

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: P197319

Luminaire Tested: **NAV-AF-03-D-UNV-T4FT-8030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197319
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24256)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-03-D-UNV-T4FT-8030
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 80 CRI, 3000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV FORWARD THROW OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 14898 lumens
Efficiency: N/A
Efficacy: 89.7 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B2 - U0 - G3

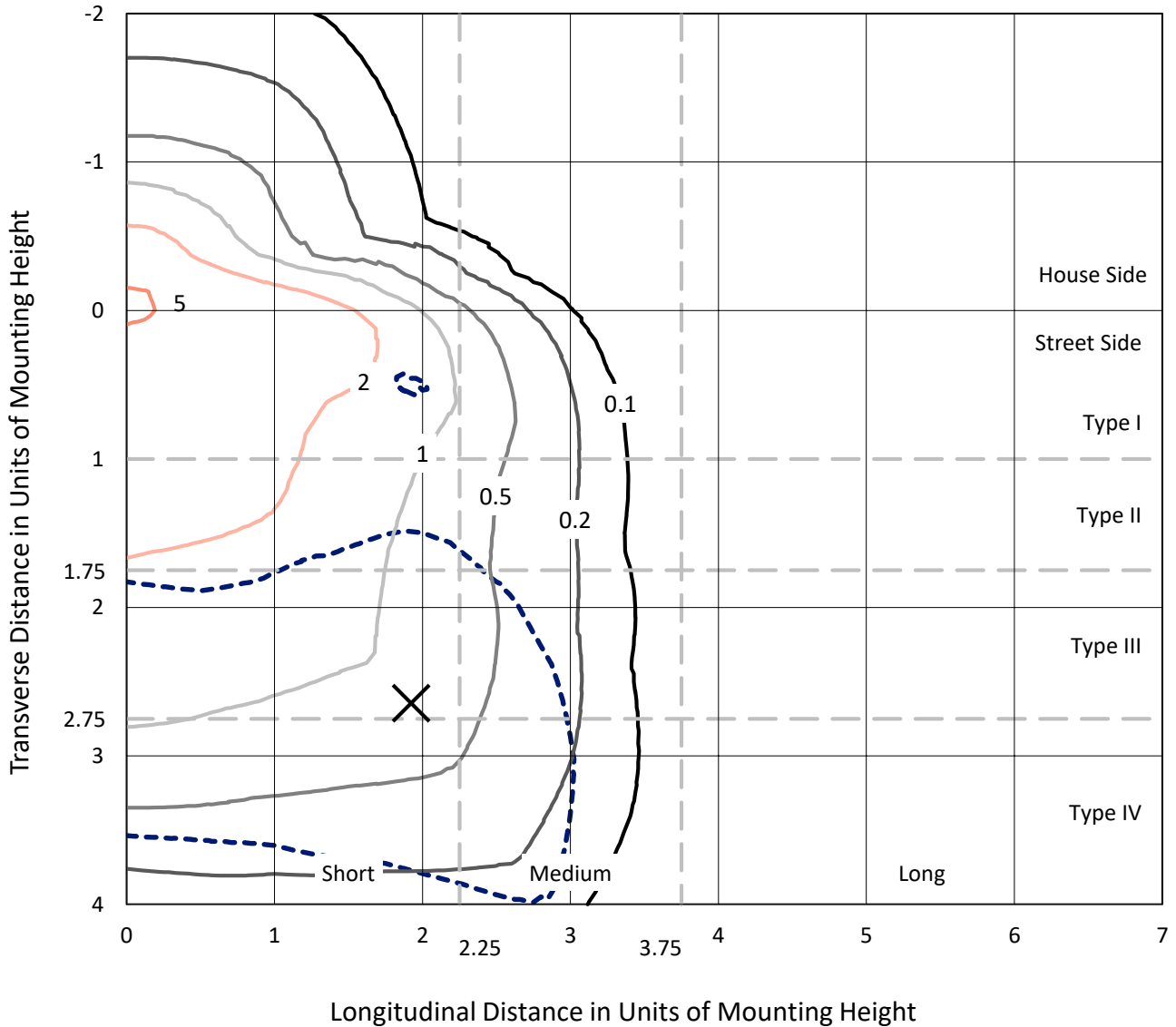
Input Watts (W): 166
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

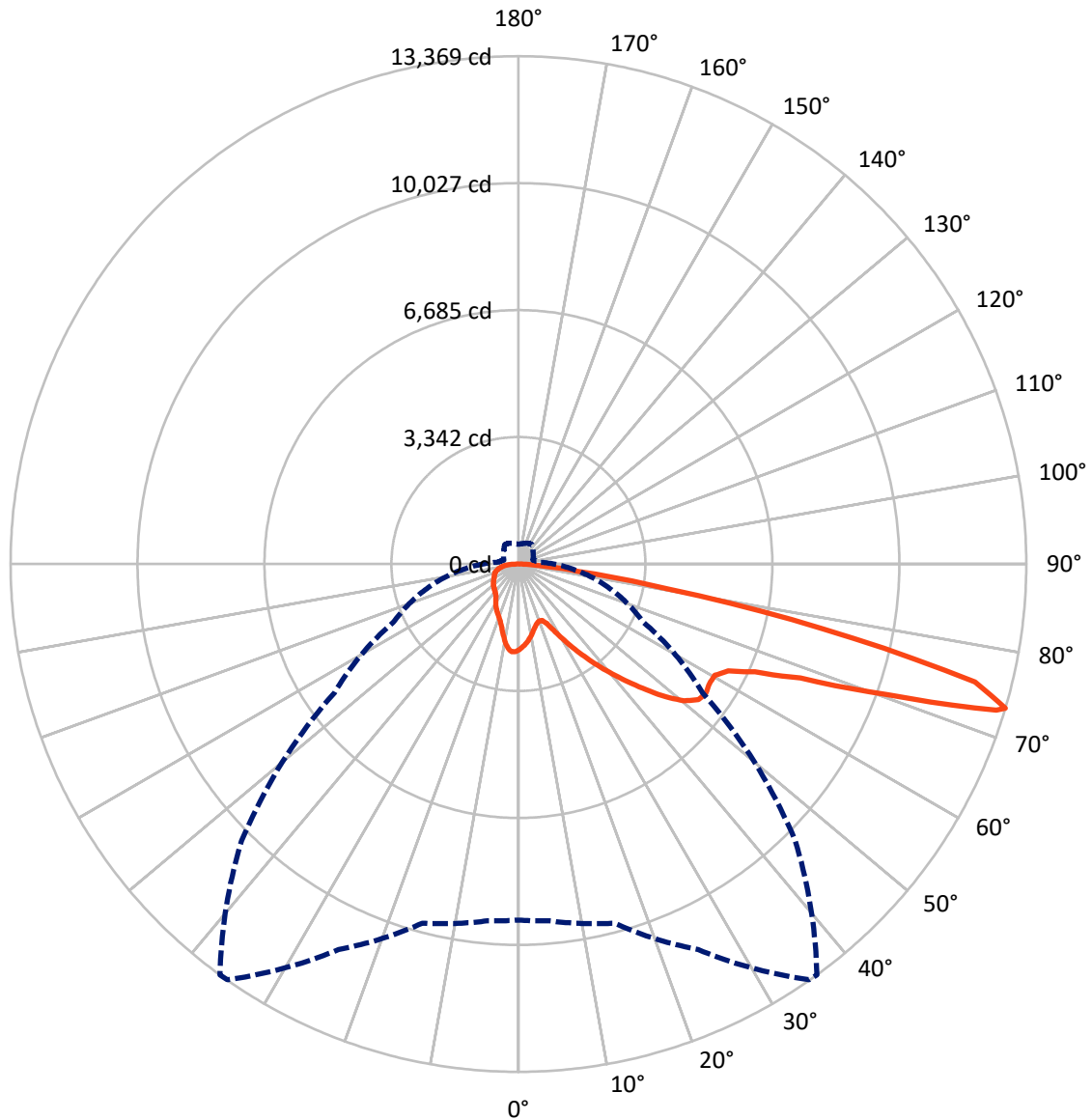
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 5.6 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 36-Deg Lateral - - - Horizontal Cone Through 73-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2872.8	0.0	2872.8
	% Fixture	19.3	0.0	19.3
Street Side	Lumens	12025.2	0.0	12025.2
	% Fixture	80.7	0.0	80.7
Total	Lumens	14898.0	0.0	14898.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	205.0	1.4
10°-20°	514.8	3.5
20°-30°	825.3	5.5
30°-40°	1365.2	9.2
40°-50°	2112.4	14.2
50°-60°	2827.9	19.0
60°-70°	3694.1	24.8
70°-80°	3017.5	20.3
80°-90°	335.9	2.3
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°	14898.0	100.0
0°-180°	14898.0	100.0



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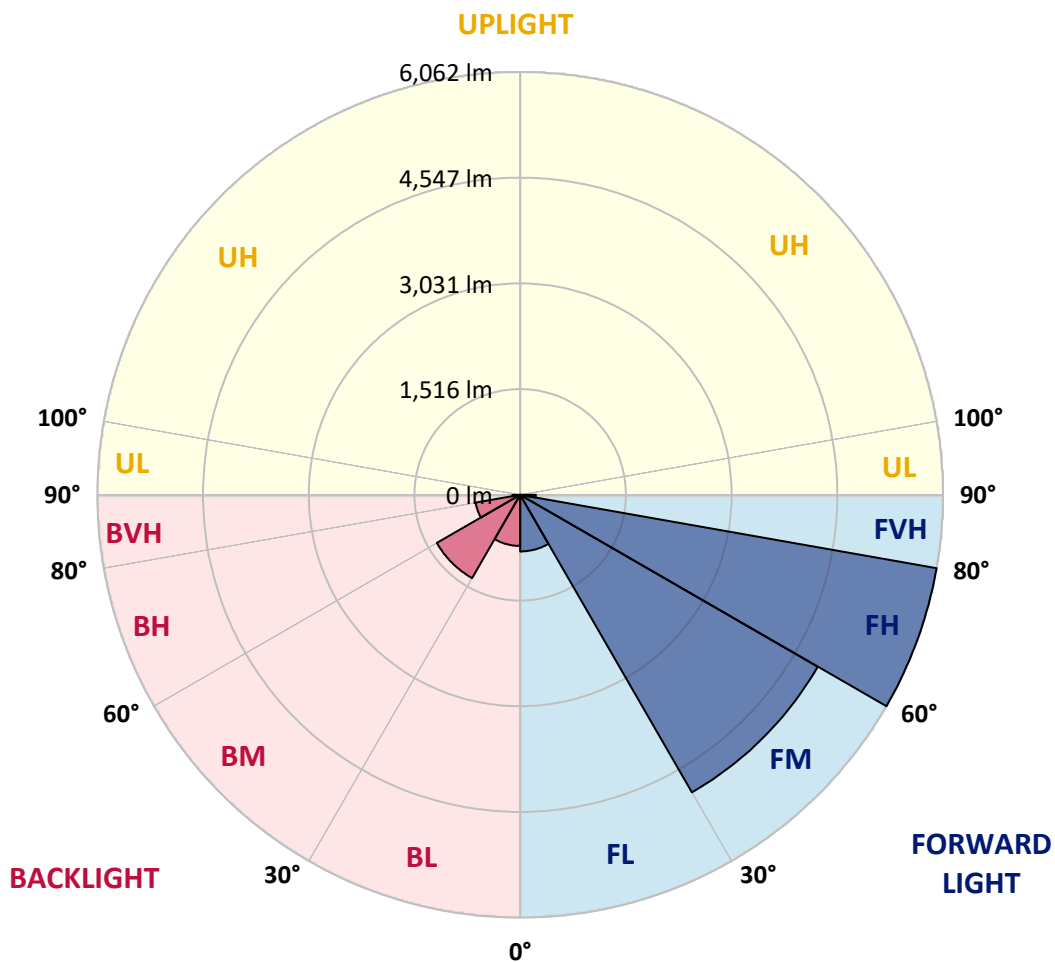
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	811.8	5.4			
