

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: P270582

Luminaire Tested: **NAV-AF-05-D-UNV-RW-7027-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270582
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-05-D-UNV-RW-7027-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 70 CRI, 2700K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND RECTANGULAR WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 17589.1 lumens
Efficiency: N/A
Efficacy: 108.6 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type II - Medium - Full Cutoff
BUG Rating: B4 - U0 - G4

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

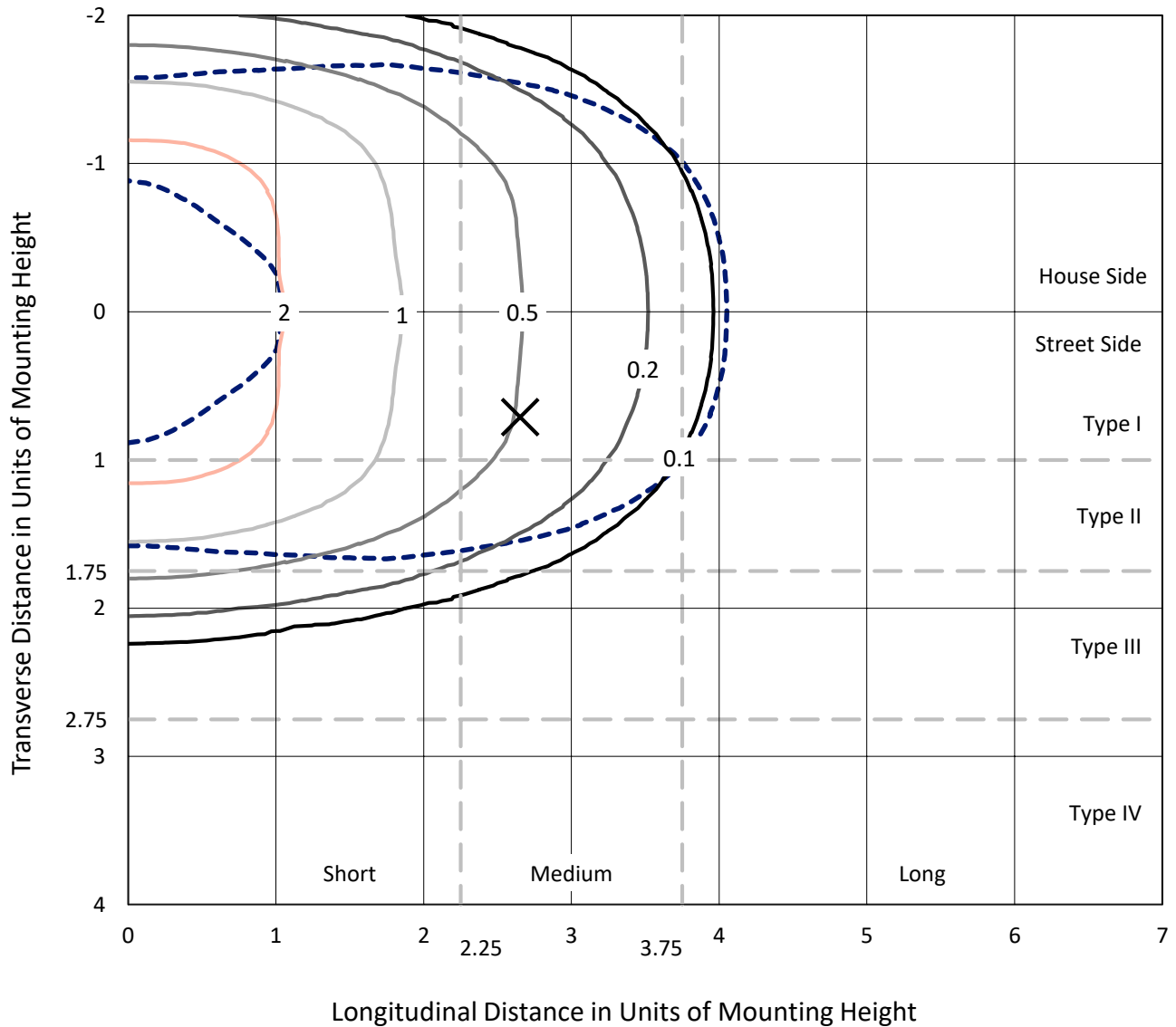


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Iso-Footcandle Lines of Horizontal Illumination

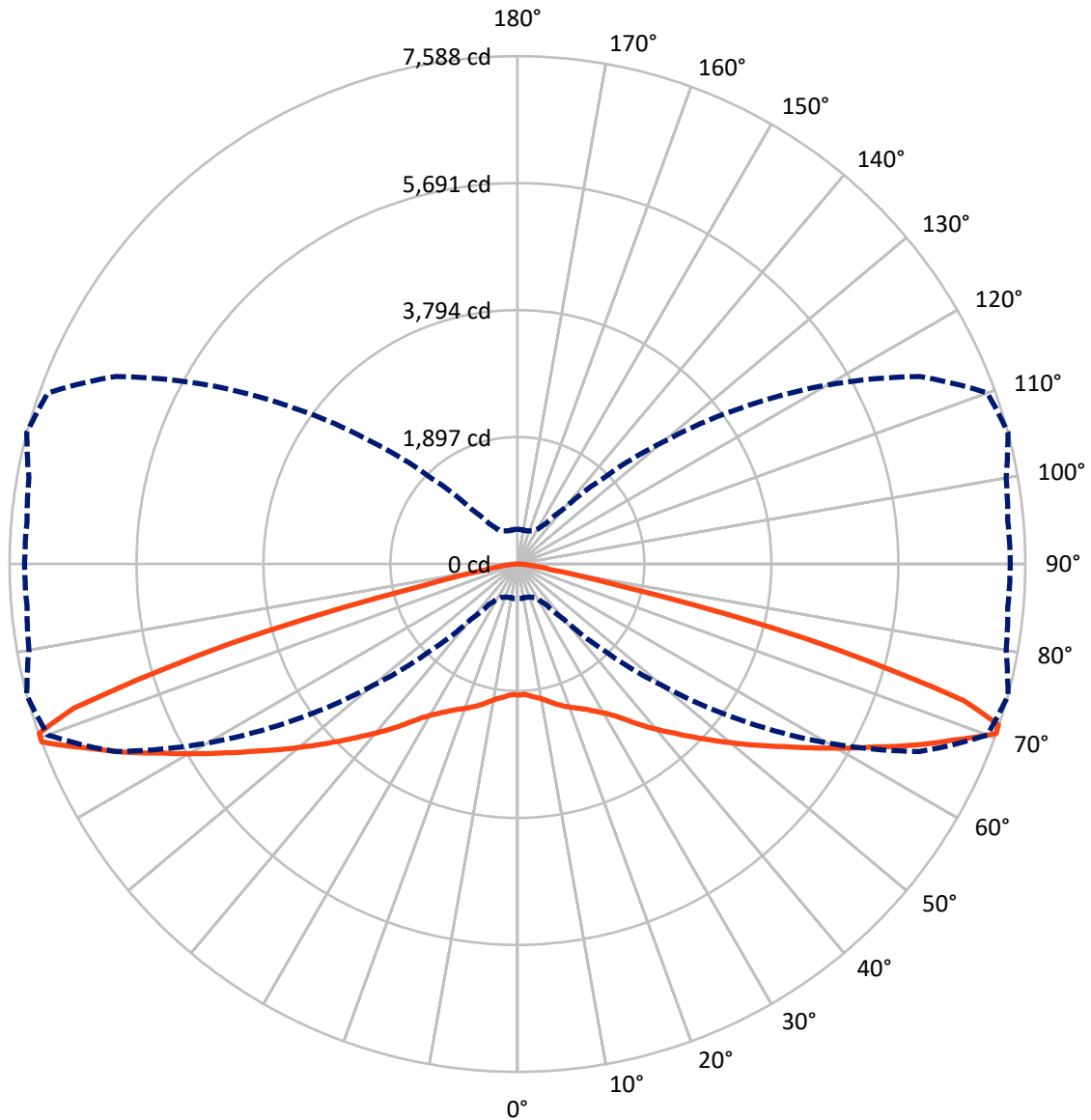
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.2 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	8794.6	0.0	8794.6
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	8794.6	0.0	8794.6
	% Fixture	50.0	0.0	50.0
Total	Lumens	17589.1	0.0	17589.1
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	187.9	1.1
10°-20°	582.7	3.3
20°-30°	1094.4	6.2
30°-40°	1927.7	11.0
40°-50°	3194.9	18.2
50°-60°	4444.5	25.3
60°-70°	4195.7	23.9
70°-80°	1792.0	10.2
80°-90°	169.3	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°	17589.1	100.0
0°-180°	17589.1	100.0



