

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: P270470

Luminaire Tested: **NAV-AF-03-D-UNV-T3R-7027-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P270470  
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-7027-600  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(3) 70 CRI, 2700K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III  
ROADWAY OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 10546 lumens  
Efficiency: N/A  
Efficacy: 109.9 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')  
IES Classification: Type III - Medium - Full Cutoff  
BUG Rating: B1 - U0 - G2

Input Watts (W): 96  
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

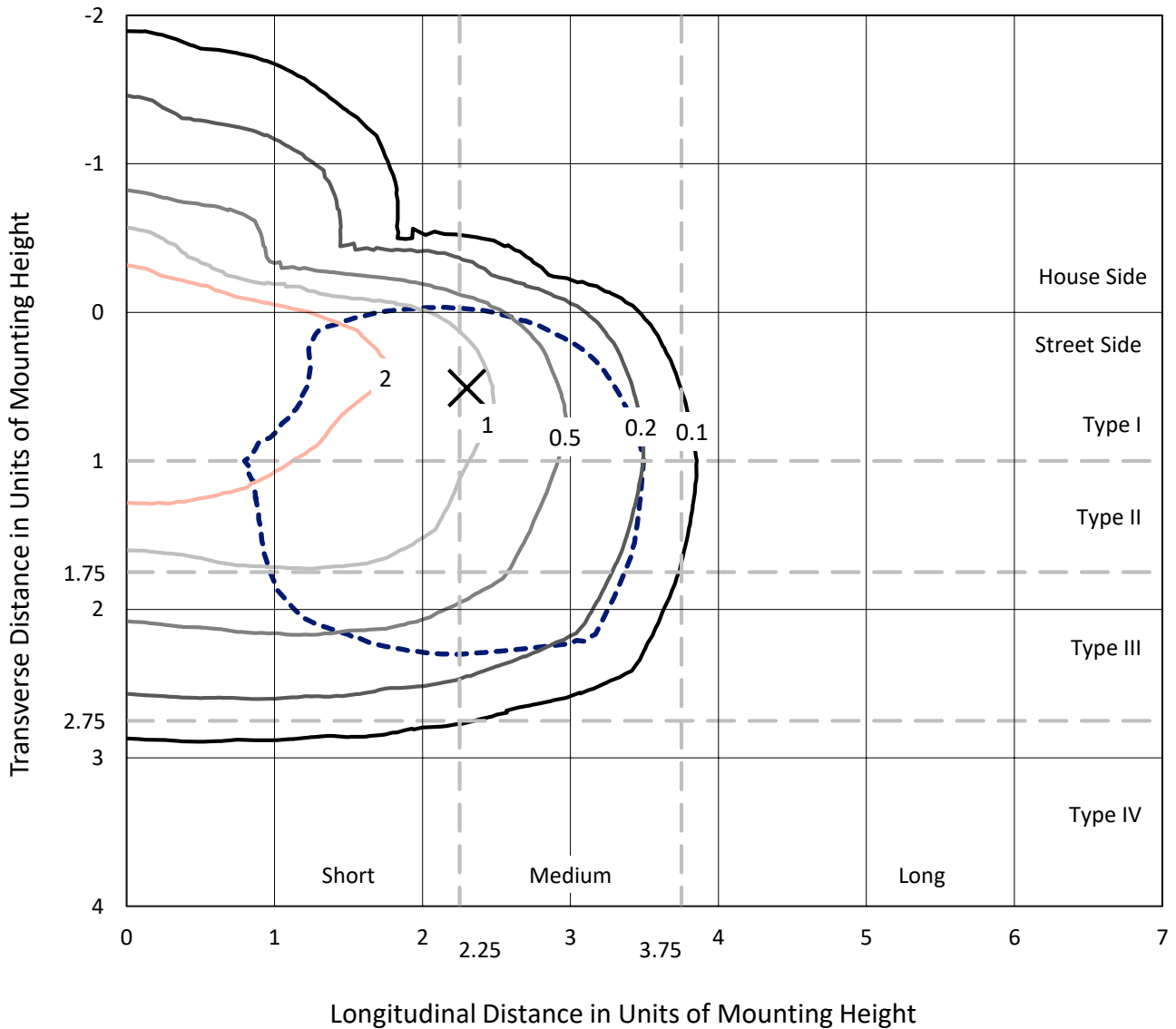


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### Iso-Footcandle Lines of Horizontal Illumination

