

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: P270546

Luminaire Tested: **NAV-AF-04-D-UNV-T3-7027-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P270546  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (p24135)  
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-T3-7027-600  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(4) 70 CRI, 2700K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 13969.5 lumens  
Efficiency: N/A  
Efficacy: 108.3 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type III - Short - Semi-Cutoff  
BUG Rating: B2 - U0 - G2

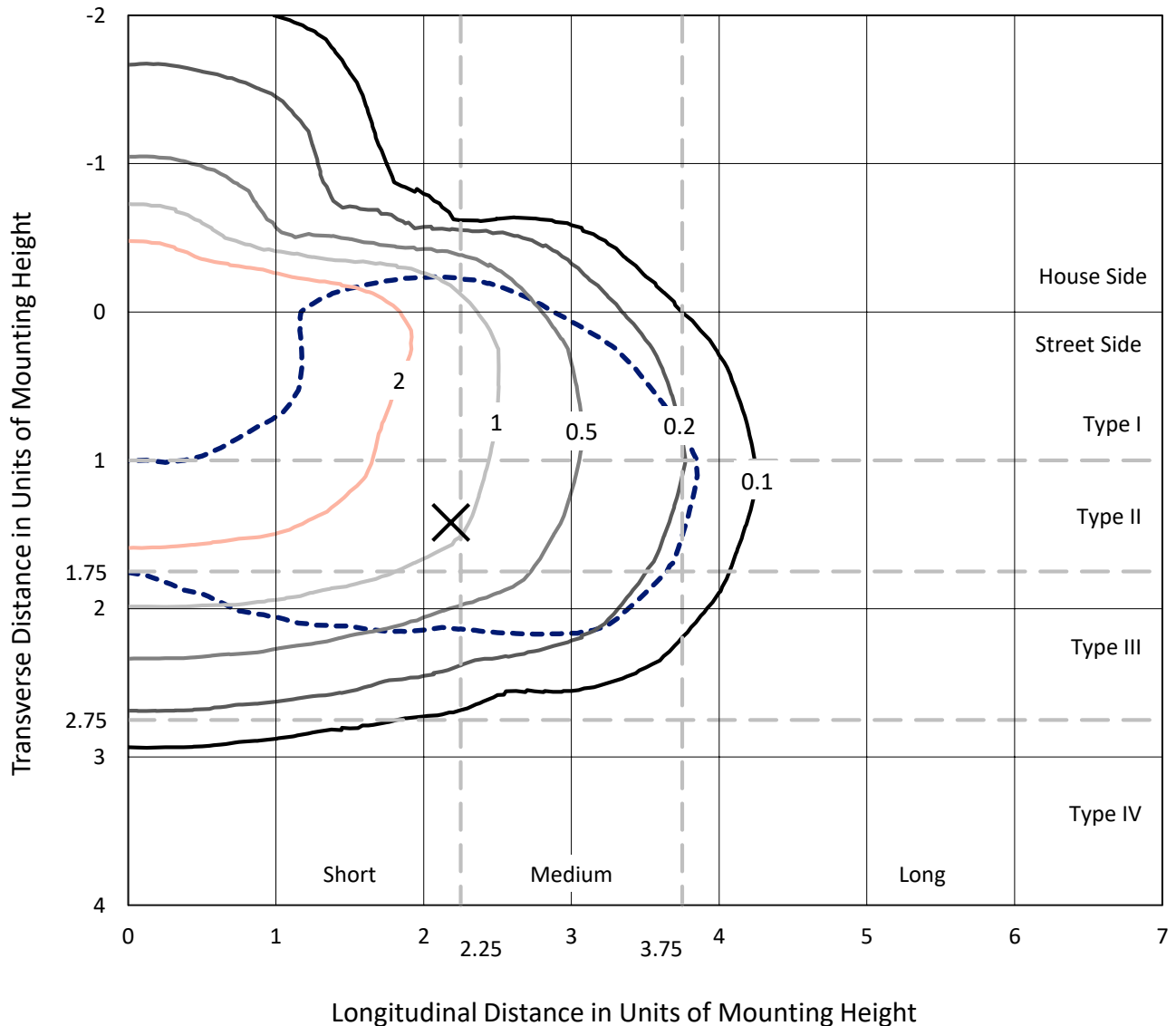
Input Watts (W): 129  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

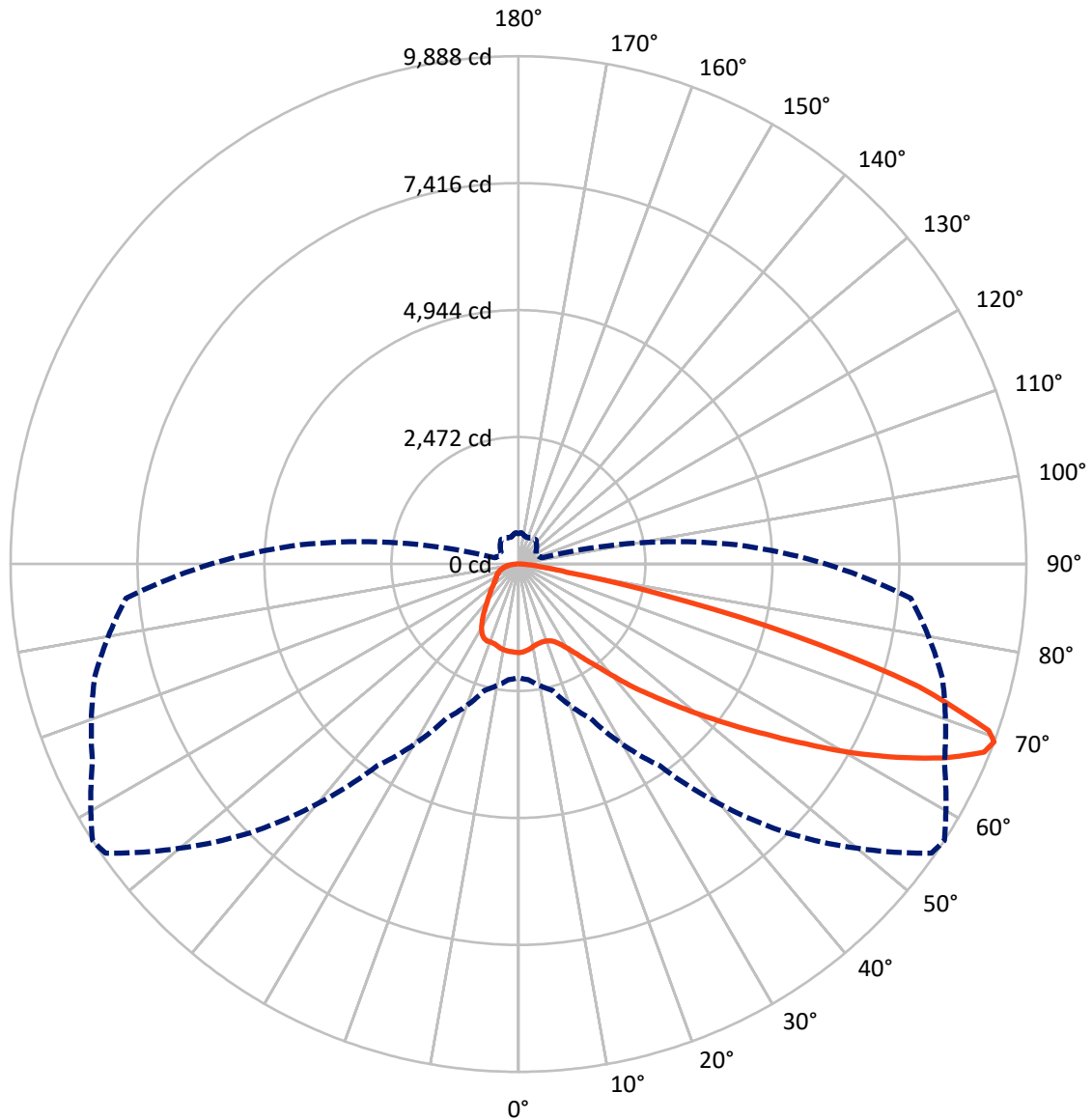
× Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 4.4 fc  
 Type III - Short - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 57-Deg Lateral    - - - Horizontal Cone Through 69-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	3082.6	0.0	3082.6
	% Fixture	22.1	0.0	22.1
<b>Street Side</b>	Lumens	10886.9	0.0	10886.9
	% Fixture	77.9	0.0	77.9
<b>Total</b>	Lumens	13969.5	0.0	13969.5
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	161.6	1.2
10°-20°	459.5	3.3
20°-30°	764.3	5.5
30°-40°	1248.1	8.9
40°-50°	2106.4	15.1
50°-60°	3276.7	23.5
60°-70°	3903.2	27.9
