

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: P195076

Luminaire Tested: **NAV-AF-04-D-UNV-RW-7060-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195076
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-7060-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(4) 70 CRI, 5700K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND RECTANGULAR WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 16426 lumens
Efficiency: N/A
Efficacy: 127.3 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

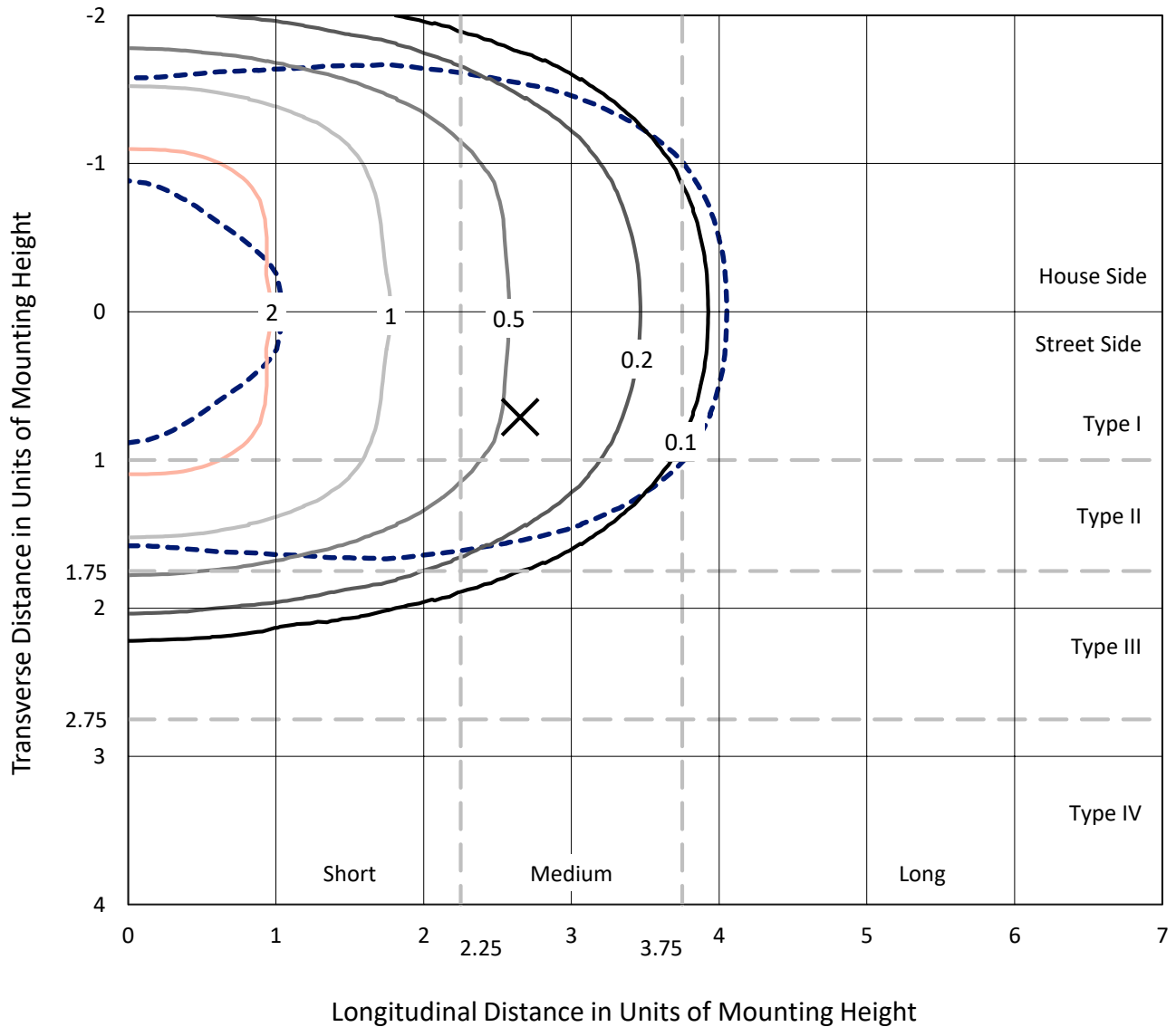
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

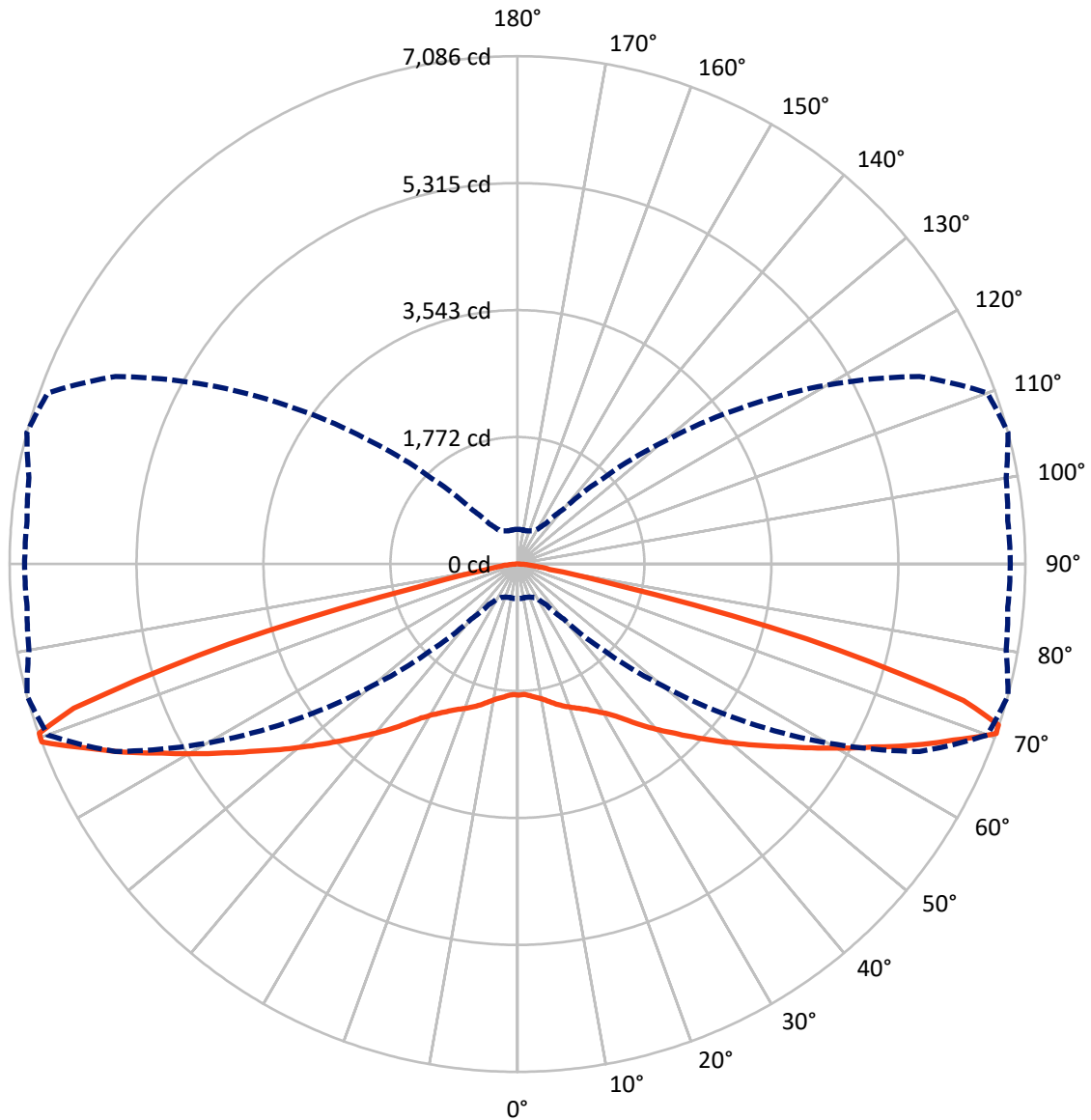
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.9 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	8213.0	0.0	8213.0
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	8213.0	0.0	8213.0
	% Fixture	50.0	0.0	50.0
Total	Lumens	16426.0	0.0	16426.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	175.5	1.1
10°-20°	544.1	3.3
20°-30°	1022.0	6.2
30°-40°	1800.3	11.0
40°-50°	2983.6	18.2
50°-60°	4150.6	25.3
60°-70°	3918.3	23.9
70°-80°	1673.5	10.2
80°-90°	158.1	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°	16426.0	100.0
0°-180°	16426.0	100.0

Coefficient of Utilization



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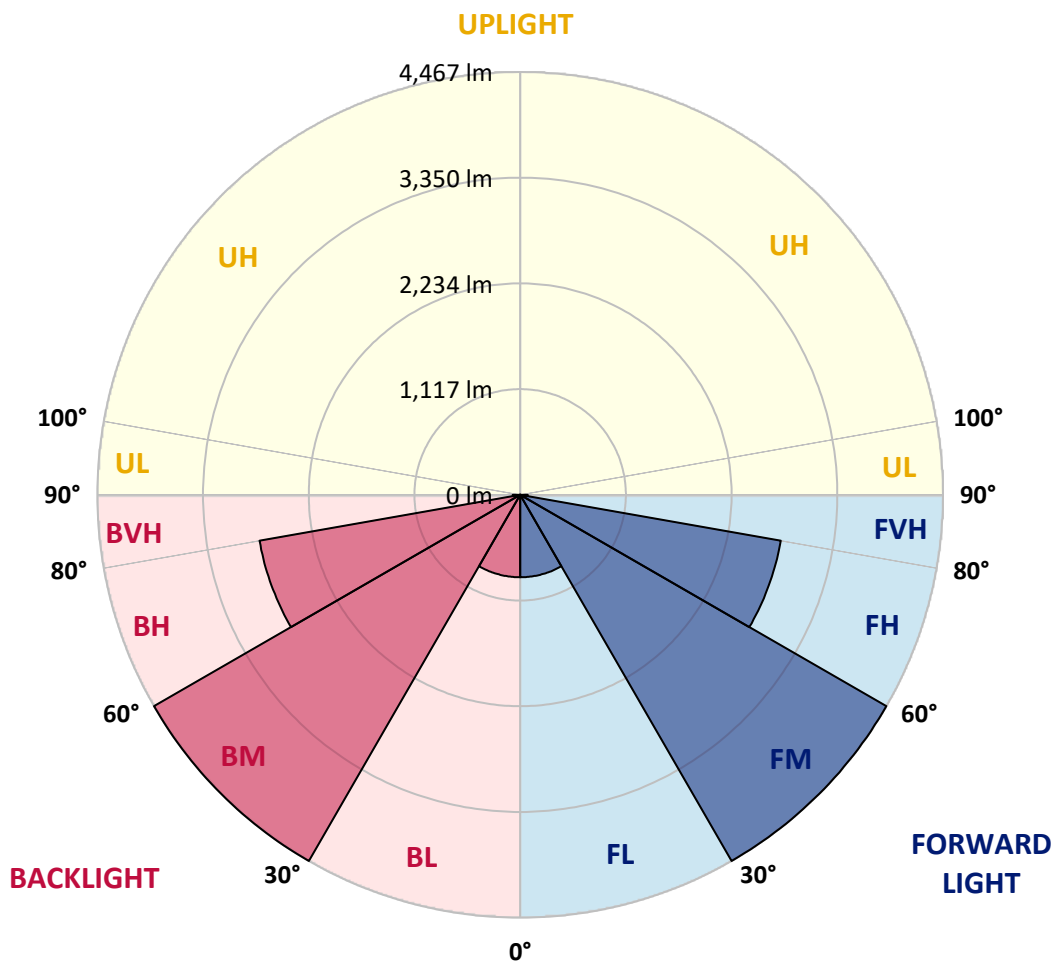
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	870.8	5.3			
