

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: P196532

Luminaire Tested: **NAV-AF-02-D-UNV-RW-7030-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196532
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-02-D-UNV-RW-7030-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 3000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND RECTANGULAR WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 13206.2 lumens
Efficiency: N/A
Efficacy: 102.4 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type II - Medium - Full Cutoff
BUG Rating: B3 - U0 - G3

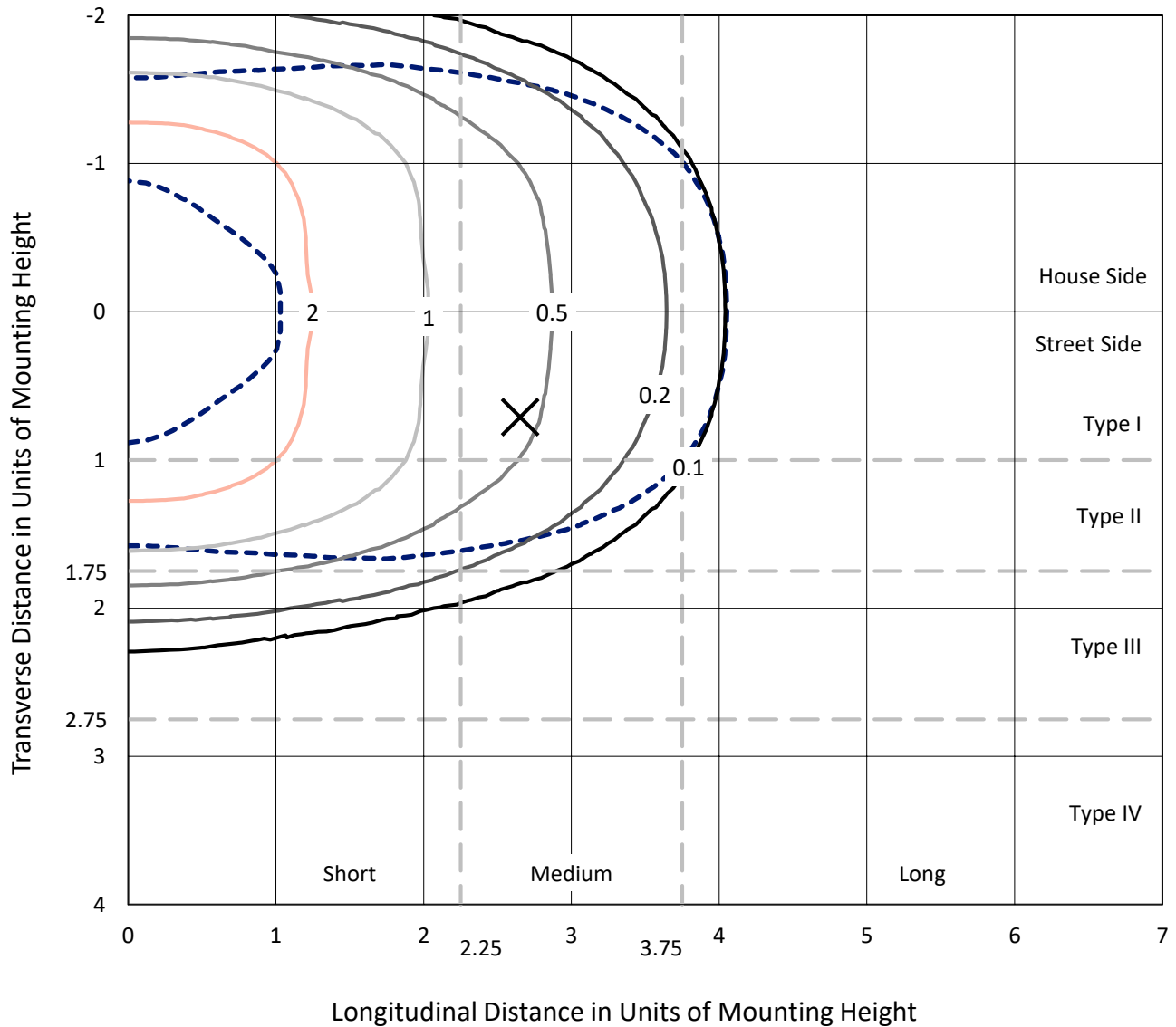
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

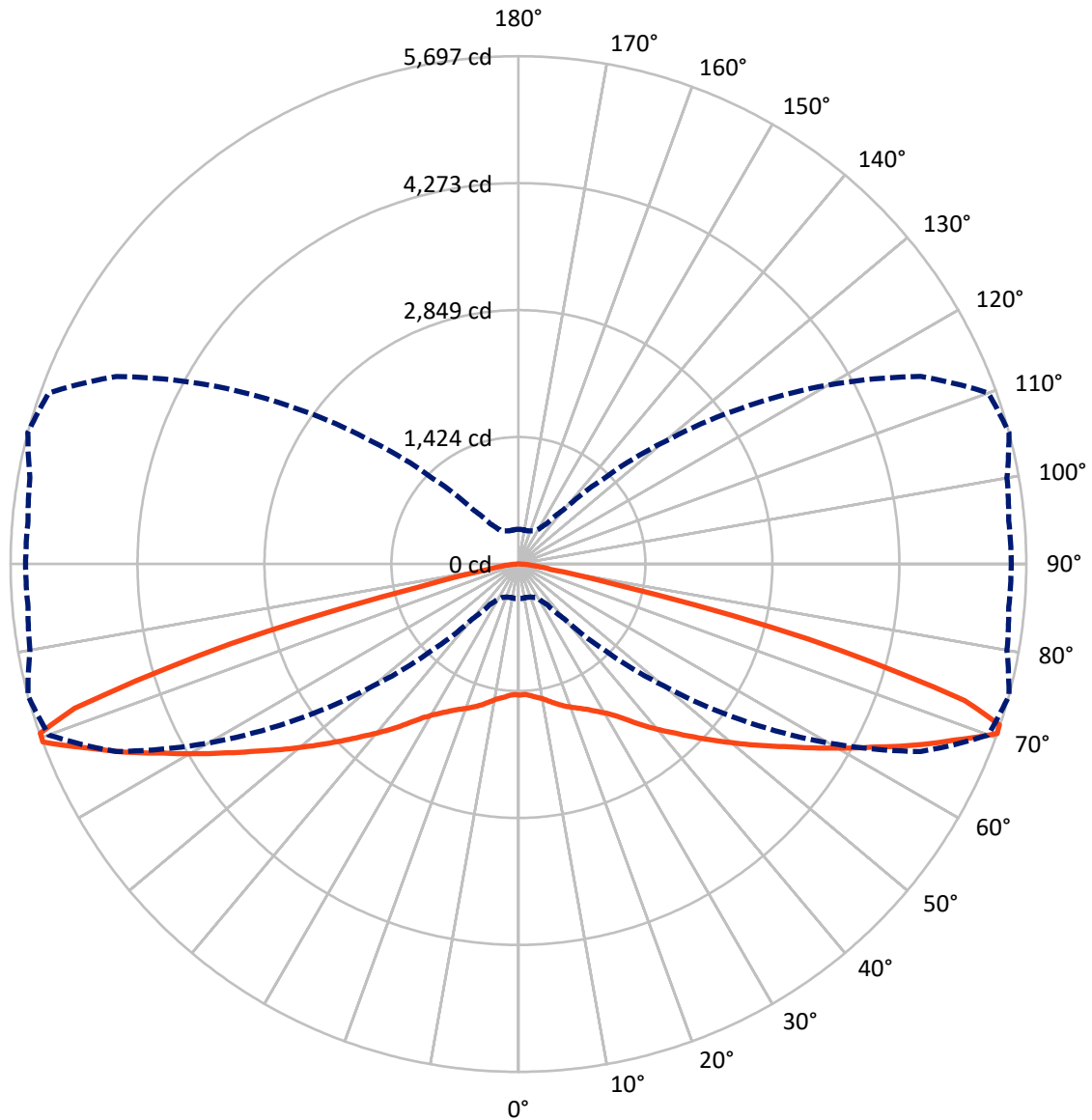
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 3.7 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	6603.1	0.0	6603.1
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	6603.1	0.0	6603.1
	% Fixture	50.0	0.0	50.0
Total	Lumens	13206.2	0.0	13206.2
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	141.1	1.1
10°-20°	437.5	3.3
20°-30°	821.7	6.2
30°-40°	1447.4	11.0
40°-50°	2398.8	18.2
50°-60°	3337.0	25.3
60°-70°	3150.2	23.9
70°-80°	1345.5	10.2
80°-90°	127.1	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°	13206.2	100.0
0°-180°	13206.2	100.0



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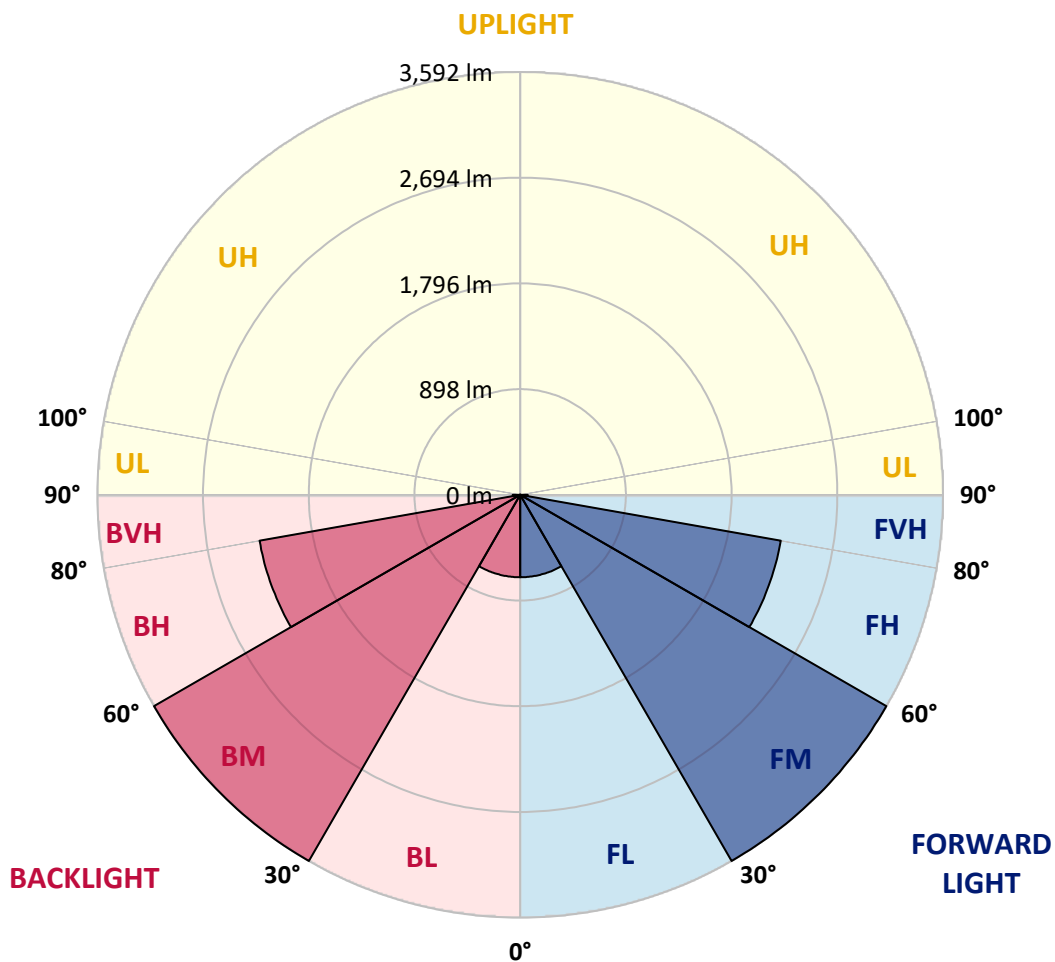