70°-80°	1818.4	13.0
80°-90°	231.3	1.7
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°	13969.5	100.0
0°-180°	13969.5	100.0

**Coefficient of Utilization**



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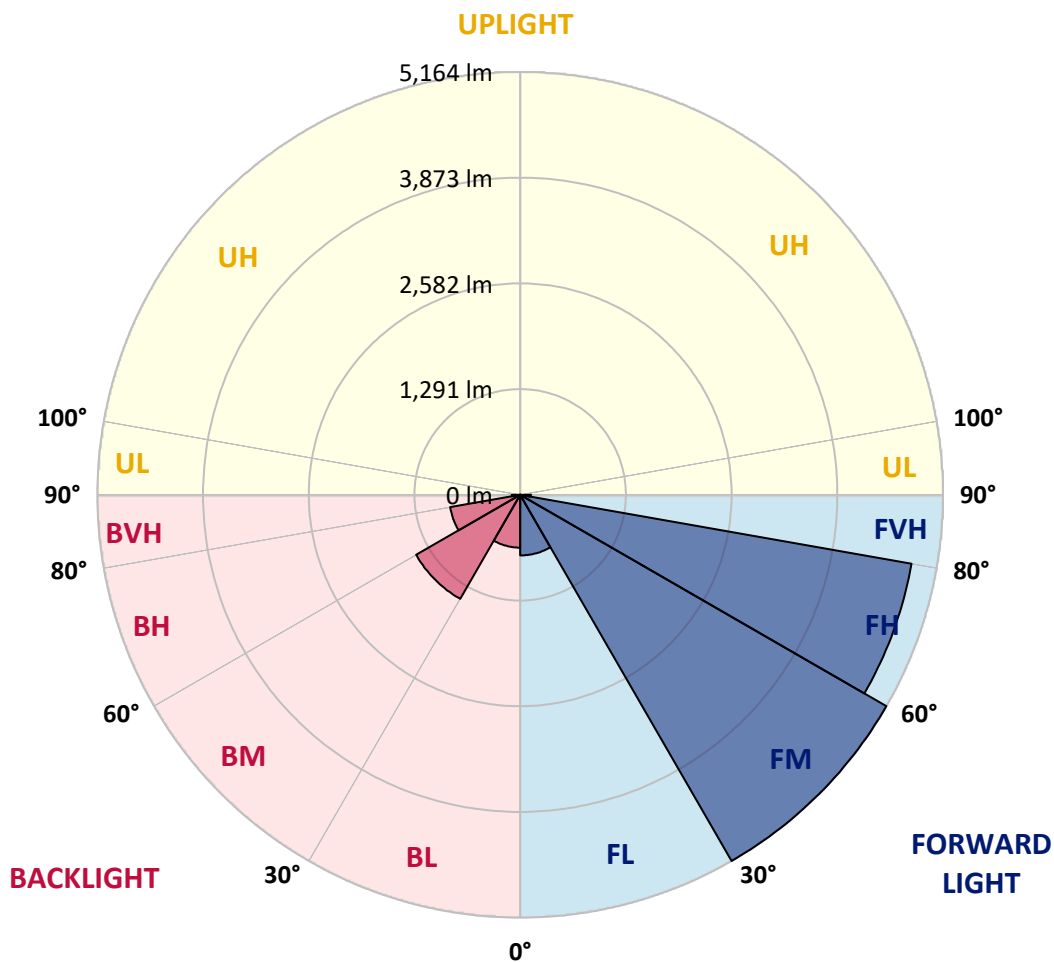
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	739.8	5.3			
FM	(30°-60°)	5164.1	37.0			
FH	(60°-80°)	4853.0	34.7			G2/5000
FVH	(80°-90°)	130.0	0.9			G2/225
BL	(0°-30°)	645.5	4.6	B2/1000		
BM	(30°-60°)	1467.1	10.5	B2/2500		
BH	(60°-80°)	868.6	6.2	B2/1000		G2/1000
BVH	(80°-90°)	101.3	0.7			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G2**

Type III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	57°	65°	75°	85°
0°	1726.1	1726.1	1726.1	1726.1	1726.1	1726.1	1726.1	1726.1	1726.1	1726.1	1726.1
2.5°	1716.2	1716.2	1720.8	1720.8	1720.8	1718.8	1713.5	1715.4	1711.7	1709.0	1704.7
5°	1681.4	1683.2	1688.5	1690.3	1692.9	1693.8	1693.8	1692.9	1693.8	1693.8	1691.1
7.5°	1633.1	1634.8	1641.2	1644.6	1652.7	1659.9	1663.4	1663.4	1668.0	1671.4	1672.5
10°	1603.6	1603.6	1607.1	1607.1	1613.4	1616.9	1628.5	1627.6	1640.2	1651.9	1657.3
12.5°	1599.9	1599.9	1598.2	1591.8	1588.4	1587.5	1599.1	1600.9	1619.6	1640.2	1650.0
15°	1611.6	1611.6	1606.2	1593.8	1580.3	1574.0	1585.7	1589.2	1609.9	1633.9	1649.2
17.5°	1649.2	1648.3	1636.6	1611.6	1588.4	1578.5	1582.1	1585.7	1604.5	1632.1	1650.9