FM	(30°-60°)	4467.2	27.2			
FH	(60°-80°)	2795.9	17.0			G2/5000
FVH	(80°-90°)	79.1	0.5			G1/100
BL	(0°-30°)	870.8	5.3	B2/1000		
BM	(30°-60°)	4467.2	27.2	B3/5000		
BH	(60°-80°)	2795.9	17.0	B4/5000		G4/5000
BVH	(80°-90°)	79.1	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°	1829.2	1829.2	1829.2	1829.2	1829.2	1829.2	1829.2	1829.2	1829.2	1829.2	1829.2
2.5°	1840.5	1839.5	1840.5	1837.4	1838.5	1837.4	1837.4	1833.3	1833.3	1831.3	1828.2
5°	1819.9	1822.0	1822.0	1822.0	1825.1	1825.1	1829.2	1830.2	1833.3	1836.4	1838.5
7.5°	1786.0	1787.0	1790.1	1792.1	1798.3	1806.5	1814.8	1824.0	1832.3	1842.6	1853.9
10°	1757.1	1759.2	1764.3	1769.5	1780.8	1791.1	1805.5	1819.9	1834.3	1851.8	1869.3
12.5°	1741.7	1744.8	1753.0	1761.3	1778.8	1792.1	1811.7	1834.3	1853.9	1870.4	1889.9
15°	1743.8	1744.8	1756.1	1767.4	1792.1	1810.7	1838.5	1865.2	1888.9	1907.4	1930.1
17.5°	1773.6	1775.7	1787.0	1803.5	1827.1	1850.8	1880.7	1908.5	1940.4	1962.0	1988.7
20°	1832.3	1835.4	1847.7	1865.2	1891.0	1915.7	1946.5	1975.4	2008.3	2034.0	2060.8
22.5°	1908.5	1913.6	1927.0	1948.6	1974.3	2004.2	2036.1	2066.0	2096.8	2122.6	2145.2
25°	2010.4	2016.5	2031.0	2052.6	2078.3	2110.2	2143.2	2174.0	2205.9	2225.5	2244.0
27.5°	2147.3	2157.6	2173.0	2190.5	2213.2	2247.1	2278.0	2303.7	2334.6	2356.2	2368.6
30°	2331.5	2345.9	2358.3	2376.8	2393.3	2429.3	2454.0	2474.6	2498.3	2510.6	2513.7
