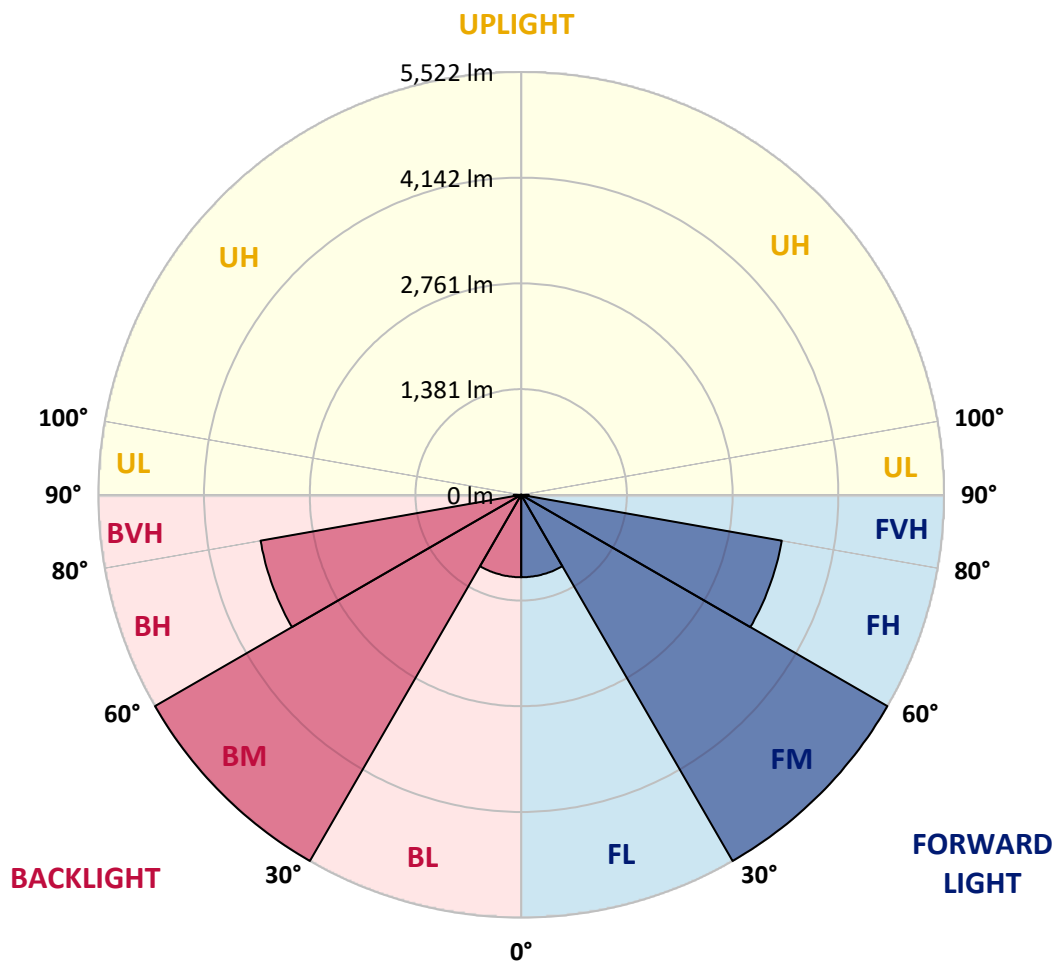
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1076.4	5.3			
FM	(30°-60°)	5522.2	27.2			
FH	(60°-80°)	3456.2	17.0			G2/5000
FVH	(80°-90°)	97.7	0.5			G1/100
BL	(0°-30°)	1076.4	5.3	B3/2500		
BM	(30°-60°)	5522.2	27.2	B4/8500		
BH	(60°-80°)	3456.2	17.0	B4/5000		G4/5000
BVH	(80°-90°)	97.7	0.5			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B4-U0-G4

Type II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2261.2	2261.2	2261.2	2261.2	2261.2	2261.2	2261.2	2261.2	2261.2	2261.2	2261.2
2.5°	2275.2	2273.9	2275.2	2271.3	2272.6	2271.3	2271.3	2266.2	2266.2	2263.7	2259.9
5°	2249.7	2252.3	2252.3	2252.3	2256.1	2256.1	2261.2	2262.4	2266.2	2270.1	2272.6
7.5°	2207.7	2209.0	2212.8	2215.4	2223.0	2233.2	2243.3	2254.8	2265.0	2277.7	2291.7
10°	2172.1	2174.6	2181.0	2187.4	2201.4	2214.1	2231.9	2249.7	2267.5	2289.2	2310.8
12.5°	2153.0	2156.8	2167.0	2177.2	2198.8	2215.4	2239.5	2267.5	2291.7	2312.1	2336.2
15°	2155.5	2156.8	2170.8	2184.8	2215.4	2238.3	2272.6	2305.7	2335.0	2357.9	2385.9
17.5°	2192.4	2195.0	2209.0	2229.3	2258.6	2287.9	2324.8	2359.1	2398.6	2425.3	2458.4
20°	2265.0	2268.8	2284.1	2305.7	2337.5	2368.0	2406.2	2441.8	2482.6	2514.4	2547.5
22.5°	2359.1	2365.5	2382.0	2408.8	2440.6	2477.5	2516.9	2553.8	2592.0	2623.8	2651.8
25°	2485.1	2492.7	2510.6	2537.3	2569.1	2608.5	2649.3	2687.4	2726.9	2751.1	2774.0
27.5°	2654.3	2667.1	2686.2	2707.8	2735.8	2777.8	2816.0	2847.8	2885.9	2912.7	2927.9
30°	2882.1	2899.9	2915.2	2938.1	2958.5	3003.0	3033.5	3059.0	3088.3	3103.5	3107.3
32.5°	3160.8	3177.3	3192.6	3209.1	3237.1	3277.9	3307.1	3321.1	3336.4	3333.8	3319.8
35°	3475.1	3487.8	3496.7	3526.0	3571.8	3598.5	3620.1	3625.2	3627.8	3601.1	3574.3
37.5°	3805.9	3821.2	3828.8	3874.6	3917.9	3948.4	3958.6	3970.1	3962.4	3917.9	3869.5
40°	4163.5	4180.0	4202.9	4242.4	4293.3	4322.5	4335.3	4334.0	4327.6	4275.5	4196.6
42.5°	4514.7	4535.0	4554.1	4622.8	4664.8	4714.5	4720.8	4719.6	4705.6	4645.7	4554.1