20°	1732.3	1732.3	1707.3	1661.7	1621.4	1598.2	1592.9	1595.5	1609.0	1634.8	1659.0
22.5°	1878.0	1880.8	1836.0	1760.9	1692.0	1642.9	1621.4	1624.0	1630.3	1655.3	1682.3
25°	2092.7	2085.5	2022.1	1915.6	1808.4	1724.2	1680.5	1683.2	1683.2	1706.4	1734.1
27.5°	2320.0	2321.7	2230.4	2116.0	1974.7	1849.5	1779.7	1778.9	1777.9	1800.4	1829.8
30°	2576.6	2577.4	2472.0	2339.5	2177.8	2017.7	1913.0	1912.1	1904.0	1931.7	1970.3
32.5°	2857.4	2856.5	2734.0	2584.7	2404.9	2223.3	2087.4	2086.5	2080.3	2117.8	2164.2
35°	3168.6	3168.6	3047.1	2862.8	2668.7	2466.6	2309.2	2308.3	2311.9	2362.8	2406.6
37.5°	3543.4	3551.4	3404.8	3181.2	2969.2	2753.7	2570.3	2564.9	2538.2	2623.9	2696.4
40°	3934.1	3956.6	3804.5	3543.4	3314.3	3091.6	2889.6	2886.1	2862.8	2953.9	3071.1
42.5°	4357.1	4408.2	4239.1	3972.7	3723.0	3482.5	3279.5	3269.7	3180.2	3322.4	3505.7
45°	4911.7	4944.8	4699.8	4458.3	4223.0	3948.5	3706.9	3654.2	3564.8	3747.2	3985.2
47.5°	5289.1	5273.1	5120.0	4958.1	4807.0	4544.0	4172.9	4105.9	3996.7	4238.3	4500.2
50°	5523.4	5534.9	5449.2	5441.2	5433.0	5249.8	4698.9	4618.4	4492.2	4778.4	5084.2
52.5°	5678.0	5625.4	5640.5	5823.1	6043.8	5956.2	5293.5	5204.2	5074.4	5360.6	5705.9
55°	5613.7	5544.0	5684.4	6043.8	6563.5	6583.1	5946.4	5854.3	5743.5	5979.5	6453.6
57.5°	5347.3	5382.0	5603.8	6103.9	6918.6	7144.8	6696.8	6602.8	6384.7	6624.3	7163.7