32.5°	2557.0	2570.3	2582.7	2596.1	2618.7	2651.7	2675.3	2686.7	2699.0	2697.0	2685.6
35°	2811.2	2821.5	2828.7	2852.4	2889.4	2911.1	2928.6	2932.7	2934.7	2913.1	2891.5
37.5°	3078.9	3091.2	3097.4	3134.4	3169.4	3194.1	3202.4	3211.6	3205.5	3169.4	3130.3
40°	3368.1	3381.5	3400.0	3431.9	3473.1	3496.8	3507.1	3506.0	3500.9	3458.7	3394.9
42.5°	3652.2	3668.7	3684.1	3739.7	3773.7	3813.8	3819.0	3817.9	3806.6	3758.2	3684.1
45°	3893.1	3912.6	3944.6	4006.3	4060.9	4109.3	4128.8	4136.0	4124.7	4073.2	3988.8
47.5°	4091.8	4105.1	4145.3	4220.4	4290.4	4361.5	4400.6	4428.4	4427.3	4390.3	4300.7
50°	4227.6	4243.1	4292.5	4376.9	4464.4	4547.8	4625.0	4687.8	4717.6	4690.9	4607.5
52.5°	4266.7	4286.3	4351.2	4452.0	4553.9	4666.1	4781.4	4892.6	4959.5	4976.0	4911.1
55°	4102.1	4123.7	4218.4	4358.4	4526.2	4691.9	4866.9	5025.4	5163.3	5227.2	5201.4
57.5°	3622.4	3637.8	3758.2	3939.4	4179.3	4470.6	4765.0	5055.2	5292.0	5457.7	5486.6
60°	2864.7	2884.3	3016.1	3207.5	3480.3	3848.8	4260.6	4736.1	5200.4	5580.2	5768.6
62.5°	1933.2	1946.5	2073.2	2248.2	2546.7	2901.8	3360.9	3963.1	4625.0	5303.3	5834.5
65°	1015.0	1015.0	1100.4	1222.9	1460.7	1778.8	2249.2	2866.8	3654.3	4501.4	5389.8
67.5°	588.8	587.8	607.3	635.1	710.3	838.9	1098.3	1552.3	2297.6	3283.7	4294.5
70°	485.9	482.8	479.7	479.7	491.0	510.6	560.0	684.5	1001.6	1693.3	2642.4
71°	464.2	462.2	454.0	450.9	456.0	466.3	487.9	545.6	711.3	1155.0	1973.3
