

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: P197289

Luminaire Tested: **NAV-AF-03-D-UNV-T3R-8030-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197289
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24250)
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-T3R-8030-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 80 CRI, 3000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III
ROADWAY OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12147 lumens
Efficiency: N/A
Efficacy: 98.0 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type III - Medium - Full Cutoff
BUG Rating: B2 - U0 - G2

Input Watts (W): 124
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

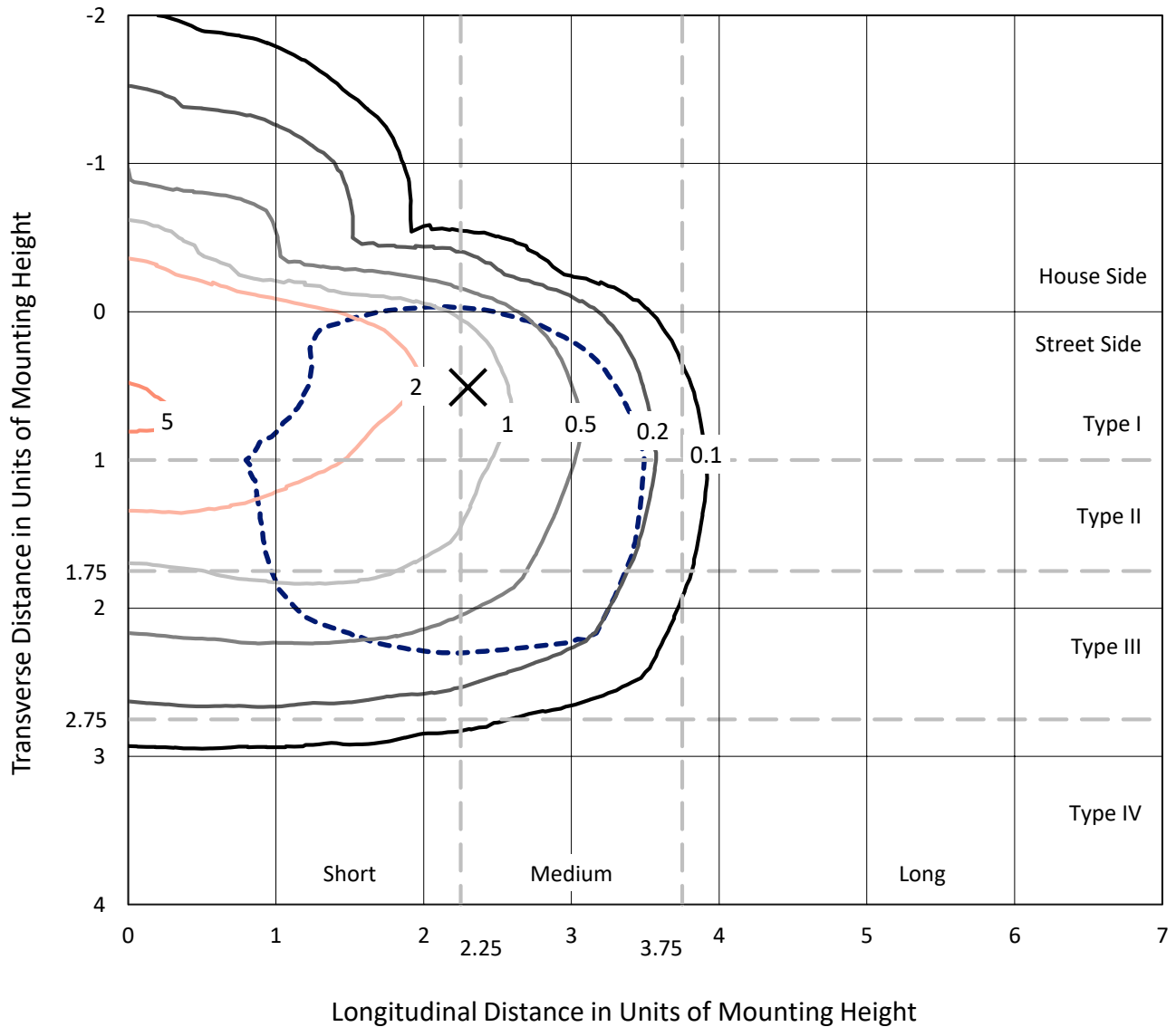


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Iso-Footcandle Lines of Horizontal Illumination

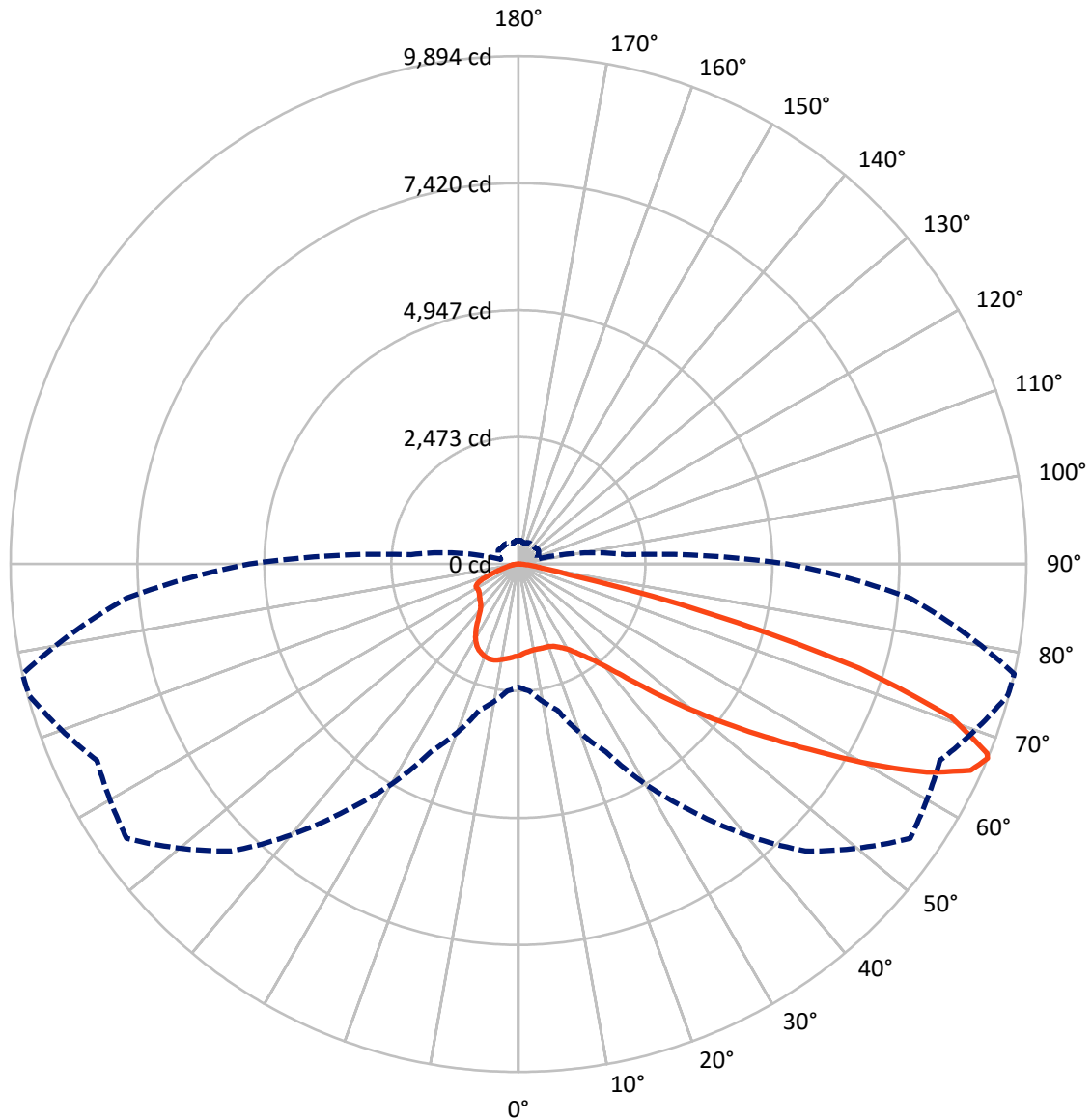
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 5.4 fc
 Type III - Medium - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 77.5-Deg Lateral - - - Horizontal Cone Through 67-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2087.5	0.0	2087.5
	% Fixture	17.2	0.0	17.2
Street Side	Lumens	10059.5	0.0	10059.5
	% Fixture	82.8	0.0	82.8
Total	Lumens	12147.0	0.0	12147.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	159.2	1.3
10°-20°	440.9	3.6
20°-30°	749.2	6.2
30°-40°	1198.6	9.9
40°-50°	1845.2	15.2
50°-60°	2560.0	21.1
60°-70°	3414.9	28.1
70°-80°	1625.1	13.4
80°-90°	153.9	1.3
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°	12147.0	100.0
0°-180°	12147.0	100.0