60°	4972.5	5043.2	5382.0	6009.0	7167.1	7582.1	7520.4	7457.8	7082.1	7252.1	7909.4
62.5°	4570.0	4639.7	5056.6	5847.2	7055.4	7969.4	8328.9	8290.5	7852.3	7856.7	8382.5
65°	3975.3	4003.9	4429.6	5405.3	6745.1	8319.1	9138.3	9104.3	8588.2	8372.7	8514.9
67.5°	3002.2	3038.1	3387.7	4266.9	5800.6	8129.5	9784.9	9779.5	9030.9	8564.1	8200.1
69°	2217.0	2260.9	2546.2	3312.6	4796.3	7406.9	9815.3	9887.7	9150.9	8544.5	7668.0
70°	1622.2	1672.5	1936.2	2629.2	3995.0	6609.1	9555.0	9710.7	9105.2	8420.2	7253.1
72.5°	689.4	706.5	836.2	1186.8	2026.5	3985.2	7826.4	8153.6	8223.4	7544.5	5666.5
75°	431.9	437.4	488.3	609.1	901.4	1648.3	5068.1	5514.4	6139.6	5853.4	3793.7
77.5°	325.5	329.9	359.5	419.5	559.9	615.2	2351.3	2803.7	3516.5	3443.2	1888.0
80°	249.5	252.2	271.8	305.0	394.4	385.5	762.9	958.8	1467.7	1294.9	668.1
82.5°	195.9	196.8	213.7	220.1	275.5	259.3	382.8	426.5	592.9	492.8	326.4
85°	173.6	176.2	193.1	160.9	176.2	156.6	210.2	228.1	314.8	296.9	123.3
87.5°	88.6	93.1	161.9	137.7	88.6	74.2	92.2	99.3	127.9	138.6	59.9
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):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1726.1	1726.1	1726.1	1726.1	1726.1	1726.1	1726.1	1726.1	1726.1	1726.1	1726.1
2.5°	1705.5	1706.4	1709.0	1713.5	1720.8	1729.6	1740.3	1751.1	1757.4	1761.8	1760.0
5°	1691.1	1692.0	1697.4	1705.5	1714.4	1727.8	1745.8	1759.2	1769.0	1775.2	1774.3