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	700.1	5.3			
FM	(30°-60°)	3591.6	27.2			
FH	(60°-80°)	2247.8	17.0			G2/5000
FVH	(80°-90°)	63.6	0.5			G1/100
BL	(0°-30°)	700.1	5.3	B2/1000		
BM	(30°-60°)	3591.6	27.2	B3/5000		
BH	(60°-80°)	2247.8	17.0	B3/2500		G3/2500
BVH	(80°-90°)	63.6	0.5			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G3

Type II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1470.6	1470.6	1470.6	1470.6	1470.6	1470.6	1470.6	1470.6	1470.6	1470.6	1470.6
2.5°	1479.7	1479.0	1479.7	1477.3	1478.1	1477.3	1477.3	1473.9	1473.9	1472.3	1469.7
5°	1463.2	1464.8	1464.8	1464.8	1467.4	1467.4	1470.6	1471.5	1473.9	1476.4	1478.1
7.5°	1435.8	1436.6	1439.2	1440.8	1445.8	1452.4	1459.0	1466.5	1473.2	1481.4	1490.6
10°	1412.7	1414.4	1418.5	1422.7	1431.8	1440.0	1451.6	1463.2	1474.8	1488.8	1502.9
12.5°	1400.2	1402.8	1409.5	1416.0	1430.1	1440.8	1456.5	1474.8	1490.6	1503.7	1519.5
15°	1401.9	1402.8	1411.8	1421.0	1440.8	1455.8	1478.1	1499.6	1518.6	1533.6	1551.7
17.5°	1426.0	1427.6	1436.6	1450.0	1469.0	1488.0	1512.0	1534.3	1560.0	1577.3	1598.9
20°	1473.2	1475.6	1485.5	1499.6	1520.4	1540.1	1565.0	1588.2	1614.7	1635.3	1656.8
22.5°	1534.3	1538.5	1549.3	1566.7	1587.3	1611.3	1637.0	1661.0	1685.8	1706.5	1724.6
25°	1616.3	1621.3	1632.9	1650.3	1670.9	1696.6	1723.0	1747.9	1773.5	1789.2	1804.2
27.5°	1726.4	1734.6	1747.0	1761.2	1779.3	1806.6	1831.5	1852.2	1877.0	1894.3	1904.3