FM (30°-60°)	4925.8	33.1			
FH (60°-80°)	6062.4	40.7			G3/7500
FVH (80°-90°)	225.3	1.5			G3/500
BL (0°-30°)	733.3	4.9	B2/1000		
BM (30°-60°)	1379.7	9.3	B2/2500		
BH (60°-80°)	649.2	4.4	B2/1000		G2/1000
BVH (80°-90°)	110.6	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-G3

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	2256.6	2256.6	2256.6	2256.6	2256.6	2256.6	2256.6	2256.6	2256.6	2256.6	2256.6
2.5°	2170.5	2176.2	2177.1	2183.7	2183.7	2182.8	2185.6	2197.0	2202.7	2215.9	2227.3
5°	2063.5	2070.1	2073.0	2084.3	2098.5	2099.5	2109.9	2131.7	2152.5	2181.8	2206.4
7.5°	1943.3	1950.9	1958.4	1982.1	2002.9	2004.8	2024.7	2059.7	2087.2	2123.1	2167.6
10°	1826.9	1828.8	1836.3	1866.6	1894.1	1896.9	1925.3	1965.1	2002.0	2052.2	2102.3
12.5°	1731.3	1736.9	1735.1	1757.8	1781.4	1783.3	1821.2	1871.4	1925.3	1982.1	2041.7
15°	1698.1	1697.2	1677.3	1676.4	1686.8	1688.7	1725.6	1784.3	1844.9	1914.9	1991.6
17.5°	1720.9	1713.3	1661.2	1629.0	1622.4	1624.3	1651.8	1716.1	1780.5	1860.9	1952.8
20°	1845.8	1816.5	1694.4	1616.7	1595.0	1595.0	1611.1	1663.1	1734.1	1827.8	1943.3
22.5°	2142.1	2096.6	1836.3	1698.1	1621.5	1613.9	1601.6	1641.3	1719.9	1832.6	1982.1
25°	2515.0	2493.3	2096.6	1914.9	1756.8	1732.2	1650.8	1665.0	1749.3	1883.7	2088.1
27.5°	2860.5	2822.7	2438.4	2230.1	2006.7	1968.9	1796.6	1738.8	1819.3	1978.3	2241.5
30°	3062.1	3036.6	2789.5	2590.8	2324.8	2276.5	2029.4	1884.6	1944.2	2134.5	2459.2
32.5°	3281.7	3266.6	3141.7	2960.9	2669.3	2613.5	2330.4	2122.2	2135.5	2341.8	2721.4
35°	3494.7	3514.6	3443.6	3311.1	3040.4	2988.3	2734.6	2432.7	2371.1	2574.7	3001.6
