

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: P270503

Luminaire Tested: **NAV-AF-04-D-UNV-RW-7027-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270503
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-04-D-UNV-RW-7027-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(4) 70 CRI, 2700K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND RECTANGULAR WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 17500.8 lumens
Efficiency: N/A
Efficacy: 102.3 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Medium - Full Cutoff
BUG Rating: B4 - U0 - G4

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

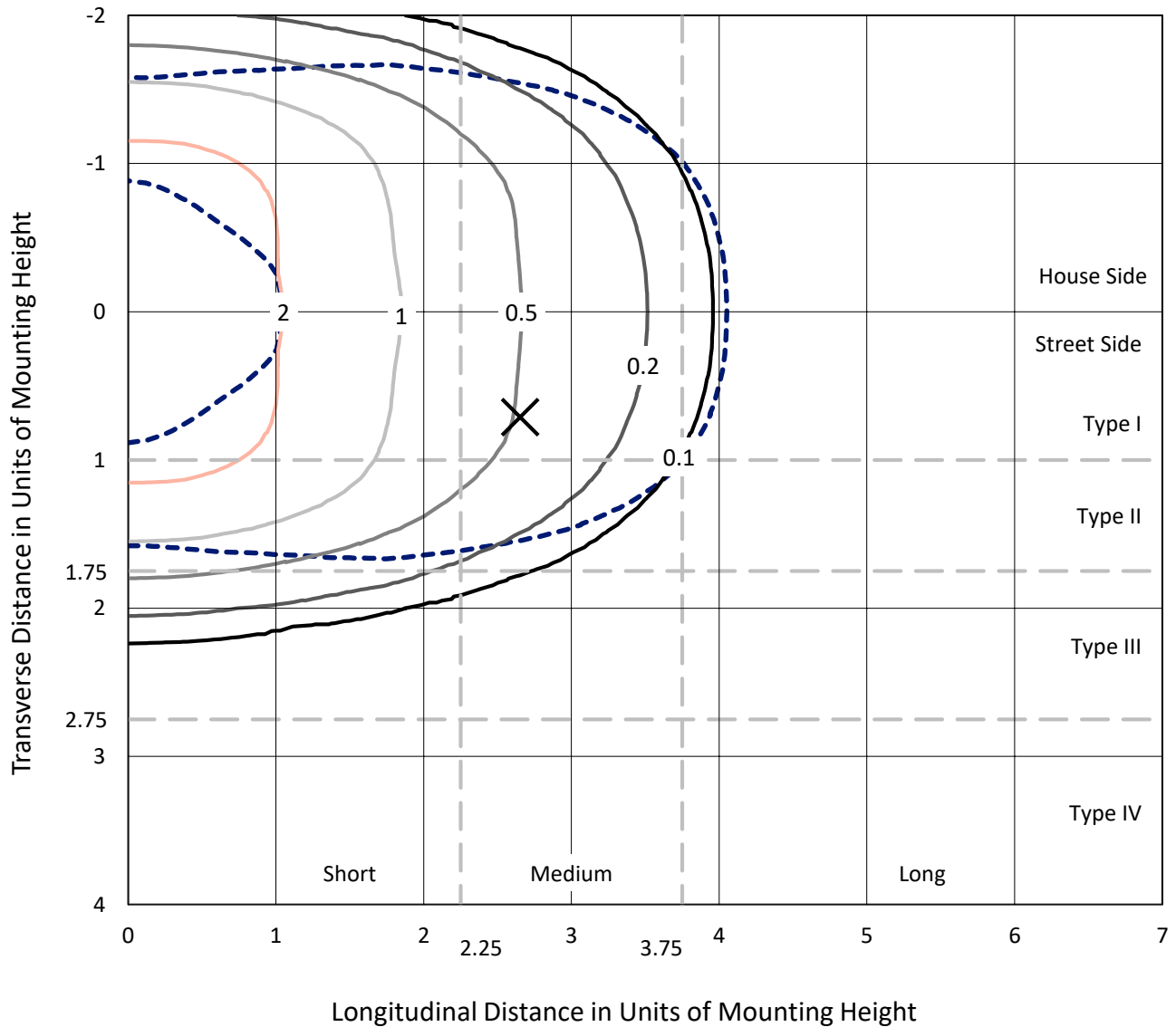


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Iso-Footcandle Lines of Horizontal Illumination

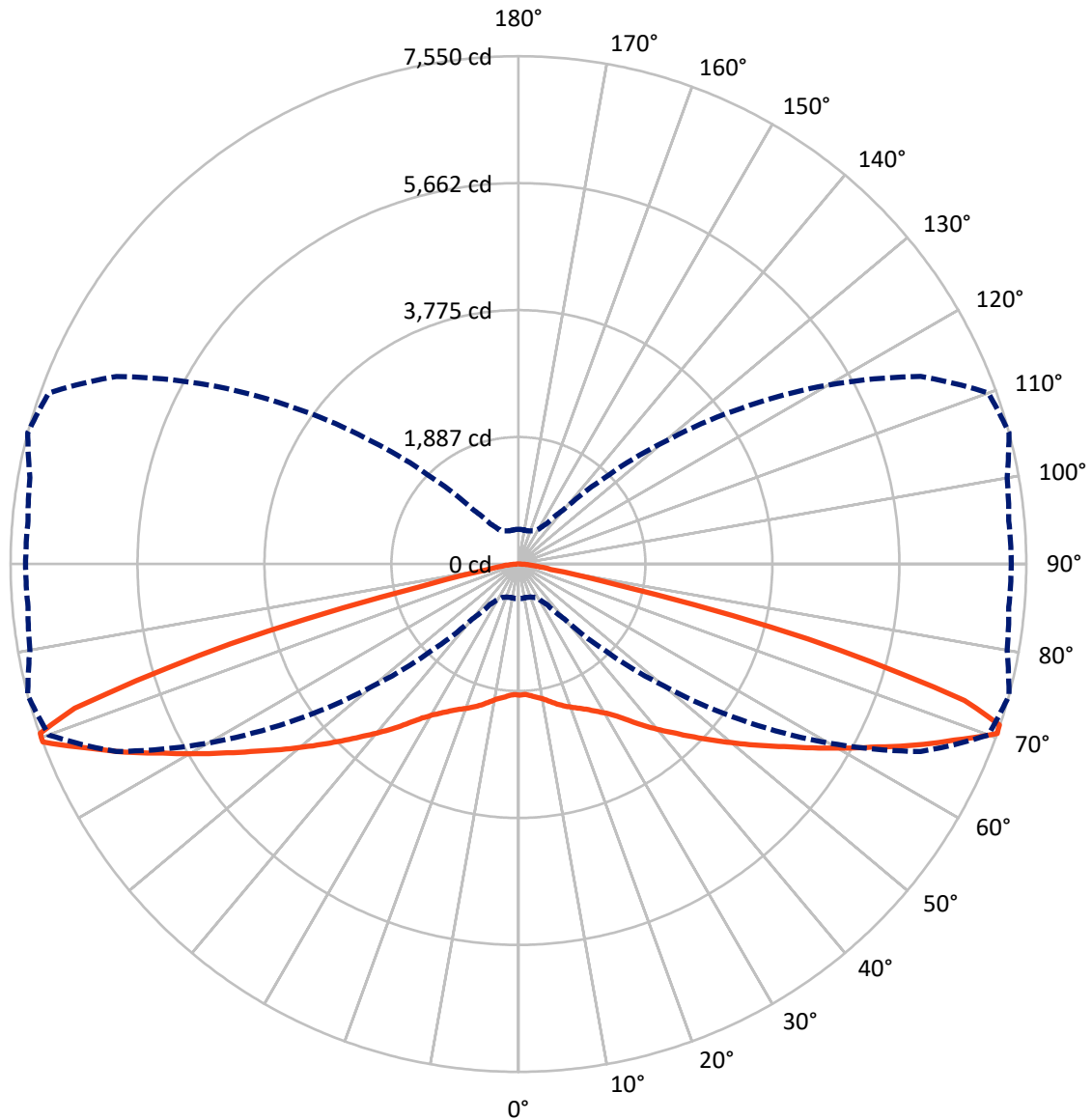
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.1 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	8750.4	0.0	8750.4
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	8750.4	0.0	8750.4
	% Fixture	50.0	0.0	50.0
Total	Lumens	17500.8	0.0	17500.8
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	186.9	1.1
10°-20°	579.7	3.3
20°-30°	1088.9	6.2
30°-40°	1918.0	11.0
40°-50°	3178.8	18.2
50°-60°	4422.2	25.3
60°-70°	4174.6	23.9
70°-80°	1783.0	10.2
80°-90°	168.5	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°	17500.8	100.0
0°-180°	17500.8	100.0