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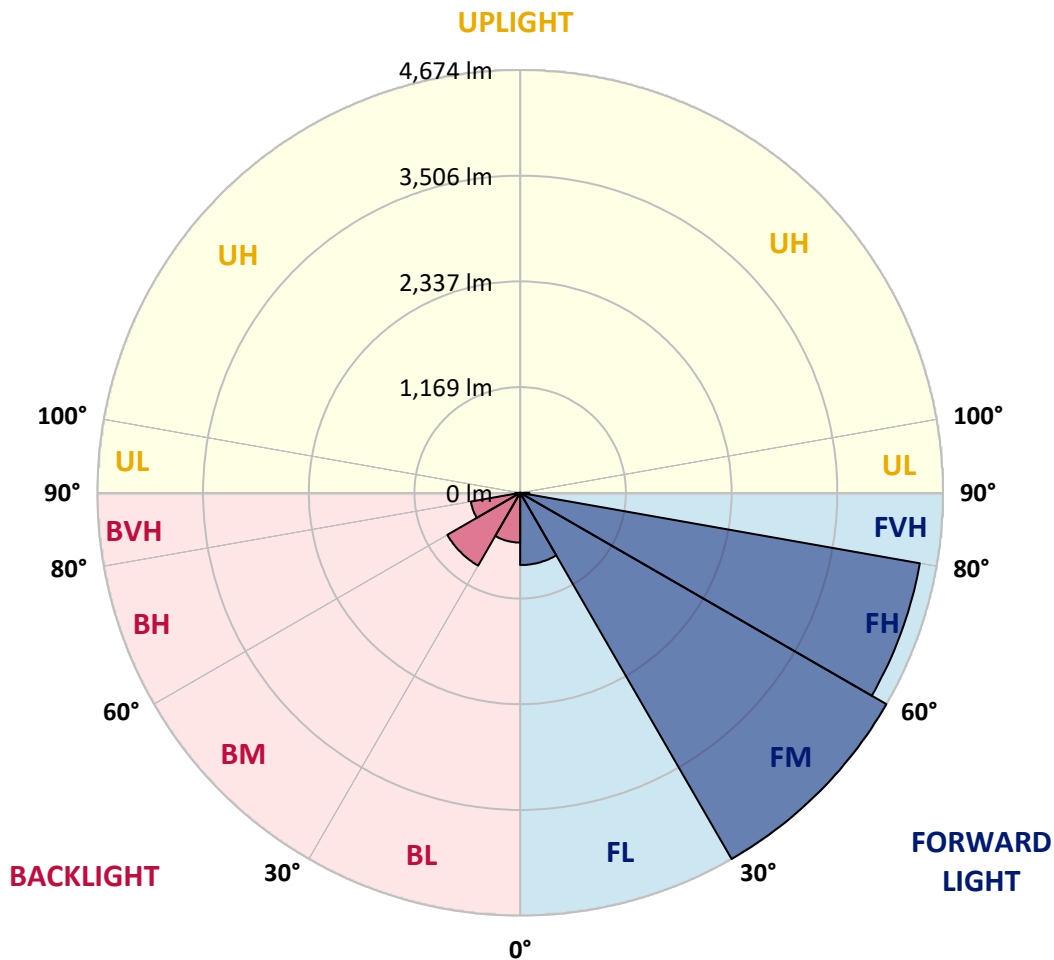
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	798.8	6.6			
FM	(30°-60°)	4674.3	38.5			
FH	(60°-80°)	4486.5	36.9			G2/5000
FVH	(80°-90°)	99.9	0.8			G1/100
BL	(0°-30°)	550.6	4.5	B2/1000		
BM	(30°-60°)	929.5	7.7	B1/1000		
BH	(60°-80°)	553.5	4.6	B2/1000		G2/1000
BVH	(80°-90°)	53.9	0.4			G1/100
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 Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	77.5°	85°
0°	1787.7	1787.7	1787.7	1787.7	1787.7	1787.7	1787.7	1787.7	1787.7	1787.7	1787.7
2.5°	1603.0	1610.5	1611.3	1633.0	1642.8	1667.6	1694.6	1718.6	1739.7	1747.2	1760.7
5°	1442.3	1442.3	1444.6	1458.9	1486.6	1526.4	1582.7	1644.3	1708.9	1724.6	1764.4
7.5°	1358.2	1359.7	1361.2	1375.5	1397.3	1432.6	1488.9	1573.0	1680.4	1706.6	1776.5
10°	1365.8	1363.5	1356.0	1353.0	1362.0	1384.5	1433.3	1519.7	1656.3	1696.9	1798.2
12.5°	1483.6	1479.1	1454.4	1418.3	1385.3	1377.0	1410.8	1492.6	1645.1	1696.9	1835.0
15°	1685.6	1688.6	1639.8	1564.7	1478.4	1419.8	1415.3	1482.9	1641.3	1701.4	1877.8
17.5°	1948.4	1949.9	1882.3	1773.5	1630.0	1509.2	1446.1	1482.9	1641.3	1705.9	1919.1
20°	2227.7	2217.2	2140.6	2004.0	1817.8	1633.0	1502.4	1491.9	1645.8	1712.6	1958.2
22.5°	2467.2	2457.5	2377.1	2233.7	2020.5	1779.5	1578.2	1521.9	1670.6	1740.4	2013.0
25°	2676.7	2682.7	2604.6	2443.2	2222.4	1944.6	1691.6	1591.0	1722.4	1790.7	2080.5
27.5°	2931.2	2920.0	2829.9	2675.9	2430.4	2115.8	1833.5	1678.1	1784.0	1851.5	2163.1
30°	3225.6	3220.3	3098.7	2940.2	2659.4	2307.3	1973.9	1772.0	1864.3	1934.9	2266.7