30°	1874.5	1886.1	1895.9	1911.0	1924.2	1953.1	1973.0	1989.5	2008.6	2018.4	2021.0
32.5°	2055.7	2066.5	2076.5	2087.2	2105.4	2131.8	2150.9	2160.0	2170.0	2168.2	2159.2
35°	2260.1	2268.4	2274.2	2293.3	2323.1	2340.5	2354.5	2357.9	2359.5	2342.1	2324.7
37.5°	2475.4	2485.3	2490.2	2520.1	2548.2	2568.0	2574.7	2582.2	2577.1	2548.2	2516.7
40°	2707.9	2718.7	2733.5	2759.3	2792.3	2811.3	2819.7	2818.8	2814.6	2780.7	2729.4
42.5°	2936.4	2949.6	2961.9	3006.6	3033.9	3066.3	3070.4	3069.5	3060.5	3021.6	2961.9
45°	3130.0	3145.7	3171.4	3221.0	3264.8	3303.8	3319.6	3325.3	3316.1	3274.8	3207.0
47.5°	3289.7	3300.4	3332.7	3393.1	3449.5	3506.5	3538.0	3560.3	3559.4	3529.7	3457.7
50°	3398.9	3411.3	3451.1	3518.9	3589.2	3656.4	3718.4	3768.9	3792.8	3771.3	3704.3
52.5°	3430.4	3446.1	3498.3	3579.4	3661.3	3751.5	3844.2	3933.6	3987.3	4000.6	3948.4
55°	3298.0	3315.4	3391.5	3504.1	3638.9	3772.1	3912.9	4040.3	4151.2	4202.5	4181.8
57.5°	2912.3	2924.8	3021.6	3167.2	3360.0	3594.2	3830.9	4064.3	4254.7	4387.9	4411.2
60°	2303.1	2318.9	2424.9	2578.7	2798.1	3094.3	3425.4	3807.8	4181.1	4486.4	4637.8
62.5°	1554.2	1565.0	1666.7	1807.4	2047.5	2333.0	2702.1	3186.2	3718.4	4263.8	4690.8
65°	816.0	816.0	884.7	983.3	1174.3	1430.1	1808.2	2304.9	2938.0	3619.1	4333.3
67.5°	473.4	472.5	488.3	510.7	571.0	674.4	883.1	1248.0	1847.1	2640.0	3452.7
70°	390.6	388.1	385.6	385.6	394.8	410.5	450.2	550.3	805.2	1361.4	2124.4
71°	373.2	371.6	364.9	362.5	366.7	374.9	392.2	438.6	571.9	928.6	1586.5