72.5°	438.5	433.4	421.0	415.9	416.9	421.0	427.2	449.8	500.3	656.7	1125.1
75°	399.4	387.0	371.6	364.4	361.3	360.3	360.3	366.5	377.8	396.3	461.2
77.5°	354.1	336.6	320.1	312.9	307.8	304.7	302.6	298.5	296.5	304.7	328.4
80°	299.5	281.0	267.6	263.5	260.4	254.3	246.0	237.8	232.6	236.8	251.2
82.5°	231.6	213.1	215.1	216.2	211.0	200.7	192.5	183.2	174.0	171.9	179.1
85°	184.3	175.0	168.8	182.2	170.9	158.5	147.2	131.8	110.1	90.6	98.8
87.5°	79.3	80.3	115.3	174.0	152.3	122.5	101.9	82.3	52.5	39.1	40.1
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°	1829.2	1829.2	1829.2	1829.2	1829.2	1829.2	1829.2	1829.2
2.5°	1827.1	1827.1	1824.0	1822.0	1822.0	1822.0	1819.9	1821.0
5°	1839.5	1841.5	1843.6	1842.6	1845.7	1848.8	1847.7	1846.7
7.5°	1860.1	1866.3	1872.4	1875.5	1879.6	1883.8	1884.8	1881.7
10°	1880.7	1893.0	1902.3	1910.5	1915.7	1919.8	1922.9	1921.8
12.5°	1906.4	1923.9	1940.4	1956.8	1968.2	1974.3	1980.5	1978.5
15°	1948.6	1968.2	1988.7	2010.4	2027.9	2037.1	2046.4	2044.3
17.5°	2006.2	2023.7	2040.2	2061.8	2083.5	2093.7	2104.0	2103.0
20°	2078.3	2091.7	2100.9	2113.3	2133.9	2145.2	2154.5	2151.4
22.5°	2160.7	2164.8	2165.8	2169.9	2186.4	2199.8	2212.1	2215.2
25°	2250.2	2247.1	2240.9	2237.9	2249.2	2263.6	2279.0	2283.1
27.5°	2361.4	2351.1	2335.6	2323.3	2326.4	2344.9	2362.4	2366.5
30°	2501.4	2477.7	2444.8	2421.1	2417.0	2436.5	2455.1	2461.2
32.5°	2660.9	2629.0	2583.7	2547.7	2532.3	2549.8	2566.2	2575.5