32.5°	3582.9	3582.2	3451.6	3257.1	2917.0	2523.5	2139.9	1900.3	1981.4	2052.8	2404.1
35°	3987.6	3986.9	3851.7	3595.0	3213.5	2763.0	2335.1	2056.5	2126.3	2201.4	2567.8
37.5°	4268.5	4263.9	4193.4	3944.1	3541.7	3041.6	2579.1	2266.7	2290.8	2374.9	2765.3
40°	4322.5	4349.5	4410.4	4263.2	3899.8	3350.9	2823.9	2492.7	2515.3	2623.4	3013.8
42.5°	4263.9	4299.2	4501.2	4542.5	4257.9	3725.6	3130.2	2805.8	2834.4	2968.8	3305.9
45°	4212.9	4243.7	4496.7	4697.2	4611.6	4134.1	3512.4	3188.0	3242.1	3408.8	3639.3
47.5°	4125.8	4154.3	4408.1	4725.0	4813.6	4527.5	3972.6	3647.5	3740.6	3942.6	4019.2
50°	4121.3	4134.1	4287.2	4631.9	4883.4	4826.3	4482.4	4185.1	4327.8	4560.5	4439.6
52.5°	4007.2	4096.5	4235.4	4483.2	4884.9	5000.5	4984.7	4774.5	4994.5	5252.0	4900.6
55°	3308.9	3411.8	4062.7	4410.4	4875.9	5149.9	5443.5	5401.4	5745.3	6016.4	5417.2
57.5°	3089.7	3133.2	3564.2	4432.1	4951.0	5396.9	5902.3	6074.9	6604.3	6900.1	6036.6
60°	3029.6	3075.4	3464.3	4442.6	5154.4	5846.7	6524.7	6835.5	7614.1	7928.0	6740.2
62.5°	2962.8	3022.1	3471.8	4452.4	5511.8	6511.9	7350.6	7660.7	8651.0	8931.1	7399.4
65°	2767.5	2846.4	3332.9	4390.8	5903.0	7346.8	8442.3	8521.1	9507.7	9685.7	7797.3
67°	2397.4	2483.7	2951.5	4034.9	5867.0	7909.2	9315.5	9059.5	9871.9	9893.6	7668.2
67.5°	2280.3	2369.6	2822.4	3887.0	5764.1	7982.8	9470.2	9133.8	9868.9	9844.8	7548.1
70°	1535.4	1636.1	1998.7	2853.9	4623.6	7429.4	9432.6	8904.8	9221.7	8946.1	6484.9
72.5°	762.1	765.1	997.1	1563.2	2801.3	5328.6	7868.7	7617.9	7475.2	6954.9	4758.7
75°	367.2	373.9	470.8	690.8	1181.1	2751.0	5366.2	5140.2	4376.6	3789.4	2381.6
77.5°	280.1	286.8	365.7	449.7	492.5	897.2	2657.9	2148.1	1268.1	1012.9	671.2