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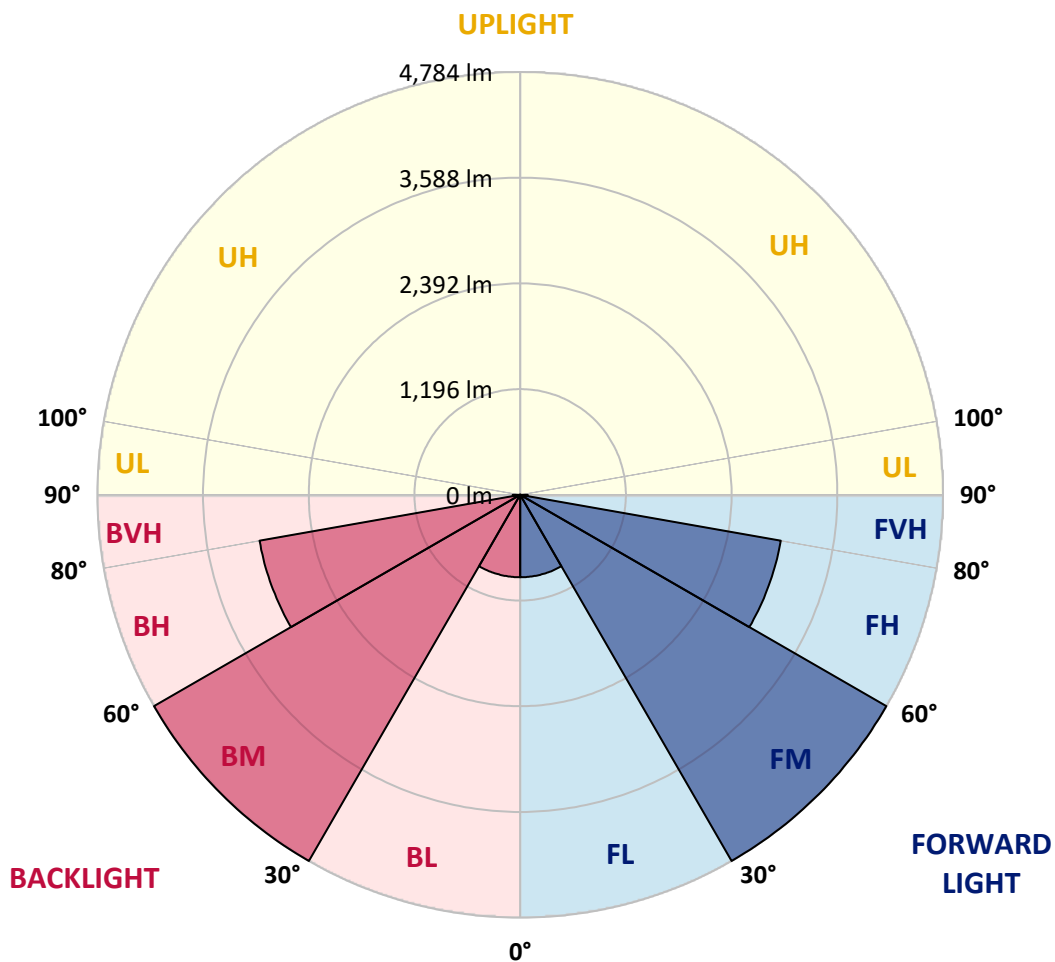
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	932.5	5.3			
FM	(30°-60°)	4783.6	27.2			
FH	(60°-80°)	2993.9	17.0			G2/5000
FVH	(80°-90°)	84.7	0.5			G1/100
BL	(0°-30°)	932.5	5.3	B2/1000		
BM	(30°-60°)	4783.6	27.2	B3/5000		
BH	(60°-80°)	2993.9	17.0	B4/5000		G4/5000
BVH	(80°-90°)	84.7	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°	1958.8	1958.8	1958.8	1958.8	1958.8	1958.8	1958.8	1958.8	1958.8	1958.8	1958.8
2.5°	1970.8	1969.8	1970.8	1967.6	1968.6	1967.6	1967.6	1963.2	1963.2	1960.9	1957.6
5°	1948.9	1950.9	1950.9	1950.9	1954.4	1954.4	1958.8	1959.8	1963.2	1966.4	1968.6
7.5°	1912.4	1913.5	1916.9	1919.0	1925.6	1934.5	1943.4	1953.3	1962.0	1973.0	1985.2
10°	1881.6	1883.7	1889.2	1894.7	1906.9	1917.9	1933.3	1948.9	1964.2	1983.0	2001.8
12.5°	1865.1	1868.4	1877.2	1886.0	1904.6	1919.0	1940.0	1964.2	1985.2	2002.9	2023.7
15°	1867.2	1868.4	1880.4	1892.5	1919.0	1938.9	1968.6	1997.3	2022.7	2042.4	2066.7
17.5°	1899.1	1901.4	1913.5	1931.1	1956.5	1981.9	2013.8	2043.6	2077.8	2101.0	2129.6
20°	1962.0	1965.3	1978.5	1997.3	2024.9	2051.3	2084.3	2115.2	2150.5	2178.1	2206.7
22.5°	2043.6	2049.2	2063.4	2086.7	2114.2	2146.1	2180.2	2212.3	2245.4	2272.9	2297.1
25°	2152.7	2159.3	2174.7	2198.0	2225.6	2259.6	2294.9	2328.0	2362.2	2383.2	2403.0
27.5°	2299.3	2310.4	2326.9	2345.7	2369.9	2406.2	2439.3	2466.8	2500.0	2523.1	2536.4