35°	2850.3	2815.3	2760.8	2714.5	2689.8	2701.1	2729.9	2740.2
37.5°	3074.7	3026.4	2965.6	2906.9	2865.8	2867.8	2898.7	2911.1
40°	3322.8	3252.8	3175.6	3102.5	3042.8	3038.7	3066.5	3075.8
42.5°	3581.2	3491.6	3401.0	3305.3	3231.2	3217.8	3253.8	3254.9
45°	3859.1	3743.8	3631.6	3520.5	3443.3	3419.6	3454.6	3458.7
47.5°	4155.6	4011.5	3878.7	3758.2	3674.9	3637.8	3671.8	3677.9
50°	4464.4	4315.1	4160.7	4026.9	3929.1	3883.8	3924.0	3928.1
52.5°	4770.1	4629.1	4475.7	4322.3	4204.0	4152.5	4199.8	4214.3
55°	5077.9	4942.0	4797.9	4644.5	4495.3	4450.0	4501.4	4516.9
57.5°	5398.0	5267.3	5136.6	4982.2	4837.0	4768.1	4823.6	4845.3
60°	5751.1	5635.8	5512.3	5356.9	5213.8	5133.5	5180.8	5205.5
62.5°	6098.0	6074.3	5962.1	5800.5	5619.3	5539.1	5579.2	5596.7
65°	6126.8	6510.8	6505.6	6345.1	6091.8	5957.0	5968.3	5976.5
67.5°	5347.6	6228.7	6791.8	6842.2	6560.2	6349.2	6324.5	6329.6
70°	3786.0	4995.5	6190.6	6975.0	7086.2	6922.5	6869.0	6877.2
71°	3033.6	4286.3	5601.8	6657.0	7078.0	7030.6	7000.8	7022.4
72.5°	1936.3	3158.1	4438.7	5700.7	6508.7	6740.3	6774.3	6787.7
75°	703.1	1358.8	2299.6	3295.0	4176.2	4782.5	5116.0	5142.7
77.5°	377.8	486.9	752.5	1124.1	1412.3	1566.7	1585.2	1592.4
80°	277.9	322.2	368.5	421.0	454.0	460.1	448.8	425.1
82.5°	196.6	222.3	240.9	259.4	272.8	261.5	217.2	165.7
85°	114.3	125.6	135.9	145.1	147.2	139.0	91.6	75.1
87.5°	45.3	49.4	48.4	54.6	52.5	48.4	36.0	30.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)