80°	216.2	229.0	308.6	345.4	325.9	359.6	835.7	657.7	493.3	452.7	332.6
82.5°	168.9	176.4	262.0	262.0	225.2	241.0	388.9	379.9	306.3	276.3	178.7
85°	119.4	134.4	211.0	195.2	147.9	149.4	232.8	223.0	157.7	126.9	69.8
87.5°	53.3	68.3	150.2	127.6	78.8	60.8	95.4	81.8	62.3	48.1	32.3
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°	1787.7	1787.7	1787.7	1787.7	1787.7	1787.7	1787.7	1787.7	1787.7	1787.7	1787.7
2.5°	1775.7	1787.7	1806.5	1817.8	1832.8	1838.8	1844.8	1855.3	1863.6	1861.3	1857.5
5°	1792.2	1812.5	1835.8	1843.3	1843.3	1835.8	1831.3	1832.0	1829.8	1828.3	1823.8
7.5°	1816.3	1844.0	1860.5	1853.0	1829.8	1800.5	1772.7	1756.2	1740.4	1730.7	1733.7
10°	1850.0	1880.8	1881.6	1848.5	1793.0	1729.2	1674.3	1639.1	1605.3	1590.3	1594.8
12.5°	1898.8	1929.6	1903.3	1832.0	1734.4	1634.6	1533.9	1461.1	1395.8	1380.0	1375.5
15°	1951.4	1975.4	1916.9	1796.7	1650.3	1485.9	1317.0	1208.1	1135.3	1122.5	1118.0
17.5°	1997.2	2010.7	1910.1	1733.7	1517.4	1258.4	1061.7	988.1	973.1	980.6	980.6
20°	2037.7	2033.2	1880.8	1636.1	1307.9	1006.1	892.0	891.2	911.5	930.3	931.8
22.5°	2088.8	2053.5	1834.3	1491.1	1057.9	839.4	819.9	839.4	861.9	883.0	885.2
25°	2149.6	2076.0	1772.0	1284.7	850.7	762.1	770.3	786.9	801.1	817.7	818.4
27.5°	2210.4	2093.3	1684.1	1042.1	738.1	712.5	721.5	728.3	732.1	742.6	742.6
30°	2281.0	2106.8	1557.2	834.9	686.3	669.0	663.7	660.7	663.7	678.0	678.7
32.5°	2369.6	2130.8	1383.8	716.3	662.2	638.2	611.2	596.2	606.7	632.2	636.7
35°	2470.2	2159.4	1175.8	669.0	654.0	623.2	573.6	550.4	554.1	577.4	581.1
37.5°	2596.4	2196.2	970.8	657.7	662.2	621.7	556.4	523.3	506.8	507.6	506.8