30°	2496.6	2512.1	2525.2	2545.1	2562.8	2601.3	2627.8	2649.8	2675.2	2688.4	2691.7
32.5°	2738.0	2752.3	2765.6	2780.0	2804.1	2839.5	2864.8	2876.9	2890.1	2888.0	2875.8
35°	3010.3	3021.3	3029.1	3054.3	3094.0	3117.2	3136.0	3140.4	3142.5	3119.5	3096.3
37.5°	3296.9	3310.2	3316.7	3356.3	3393.8	3420.3	3429.1	3439.0	3432.5	3393.8	3351.9
40°	3606.7	3621.0	3640.8	3675.0	3719.1	3744.3	3755.5	3754.2	3748.7	3703.6	3635.4
42.5°	3910.9	3928.5	3944.9	4004.6	4040.8	4083.9	4089.4	4088.2	4076.1	4024.3	3944.9
45°	4168.8	4189.8	4223.9	4290.0	4348.4	4400.3	4421.2	4429.0	4416.7	4361.6	4271.4
47.5°	4381.6	4395.9	4438.9	4519.3	4594.2	4670.3	4712.1	4742.0	4740.9	4701.2	4605.3
50°	4527.0	4543.5	4596.4	4686.8	4780.5	4869.8	4952.4	5019.6	5051.7	5023.1	4933.8
52.5°	4568.9	4589.8	4659.2	4767.2	4876.4	4996.6	5120.0	5239.1	5310.7	5328.3	5258.9
55°	4392.5	4415.7	4517.0	4667.0	4846.6	5024.1	5211.4	5381.2	5529.0	5597.2	5569.8
57.5°	3878.8	3895.4	4024.3	4218.4	4475.1	4787.2	5102.4	5413.1	5666.8	5844.3	5875.1
60°	3067.6	3088.6	3229.6	3434.7	3726.8	4121.3	4562.2	5071.6	5568.7	5975.3	6177.0
62.5°	2070.1	2084.3	2219.9	2407.4	2727.1	3107.2	3598.9	4243.8	4952.4	5678.8	6247.6
65°	1086.8	1086.8	1178.3	1309.5	1564.0	1904.6	2408.4	3069.8	3913.0	4820.1	5771.4
67.5°	630.5	629.4	650.4	680.0	760.5	898.3	1176.2	1662.3	2460.3	3516.2	4598.7
70°	520.3	517.0	513.7	513.7	525.8	546.7	599.6	732.9	1072.4	1813.1	2829.5
71°	497.1	495.0	486.2	482.7	488.3	499.3	522.5	584.2	761.7	1236.7	2113.1