45°	4812.4	4836.6	4876.1	4952.4	5019.9	5079.7	5103.8	5112.7	5098.7	5035.1	4930.8
47.5°	5058.0	5074.6	5124.2	5217.1	5303.6	5391.4	5439.8	5474.1	5472.8	5427.0	5316.3
50°	5226.0	5245.1	5306.2	5410.5	5518.7	5621.7	5717.2	5794.8	5831.7	5798.6	5695.5
52.5°	5274.3	5298.5	5378.7	5503.4	5629.4	5768.1	5910.6	6048.0	6130.7	6151.1	6070.9
55°	5070.7	5097.5	5214.5	5387.6	5595.0	5799.9	6016.2	6212.1	6382.7	6461.5	6429.7
57.5°	4477.8	4496.9	4645.7	4869.7	5166.2	5526.3	5890.2	6249.0	6541.7	6746.6	6782.2
60°	3541.3	3565.4	3728.3	3965.0	4302.2	4757.7	5266.7	5854.6	6428.5	6898.0	7130.9
62.5°	2389.7	2406.2	2562.7	2779.1	3148.1	3587.1	4154.6	4899.0	5717.2	6555.7	7212.3
65°	1254.6	1254.6	1360.3	1511.7	1805.6	2198.8	2780.3	3543.8	4517.2	5564.5	6662.6
67.5°	727.8	726.6	750.8	785.1	878.0	1037.1	1357.7	1918.9	2840.1	4059.1	5308.7
70°	600.6	596.8	593.0	593.0	607.0	631.1	692.2	846.2	1238.1	2093.2	3266.4
71°	573.9	571.3	561.2	557.3	563.7	576.4	603.1	674.4	879.3	1427.7	2439.3
72.5°	542.1	535.7	520.4	514.1	515.3	520.4	528.1	556.1	618.4	811.8	1390.8
75°	493.7	478.4	459.4	450.5	446.6	445.4	445.4	453.0	467.0	489.9	570.1
77.5°	437.7	416.1	395.7	386.8	380.5	376.6	374.1	369.0	366.5	376.6	405.9
80°	370.3	347.4	330.8	325.7	321.9	314.3	304.1	293.9	287.6	292.7	310.5
82.5°	286.3	263.4	265.9	267.2	260.9	248.1	237.9	226.5	215.0	212.5	221.4
85°	227.8	216.3	208.7	225.2	211.2	196.0	182.0	162.9	136.2	112.0	122.2
87.5°	98.0	99.3	142.5	215.0	188.3	151.4	126.0	101.8	64.9	48.4	49.6
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°	2261.2	2261.2	2261.2	2261.2	2261.2	2261.2	2261.2	2261.2
2.5°	2258.6	2258.6	2254.8	2252.3	2252.3	2252.3	2249.7	2251.0
5°	2273.9	2276.4	2279.0	2277.7	2281.5	2285.3	2284.1	2282.8
7.5°	2299.3	2307.0	2314.6	2318.4	2323.5	2328.6	2329.9	2326.1
10°	2324.8	2340.1	2351.5	2361.7	2368.0	2373.1	2377.0	2375.7
12.5°	2356.6	2378.2	2398.6	2418.9	2432.9	2440.6	2448.2	2445.7