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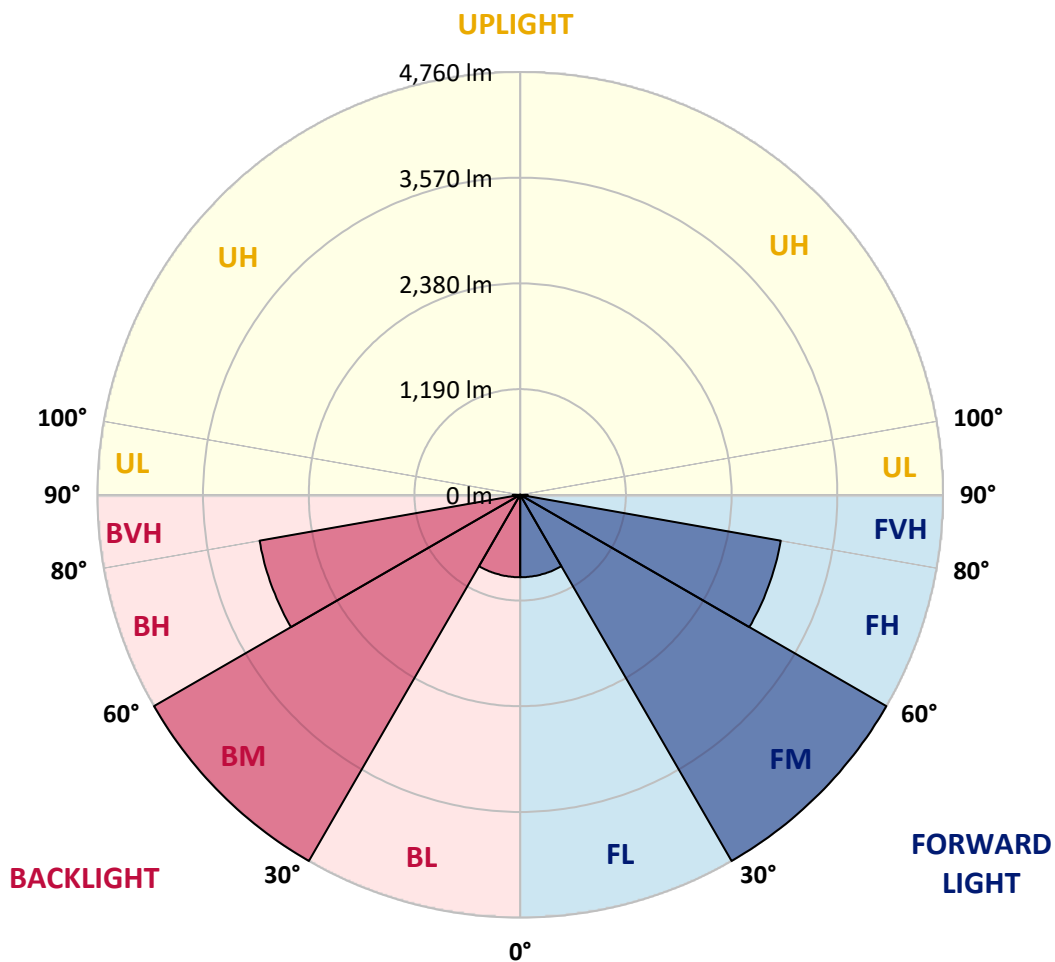
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	927.8	5.3			
FM	(30°-60°)	4759.5	27.2			
FH	(60°-80°)	2978.8	17.0			G2/5000
FVH	(80°-90°)	84.2	0.5			G1/100
BL	(0°-30°)	927.8	5.3	B2/1000		
BM	(30°-60°)	4759.5	27.2	B3/5000		
BH	(60°-80°)	2978.8	17.0	B4/5000		G4/5000
BVH	(80°-90°)	84.2	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°	1949.0	1949.0	1949.0	1949.0	1949.0	1949.0	1949.0	1949.0	1949.0	1949.0	1949.0
2.5°	1960.9	1959.8	1960.9	1957.6	1958.8	1957.6	1957.6	1953.3	1953.3	1951.1	1947.7
5°	1939.0	1941.1	1941.1	1941.1	1944.6	1944.6	1949.0	1950.0	1953.3	1956.6	1958.8
7.5°	1902.8	1903.9	1907.2	1909.3	1915.9	1924.8	1933.5	1943.5	1952.1	1963.2	1975.3
10°	1872.1	1874.4	1879.9	1885.3	1897.3	1908.3	1923.7	1939.0	1954.4	1972.9	1991.6
12.5°	1855.7	1859.0	1867.8	1876.5	1895.2	1909.3	1930.3	1954.4	1975.3	1992.8	2013.6
15°	1857.9	1859.0	1871.0	1883.0	1909.3	1929.1	1958.8	1987.3	2012.6	2032.2	2056.4
17.5°	1889.7	1891.8	1903.9	1921.5	1946.6	1971.9	2003.7	2033.4	2067.3	2090.4	2118.9
20°	1952.1	1955.5	1968.6	1987.3	2014.7	2040.9	2073.8	2104.5	2139.8	2167.2	2195.6
22.5°	2033.4	2038.9	2053.0	2076.2	2103.6	2135.4	2169.3	2201.1	2234.1	2261.5	2285.6
25°	2141.9	2148.4	2163.8	2186.8	2214.3	2248.3	2283.4	2316.3	2350.2	2371.2	2390.8
27.5°	2287.8	2298.8	2315.2	2333.8	2358.1	2394.2	2427.1	2454.4	2487.3	2510.5	2523.6