40°	2757.8	2233.0	808.6	660.7	680.2	625.4	548.1	496.3	461.8	463.3	466.3
42.5°	2926.7	2257.0	705.8	669.7	702.0	630.7	545.1	470.0	440.0	465.5	488.8
45°	3124.2	2250.2	652.5	678.0	718.5	632.9	533.8	467.0	442.2	518.8	562.4
47.5°	3350.9	2220.9	622.4	681.8	723.0	632.2	525.6	476.8	461.0	593.9	643.5
50°	3597.2	2175.1	598.4	675.7	720.8	629.2	534.6	488.8	468.5	610.4	648.7
52.5°	3866.8	2133.1	573.6	662.2	709.5	620.2	545.9	483.5	447.5	562.4	591.7
55°	4185.9	2123.3	545.9	639.0	690.8	610.4	539.8	467.0	424.2	498.5	516.6
57.5°	4550.8	2184.2	509.8	610.4	665.2	590.9	525.6	458.0	416.0	453.5	463.3
60°	5014.0	2318.6	471.5	580.4	633.7	561.6	512.8	460.3	418.2	446.7	449.0
62.5°	5375.9	2439.4	437.0	543.6	591.7	526.3	499.3	462.5	425.0	455.8	452.0
65°	5507.3	2380.1	394.2	488.8	532.3	487.3	480.5	464.0	425.0	461.0	452.7
67°	5237.8	2097.1	353.6	434.0	476.0	452.7	462.5	458.0	417.5	460.3	446.0
67.5°	5109.4	1997.2	343.1	425.0	461.0	442.2	458.0	455.0	415.2	458.8	442.2
70°	4213.6	1432.6	289.8	356.6	385.9	389.7	430.2	435.5	397.2	431.0	400.9
72.5°	2998.1	896.5	250.0	276.3	311.6	333.4	392.7	409.2	373.2	374.7	349.9
75°	1483.6	481.3	223.0	213.2	242.5	277.8	342.4	373.2	337.9	312.3	304.1
77.5°	500.8	272.6	188.5	171.9	188.5	223.0	283.8	325.9	298.1	264.3	259.0
80°	259.0	198.2	147.2	138.2	148.7	172.7	222.2	271.0	254.5	256.0	211.0
82.5°	161.4	120.9	105.9	105.1	112.6	132.1	163.7	220.0	218.5	187.0	135.9
85°	75.1	69.8	67.6	69.8	72.1	75.1	106.6	156.9	165.9	100.6	89.3
87.5°	31.5	30.8	27.0	29.3	32.3	31.5	42.8	66.8	93.1	63.1	57.8
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)