72.5°	352.6	348.4	338.4	334.4	335.2	338.4	343.4	361.6	402.2	528.0	904.5
75°	321.1	311.2	298.8	293.0	290.5	289.6	289.6	294.7	303.7	318.6	370.7
77.5°	284.7	270.6	257.5	251.7	247.5	245.0	243.3	240.1	238.3	245.0	264.0
80°	240.8	225.9	215.1	211.9	209.3	204.5	197.8	191.2	187.1	190.3	201.9
82.5°	186.2	171.3	172.9	173.8	169.7	161.3	154.7	147.3	139.9	138.2	144.0
85°	148.1	140.7	135.7	146.5	137.3	127.4	118.3	106.0	88.5	72.8	79.4
87.5°	63.7	64.6	92.7	139.9	122.5	98.5	82.0	66.2	42.2	31.4	32.2
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°	1470.6	1470.6	1470.6	1470.6	1470.6	1470.6	1470.6	1470.6
2.5°	1469.0	1469.0	1466.5	1464.8	1464.8	1464.8	1463.2	1464.0
5°	1479.0	1480.6	1482.2	1481.4	1483.8	1486.4	1485.5	1484.8
7.5°	1495.4	1500.4	1505.4	1507.9	1511.2	1514.6	1515.3	1512.8
10°	1512.0	1522.0	1529.4	1535.9	1540.1	1543.5	1545.9	1545.2
12.5°	1532.7	1546.8	1560.0	1573.3	1582.4	1587.3	1592.4	1590.6
15°	1566.7	1582.4	1598.9	1616.3	1630.3	1637.8	1645.2	1643.6
17.5°	1613.0	1627.1	1640.3	1657.7	1675.1	1683.3	1691.6	1690.8
20°	1670.9	1681.7	1689.1	1699.1	1715.6	1724.6	1732.2	1729.7
22.5°	1737.1	1740.4	1741.3	1744.6	1757.8	1768.6	1778.5	1781.0
25°	1809.2	1806.6	1801.6	1799.2	1808.2	1819.9	1832.3	1835.5
27.5°	1898.5	1890.1	1877.8	1867.9	1870.4	1885.3	1899.4	1902.6
30°	2011.0	1992.1	1965.6	1946.5	1943.1	1958.9	1973.8	1978.8
32.5°	2139.3	2113.7	2077.2	2048.3	2035.9	2049.9	2063.2	2070.7