30°	2484.2	2499.4	2512.6	2532.3	2549.8	2588.2	2614.5	2636.5	2661.8	2675.0	2678.1
32.5°	2724.3	2738.6	2751.7	2765.9	2790.0	2825.2	2850.4	2862.4	2875.7	2873.4	2861.3
35°	2995.2	3006.1	3013.9	3039.1	3078.5	3101.6	3120.3	3124.6	3126.8	3103.7	3080.6
37.5°	3280.3	3293.5	3300.1	3339.4	3376.8	3403.1	3411.9	3421.9	3415.1	3376.8	3335.1
40°	3588.5	3602.7	3622.4	3656.6	3700.4	3725.6	3736.6	3735.4	3729.9	3684.9	3617.0
42.5°	3891.2	3908.7	3925.1	3984.4	4020.6	4063.4	4068.9	4067.7	4055.7	4004.1	3925.1
45°	4147.8	4168.7	4202.7	4268.4	4326.5	4378.1	4399.0	4406.6	4394.6	4339.7	4249.8
47.5°	4359.5	4373.8	4416.5	4496.6	4571.1	4646.8	4688.6	4718.1	4717.0	4677.6	4582.2
50°	4504.2	4520.7	4573.4	4663.3	4756.5	4845.4	4927.7	4994.4	5026.2	4997.8	4909.0
52.5°	4546.0	4566.8	4635.9	4743.3	4851.9	4971.5	5094.3	5212.8	5284.0	5301.5	5232.4
55°	4370.4	4393.5	4494.4	4643.6	4822.3	4998.9	5185.3	5354.2	5501.2	5569.2	5541.7
57.5°	3859.4	3875.8	4004.1	4197.2	4452.7	4763.2	5076.7	5386.1	5638.3	5814.9	5845.5
60°	3052.3	3073.0	3213.3	3417.4	3708.1	4100.7	4539.3	5046.0	5540.7	5945.3	6146.1
62.5°	2059.6	2073.8	2208.8	2395.2	2713.3	3091.6	3580.9	4222.5	4927.7	5650.2	6216.2
65°	1081.4	1081.4	1172.4	1302.9	1556.3	1895.2	2396.4	3054.3	3893.3	4796.1	5742.4
67.5°	627.3	626.2	647.0	676.7	756.7	893.9	1170.2	1653.9	2447.9	3498.5	4575.5
70°	517.7	514.4	511.0	511.0	523.2	544.0	596.7	729.3	1067.0	1804.2	2815.3
71°	494.6	492.5	483.6	480.4	485.9	496.9	519.8	581.3	757.8	1230.5	2102.5