37.5°	3750.3	3755.0	3710.5	3624.4	3430.4	3387.8	3178.6	2764.0	2627.7	2822.7	3272.3
40°	4260.5	4185.7	4011.5	3943.4	3827.9	3801.4	3562.9	3067.8	2866.2	3077.3	3527.9
42.5°	4812.3	4695.9	4423.3	4311.6	4265.2	4240.6	3882.8	3270.4	3089.6	3331.9	3778.7
45°	5257.2	5162.6	4895.6	4757.4	4763.1	4723.4	4162.1	3451.2	3331.9	3587.5	4058.9
47.5°	5695.5	5537.4	5238.3	5218.4	5284.7	5226.0	4429.0	3632.0	3584.6	3865.8	4339.1
50°	5723.9	5580.0	5458.8	5617.9	5731.5	5658.6	4671.3	3868.6	3846.8	4202.8	4700.6
52.5°	5378.4	5357.6	5542.1	5810.0	5998.4	5933.1	4869.1	4111.9	4114.7	4624.0	5140.8
55°	5252.5	5226.0	5447.5	5776.9	6031.5	5992.7	5016.8	4386.4	4411.9	5135.1	5613.1
57.5°	5464.5	5398.3	5441.8	5714.4	5953.9	5931.2	5170.1	4691.2	4737.6	5723.9	6049.5
60°	6122.4	5987.0	5756.1	5807.2	5956.7	5943.5	5389.7	5031.0	5108.6	6337.3	6325.9
62.5°	7107.8	6954.4	6484.0	6256.8	6223.7	6198.1	5752.3	5448.4	5487.2	6780.3	6165.0
65°	8188.7	8024.0	7464.6	7092.6	6897.6	6842.7	6337.3	5952.0	5708.7	6779.3	5538.4
67.5°	9402.2	9228.1	8670.5	8315.6	8104.5	8010.8	7286.7	6359.0	5636.8	6205.7	4431.8
70°	10645.1	10479.4	10223.9	10347.9	10440.6	10297.7	8782.2	6494.4	5120.0	4865.4	2976.0
72.5°	9985.3	9972.1	10166.1	11341.8	13129.8	13158.2	10275.9	6112.0	3955.7	2891.8	1586.4
73°	9372.9	9428.7	9788.4	11195.0	13359.8	13369.3	10305.3	5914.1	3632.0	2491.4	1393.3
75°	4855.9	5234.5	6569.2	9077.6	12370.7	12415.2	9084.2	4477.3	2164.8	1383.9	939.0
77.5°	1300.6	1283.5	2116.5	4422.4	8247.4	8188.7	5740.0	2167.6	1037.4	868.0	658.8
80°	445.8	451.5	720.3	1617.7	3849.7	3986.9	2491.4	945.6	682.5	604.9	466.7