7.5°	1673.4	1676.0	1686.7	1695.6	1708.1	1718.8	1733.2	1745.8	1755.6	1761.8	1760.9
10°	1659.9	1662.6	1676.0	1687.6	1698.3	1700.1	1697.4	1693.8	1692.9	1697.4	1695.6
12.5°	1653.6	1659.0	1671.4	1679.6	1675.1	1658.1	1638.4	1630.3	1627.6	1636.6	1637.5
15°	1655.3	1659.9	1670.6	1665.3	1641.2	1612.5	1601.8	1608.0	1613.4	1618.7	1619.6
17.5°	1659.9	1662.6	1665.3	1645.5	1611.6	1592.9	1589.2	1583.0	1566.9	1557.9	1557.0
20°	1668.0	1671.4	1667.1	1635.8	1605.4	1580.3	1537.4	1498.9	1462.3	1442.6	1434.6
22.5°	1695.6	1698.3	1685.0	1654.5	1608.0	1526.6	1439.9	1373.7	1317.4	1286.9	1275.4
25°	1750.2	1754.7	1735.9	1697.4	1575.7	1433.7	1311.0	1221.7	1151.0	1114.3	1104.5
27.5°	1845.8	1850.4	1829.8	1729.6	1500.7	1309.3	1160.8	1072.2	1011.5	980.2	975.6
30°	1988.9	1995.2	1976.5	1728.8	1386.3	1151.0	1014.1	962.4	927.4	906.0	905.0
32.5°	2187.6	2210.8	2133.8	1698.3	1245.0	990.9	903.2	885.4	868.4	854.1	854.1
35°	2439.7	2494.4	2289.5	1634.8	1089.3	881.7	841.5	824.6	803.2	788.0	786.0
37.5°	2741.1	2826.1	2400.5	1522.2	955.2	829.0	804.1	776.2	742.3	712.7	705.6
40°	3155.1	3174.9	2455.0	1338.8	854.9	800.4	769.0	734.3	691.3	658.2	654.7
42.5°	3571.0	3506.7	2444.2	1142.0	797.8	774.5	733.3	694.8	656.4	628.8	628.8
45°	4044.2	3796.4	2362.8	944.4	745.9	745.0	700.3	663.6	634.1	613.5	609.1