72.5°	467.2	461.6	448.6	443.0	444.2	448.6	455.1	479.2	533.1	699.7	1198.7
75°	425.5	412.4	396.0	388.2	385.0	383.8	383.8	390.5	402.5	422.3	491.4
77.5°	377.3	358.7	341.0	333.5	327.9	324.6	322.4	318.1	315.8	324.6	349.9
80°	319.2	299.4	285.1	280.8	277.4	270.8	262.1	253.3	247.8	252.2	267.6
82.5°	246.8	227.0	229.2	230.3	224.8	213.8	205.2	195.2	185.3	183.2	190.8
85°	196.3	186.5	179.9	194.2	182.0	168.9	156.8	140.3	117.4	96.5	105.3
87.5°	84.4	85.6	122.9	185.3	162.4	130.6	108.5	87.8	56.0	41.7	42.8
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°	1949.0	1949.0	1949.0	1949.0	1949.0	1949.0	1949.0	1949.0
2.5°	1946.6	1946.6	1943.5	1941.1	1941.1	1941.1	1939.0	1940.1
5°	1959.8	1962.1	1964.2	1963.2	1966.4	1969.8	1968.6	1967.6
7.5°	1981.8	1988.4	1995.0	1998.2	2002.6	2007.1	2008.2	2004.7
10°	2003.7	2016.9	2026.8	2035.5	2040.9	2045.4	2048.7	2047.5
12.5°	2031.2	2049.8	2067.3	2084.8	2097.0	2103.6	2110.1	2108.0
15°	2076.2	2097.0	2118.9	2141.9	2160.6	2170.5	2180.2	2178.1
17.5°	2137.5	2156.1	2173.7	2196.7	2219.8	2230.8	2241.7	2240.6
20°	2214.3	2228.5	2238.4	2251.6	2273.5	2285.6	2295.4	2292.1
22.5°	2302.0	2306.4	2307.6	2311.9	2329.5	2343.7	2356.9	2360.1
25°	2397.4	2394.2	2387.5	2384.3	2396.4	2411.7	2428.2	2432.5
27.5°	2516.0	2505.0	2488.5	2475.3	2478.7	2498.4	2517.1	2521.4
30°	2665.0	2639.8	2604.7	2579.6	2575.1	2595.9	2615.7	2622.3
32.5°	2835.1	2801.1	2752.8	2714.4	2698.0	2716.6	2734.1	2744.1