82.5°	227.2	234.7	376.7	688.2	1610.1	1576.0	801.7	556.6	457.2	367.3	261.3
85°	121.2	124.9	207.3	356.9	590.7	597.3	282.1	297.2	290.6	208.2	128.7
87.5°	59.6	61.5	99.4	157.1	218.7	211.1	98.4	128.7	142.9	117.4	71.0
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°	2256.6	2256.6	2256.6	2256.6	2256.6	2256.6	2256.6	2256.6	2256.6	2256.6	2256.6
2.5°	2241.5	2241.5	2253.8	2274.6	2289.7	2303.9	2313.4	2328.6	2337.1	2336.1	2335.2
5°	2226.3	2235.8	2260.4	2286.0	2303.0	2314.4	2314.4	2321.0	2321.0	2318.1	2314.4
7.5°	2191.3	2207.4	2243.4	2266.1	2270.8	2258.5	2233.9	2215.0	2191.3	2179.0	2174.3
10°	2135.5	2156.3	2201.7	2212.1	2187.5	2144.0	2084.3	2033.2	1987.8	1967.0	1960.3
12.5°	2080.6	2108.0	2150.6	2134.5	2075.8	1990.6	1898.8	1828.8	1777.7	1757.8	1751.1
15°	2035.1	2068.2	2101.4	2051.2	1949.0	1830.7	1729.4	1664.1	1625.3	1610.1	1606.3
17.5°	2004.8	2043.6	2055.0	1961.3	1819.3	1686.8	1596.9	1554.3	1537.2	1530.6	1528.7
20°	2006.7	2050.3	2022.8	1874.2	1694.4	1560.9	1501.3	1488.9	1488.9	1488.9	1488.0
22.5°	2058.8	2096.6	2009.6	1792.8	1574.1	1454.9	1429.3	1439.7	1447.3	1447.3	1446.4
25°	2166.7	2187.5	2019.0	1714.2	1461.5	1363.1	1364.0	1383.9	1390.5	1390.5	1388.6
27.5°	2331.4	2314.4	2036.1	1627.1	1350.7	1279.8	1293.0	1311.0	1315.7	1312.9	1311.9
30°	2537.7	2469.6	2050.3	1524.9	1246.6	1202.1	1213.5	1223.9	1220.1	1213.5	1212.6
32.5°	2768.7	2627.7	2041.7	1410.4	1154.8	1121.7	1128.3	1134.0	1128.3	1112.2	1112.2
35°	2997.8	2770.6	1995.4	1285.4	1081.9	1044.1	1043.1	1061.1	1060.2	1041.2	1042.2
37.5°	3198.4	2883.2	1905.4	1170.9	1019.5	987.3	991.1	1002.4	1008.1	982.5	979.7