72.5°	469.5	464.1	450.8	445.3	446.4	450.8	457.4	481.8	535.7	703.3	1204.7
75°	427.7	414.5	397.9	390.3	386.9	385.8	385.8	392.4	404.5	424.4	493.8
77.5°	379.2	360.4	342.9	335.1	329.6	326.3	324.1	319.6	317.5	326.3	351.6
80°	320.8	300.9	286.6	282.2	278.8	272.2	263.5	254.6	249.1	253.5	269.0
82.5°	248.0	228.2	230.3	231.5	226.0	215.0	206.2	196.2	186.3	184.2	191.8
85°	197.3	187.3	180.7	195.1	183.0	169.8	157.7	141.2	117.9	96.9	105.8
87.5°	84.9	86.0	123.4	186.3	163.1	131.2	109.1	88.2	56.2	42.0	42.9
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°	1958.8	1958.8	1958.8	1958.8	1958.8	1958.8	1958.8	1958.8
2.5°	1956.5	1956.5	1953.3	1950.9	1950.9	1950.9	1948.9	1950.0
5°	1969.8	1972.0	1974.1	1973.0	1976.4	1979.7	1978.5	1977.4
7.5°	1991.8	1998.4	2004.9	2008.3	2012.7	2017.1	2018.2	2015.0
10°	2013.8	2027.0	2036.9	2045.8	2051.3	2055.7	2059.1	2057.9
12.5°	2041.4	2060.2	2077.8	2095.3	2107.6	2114.2	2120.8	2118.6
15°	2086.7	2107.6	2129.6	2152.7	2171.5	2181.4	2191.2	2189.1
17.5°	2148.2	2167.0	2184.7	2207.9	2231.0	2242.0	2252.9	2252.0
20°	2225.6	2239.8	2249.7	2262.9	2285.0	2297.1	2307.0	2303.8
22.5°	2313.7	2318.0	2319.2	2323.6	2341.3	2355.5	2368.8	2372.1
25°	2409.6	2406.2	2399.6	2396.3	2408.4	2423.8	2440.4	2444.7
27.5°	2528.5	2517.6	2501.1	2487.8	2491.1	2510.9	2529.6	2534.1
30°	2678.4	2653.1	2617.9	2592.5	2588.0	2609.0	2628.9	2635.4
32.5°	2849.3	2815.2	2766.7	2728.2	2711.5	2730.3	2747.9	2757.8