35°	2291.6	2263.6	2219.6	2182.4	2162.5	2171.6	2194.8	2203.1
37.5°	2472.0	2433.1	2384.2	2337.2	2304.1	2305.7	2330.5	2340.5
40°	2671.5	2615.2	2553.2	2494.4	2446.4	2443.0	2465.4	2472.9
42.5°	2879.2	2807.2	2734.3	2657.4	2597.8	2587.0	2616.0	2616.9
45°	3102.6	3010.0	2919.7	2830.4	2768.3	2749.3	2777.4	2780.7
47.5°	3341.0	3225.2	3118.4	3021.6	2954.5	2924.8	2952.0	2957.0
50°	3589.2	3469.3	3345.2	3237.6	3158.9	3122.5	3154.8	3158.1
52.5°	3835.1	3721.7	3598.4	3475.1	3379.9	3338.5	3376.5	3388.1
55°	4082.5	3973.3	3857.4	3734.2	3614.1	3577.7	3619.1	3631.4
57.5°	4339.9	4234.8	4129.7	4005.6	3888.9	3833.5	3878.1	3895.5
60°	4623.8	4531.1	4431.8	4306.8	4191.7	4127.2	4165.3	4185.1
62.5°	4902.7	4883.7	4793.4	4663.5	4517.9	4453.3	4485.5	4499.7
65°	4925.9	5234.5	5230.3	5101.4	4897.6	4789.3	4798.3	4805.0
67.5°	4299.4	5007.8	5460.4	5500.9	5274.3	5104.6	5084.7	5088.9
70°	3043.9	4016.4	4977.2	5607.7	5697.3	5565.5	5522.5	5529.2
71°	2438.8	3446.1	4503.7	5352.1	5690.6	5652.4	5628.5	5645.9
72.5°	1556.7	2539.0	3568.6	4583.2	5232.9	5419.0	5446.3	5457.2
75°	565.2	1092.4	1848.8	2649.1	3357.5	3845.1	4113.2	4134.7
77.5°	303.7	391.4	605.0	903.7	1135.4	1259.6	1274.5	1280.3
80°	223.4	259.1	296.3	338.4	364.9	370.0	360.9	341.8
82.5°	158.1	178.7	193.6	208.5	219.3	210.3	174.6	133.3
85°	91.9	100.9	109.3	116.7	118.3	111.8	73.6	60.4
87.5°	36.4	39.8	38.9	43.8	42.2	38.9	29.0	24.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)