40°	3373.6	2960.9	1778.6	1073.4	969.3	971.2	960.8	942.8	936.2	924.8	922.9
42.5°	3538.3	3014.8	1644.2	992.0	943.7	965.5	930.5	887.9	869.9	880.3	886.9
45°	3700.1	3075.4	1514.5	924.8	911.5	948.5	900.2	852.9	832.0	836.8	843.4
47.5°	3898.0	3159.6	1358.3	852.9	862.3	917.2	881.3	830.1	798.9	780.0	774.3
50°	4158.3	3281.7	1155.8	775.2	810.3	883.1	865.2	797.0	762.9	725.1	715.6
52.5°	4483.9	3397.2	951.3	712.8	767.7	853.8	838.7	768.6	727.0	681.5	674.0
55°	4808.6	3413.3	775.2	658.8	719.4	814.0	806.5	745.9	687.2	650.3	642.7
57.5°	5035.7	3260.9	656.9	613.4	673.0	764.8	777.1	718.4	654.1	625.7	620.9
60°	5039.5	2896.5	585.0	583.1	638.0	722.2	746.8	686.3	633.3	614.3	610.5
62.5°	4639.1	2334.2	538.6	560.4	612.4	687.2	724.1	668.3	628.5	620.9	617.2
65°	3888.5	1724.6	501.7	539.5	588.8	657.9	705.2	662.6	626.6	623.8	620.9
67.5°	2870.9	1182.3	470.4	513.0	562.3	627.6	687.2	654.1	615.3	626.6	622.8
70°	1806.0	789.4	441.1	482.7	527.2	592.6	663.5	638.9	601.1	594.4	582.1
72.5°	1019.5	570.8	406.1	443.9	481.8	546.2	631.4	613.4	568.9	542.4	530.1
73°	921.0	540.5	397.6	434.5	471.4	536.7	623.8	605.8	559.4	530.1	518.7
75°	674.0	442.0	358.7	395.7	427.8	493.2	587.8	567.9	517.8	482.7	475.2
77.5°	488.4	340.8	308.6	341.7	370.1	432.6	533.9	511.1	461.9	443.0	435.4
80°	352.1	258.4	255.6	287.8	312.4	375.8	476.1	452.5	405.1	461.0	448.7
82.5°	210.1	165.6	187.4	223.4	248.9	315.2	413.6	386.2	340.8	344.6	293.4
85°	100.3	93.7	116.4	146.7	164.7	215.8	344.6	322.8	272.6	223.4	218.7
87.5°	44.5	42.6	55.8	65.3	88.0	129.7	235.7	209.2	197.8	118.3	92.8
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)