15°	2408.8	2432.9	2458.4	2485.1	2506.7	2518.2	2529.6	2527.1
17.5°	2480.0	2501.7	2522.0	2548.7	2575.5	2588.2	2600.9	2599.6
20°	2569.1	2585.6	2597.1	2612.4	2637.8	2651.8	2663.3	2659.4
22.5°	2670.9	2676.0	2677.3	2682.3	2702.7	2719.2	2734.5	2738.3
25°	2781.6	2777.8	2770.1	2766.3	2780.3	2798.1	2817.2	2822.3
27.5°	2919.0	2906.3	2887.2	2871.9	2875.8	2898.7	2920.3	2925.4
30°	3092.1	3062.8	3022.1	2992.8	2987.7	3011.9	3034.8	3042.4
32.5°	3289.3	3249.9	3193.9	3149.3	3130.2	3151.9	3172.2	3183.7
35°	3523.4	3480.2	3412.7	3355.5	3324.9	3338.9	3374.6	3387.3
37.5°	3800.8	3741.0	3666.0	3593.4	3542.5	3545.1	3583.2	3598.5
40°	4107.5	4021.0	3925.5	3835.2	3761.4	3756.3	3790.7	3802.1
42.5°	4426.9	4316.2	4204.2	4085.9	3994.2	3977.7	4022.2	4023.5
45°	4770.4	4627.9	4489.2	4351.8	4256.4	4227.1	4270.4	4275.5
47.5°	5136.9	4958.8	4794.6	4645.7	4542.7	4496.9	4538.9	4546.5
50°	5518.7	5334.1	5143.3	4977.9	4857.0	4801.0	4850.6	4855.7
52.5°	5896.6	5722.2	5532.7	5343.1	5196.7	5133.1	5191.6	5209.4
55°	6277.0	6109.1	5930.9	5741.3	5556.8	5500.8	5564.5	5583.6
57.5°	6672.8	6511.2	6349.6	6158.7	5979.3	5894.0	5962.7	5989.5
60°	7109.2	6966.7	6814.0	6621.9	6445.0	6345.8	6404.3	6434.8
62.5°	7538.0	7508.8	7370.1	7170.3	6946.4	6847.1	6896.7	6918.4
65°	7573.7	8048.3	8041.9	7843.4	7530.4	7363.7	7377.7	7387.9
67.5°	6610.4	7699.6	8395.7	8458.0	8109.4	7848.5	7818.0	7824.4
70°	4680.1	6175.2	7652.6	8622.2	8759.6	8557.3	8491.1	8501.3
71°	3749.9	5298.5	6924.7	8229.0	8749.4	8690.9	8654.0	8680.7
72.5°	2393.5	3903.9	5486.8	7046.9	8045.8	8332.1	8374.1	8390.6
75°	869.1	1679.6	2842.7	4073.1	5162.4	5911.8	6324.1	6357.2
77.5°	467.0	601.9	930.2	1389.5	1745.8	1936.7	1959.6	1968.5
80°	343.6	398.3	455.5	520.4	561.2	568.8	554.8	525.5
82.5°	243.0	274.9	297.8	320.7	337.2	323.2	268.5	204.9
85°	141.2	155.2	168.0	179.4	182.0	171.8	113.2	92.9
87.5°	56.0	61.1	59.8	67.4	64.9	59.8	44.5	38.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)