35°	3036.8	2999.5	2941.4	2892.1	2865.8	2877.8	2908.5	2919.5
37.5°	3275.8	3224.3	3159.7	3097.1	3053.2	3055.4	3088.5	3101.6
40°	3540.2	3465.7	3383.3	3305.6	3242.0	3237.5	3267.1	3277.0
42.5°	3815.6	3720.2	3623.7	3521.5	3442.7	3428.4	3466.7	3467.8
45°	4111.6	3988.8	3869.3	3750.9	3668.6	3643.3	3680.6	3684.9
47.5°	4427.4	4274.0	4132.5	4004.1	3915.4	3875.8	3911.9	3918.5
50°	4756.5	4597.4	4433.0	4290.3	4186.2	4138.0	4180.7	4185.2
52.5°	5082.3	4932.0	4768.6	4605.2	4478.9	4424.2	4474.6	4490.0
55°	5410.1	5265.3	5111.9	4948.5	4789.5	4741.2	4796.1	4812.4
57.5°	5751.3	5611.9	5472.7	5308.2	5153.5	5080.1	5139.3	5162.3
60°	6127.3	6004.6	5872.9	5707.4	5554.8	5469.4	5519.8	5546.1
62.5°	6497.0	6471.7	6352.3	6180.1	5987.1	5901.4	5944.3	5962.9
65°	6527.8	6936.8	6931.3	6760.3	6490.4	6346.7	6358.8	6367.5
67.5°	5697.5	6636.3	7236.1	7289.9	6989.4	6764.5	6738.2	6743.8
70°	4033.7	5322.4	6595.7	7431.4	7549.9	7375.5	7318.4	7327.2
71°	3232.0	4566.8	5968.3	7092.6	7541.1	7490.6	7458.8	7481.9
72.5°	2063.0	3364.7	4729.0	6073.7	6934.6	7181.4	7217.5	7231.9
75°	749.0	1447.7	2450.0	3510.7	4449.5	5095.4	5450.7	5479.2
77.5°	402.5	518.7	801.6	1197.6	1504.8	1669.2	1689.0	1696.5
80°	296.1	343.3	392.6	448.6	483.6	490.3	478.2	452.9
82.5°	209.5	237.0	256.6	276.4	290.6	278.6	231.5	176.5
85°	121.7	133.8	144.7	154.7	156.8	148.1	97.6	80.0
87.5°	48.2	52.6	51.6	58.1	56.0	51.6	38.4	32.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)