47.5°	4496.6	4056.7	2222.3	798.7	692.2	715.5	678.8	649.3	622.4	602.9	599.2
50°	5045.8	4358.0	2073.1	696.6	640.3	689.4	669.9	654.7	628.8	594.8	591.2
52.5°	5591.4	4710.4	1957.6	619.8	594.8	669.0	675.3	677.1	652.9	586.8	582.2
55°	6177.1	5086.9	1836.0	559.9	557.2	659.1	687.7	685.9	674.3	588.5	581.4
57.5°	6734.4	5465.3	1654.5	517.9	527.7	649.3	690.4	661.8	641.2	597.5	585.8
60°	7195.9	5778.3	1388.1	488.3	502.6	629.6	672.6	629.6	594.8	595.7	584.8
62.5°	7420.3	5865.9	1061.5	454.4	482.0	597.5	646.6	605.5	573.3	599.2	592.9
65°	7249.4	5616.5	756.6	423.0	457.0	559.9	631.4	584.8	562.5	617.0	609.9
67.5°	6635.9	4936.7	549.1	395.3	432.9	521.3	602.9	566.1	551.7	630.5	614.4
69°	5984.0	4262.4	475.8	379.3	415.8	500.9	584.0	556.3	543.7	611.7	588.5
70°	5442.0	3742.8	439.1	369.4	401.5	489.1	569.6	550.0	535.7	589.4	561.6
72.5°	3902.0	2419.1	369.4	339.9	364.1	463.3	538.4	526.8	505.2	532.2	514.2
75°	2357.4	1262.7	313.9	309.5	324.6	427.6	501.8	487.4	466.0	468.6	459.8
77.5°	1083.0	583.1	262.9	273.7	283.5	382.8	457.0	440.9	421.2	414.1	414.9
80°	474.8	340.7	220.1	233.4	238.8	344.3	408.6	390.9	369.4	407.8	378.2
82.5°	256.6	197.6	171.8	180.6	195.9	299.7	355.0	331.8	311.3	362.1	292.5
85°	103.8	101.1	116.3	125.3	136.0	215.6	296.9	272.7	247.8	221.8	216.4
87.5°	44.7	48.2	57.2	60.8	72.5	134.1	199.5	174.5	175.3	150.2	147.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)