35°	3052.3	3014.7	2956.2	2906.6	2880.2	2892.4	2923.3	2934.3
37.5°	3292.5	3240.6	3175.6	3112.7	3068.7	3070.9	3104.0	3117.2
40°	3558.0	3483.2	3400.4	3322.2	3258.3	3253.9	3283.7	3293.5
42.5°	3834.8	3738.8	3641.9	3539.3	3460.0	3445.7	3484.3	3485.3
45°	4132.5	4009.0	3888.9	3769.7	3687.1	3661.8	3699.2	3703.6
47.5°	4449.8	4295.5	4153.4	4024.3	3935.0	3895.4	3931.8	3938.3
50°	4780.5	4620.7	4455.4	4312.0	4207.3	4158.9	4201.8	4206.3
52.5°	5107.9	4956.8	4792.6	4628.3	4501.6	4446.5	4497.3	4512.6
55°	5437.5	5291.9	5137.6	4973.3	4813.6	4765.1	4820.1	4836.7
57.5°	5780.2	5640.3	5500.3	5334.9	5179.5	5105.6	5165.3	5188.3
60°	6158.3	6035.0	5902.7	5736.1	5583.0	5497.0	5547.8	5574.2
62.5°	6529.8	6504.4	6384.3	6211.2	6017.2	5931.2	5974.3	5993.0
65°	6560.7	6971.8	6966.3	6794.3	6523.2	6378.8	6390.9	6399.7
67.5°	5726.2	6669.7	7272.8	7326.8	7024.7	6798.7	6772.3	6777.8
70°	4054.1	5349.2	6629.0	7469.0	7588.0	7412.8	7355.4	7364.2
71°	3248.5	4589.8	5998.5	7128.3	7579.2	7528.4	7496.4	7519.6
72.5°	2073.4	3381.7	4752.9	6104.3	6969.6	7217.6	7254.1	7268.4
75°	752.9	1455.0	2462.4	3528.4	4471.9	5121.1	5478.3	5506.9
77.5°	404.5	521.3	805.8	1203.6	1512.2	1677.7	1697.4	1705.3
80°	297.6	344.9	394.6	450.8	486.2	492.7	480.7	455.3
82.5°	210.6	238.1	258.0	277.8	292.0	280.0	232.7	177.4
85°	122.3	134.4	145.4	155.4	157.7	148.8	98.2	80.5
87.5°	48.5	52.9	51.8	58.4	56.2	51.8	38.5	33.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)