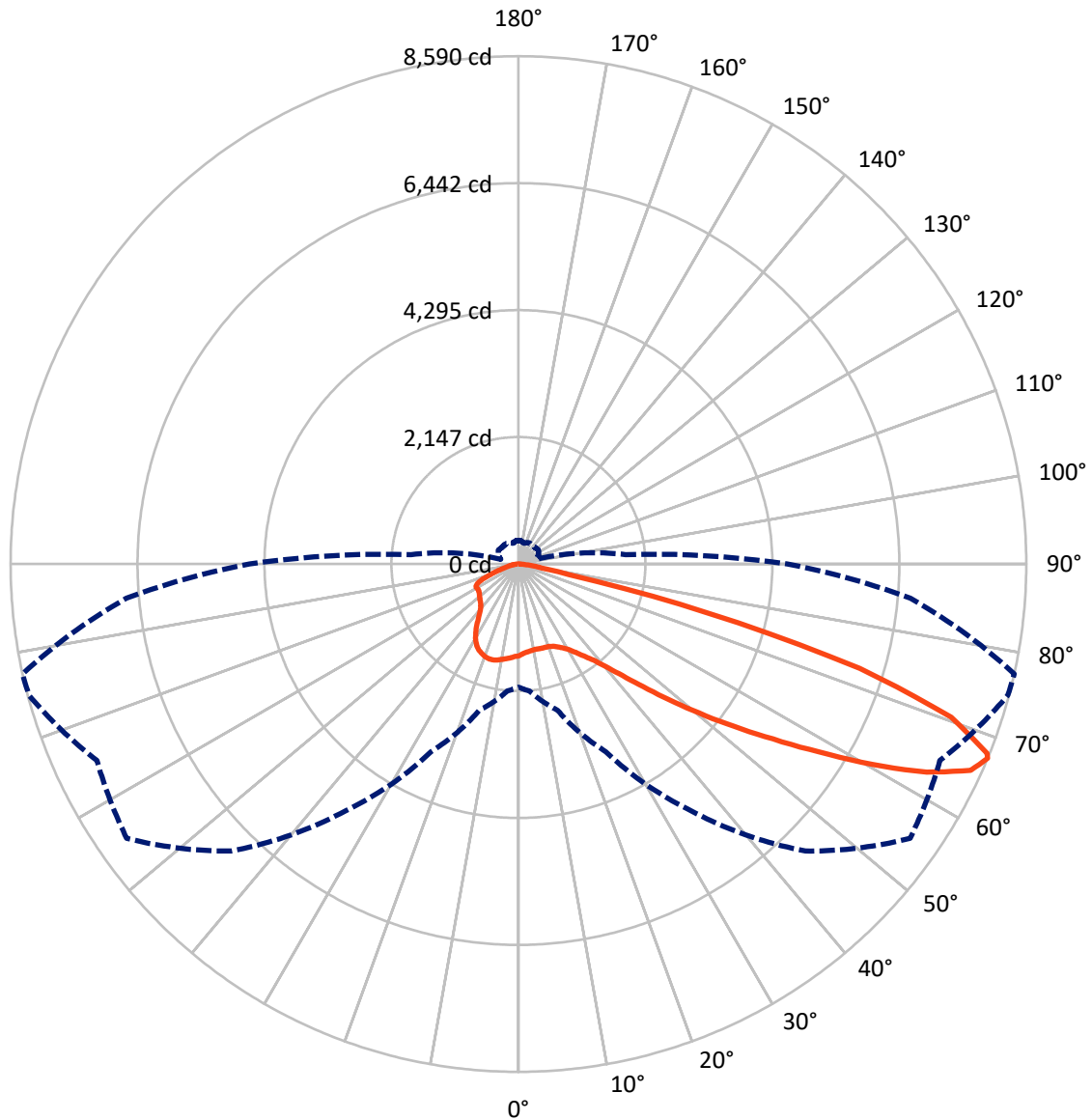
✕ Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 4.7 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
<b>House Side</b>	Lumens	1812.3	0.0	1812.3
	% Fixture	17.2	0.0	17.2
<b>Street Side</b>	Lumens	8733.7	0.0	8733.7
	% Fixture	82.8	0.0	82.8
<b>Total</b>	Lumens	10546.0	0.0	10546.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	138.2	1.3
10°-20°	382.8	3.6
20°-30°	650.5	6.2
30°-40°	1040.6	9.9
40°-50°	1602.0	15.2
50°-60°	2222.6	21.1
60°-70°	2964.8	28.1
70°-80°	1410.9	13.4
80°-90°	133.6	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°	10546.0	100.0
0°-180°	10546.0	100.0



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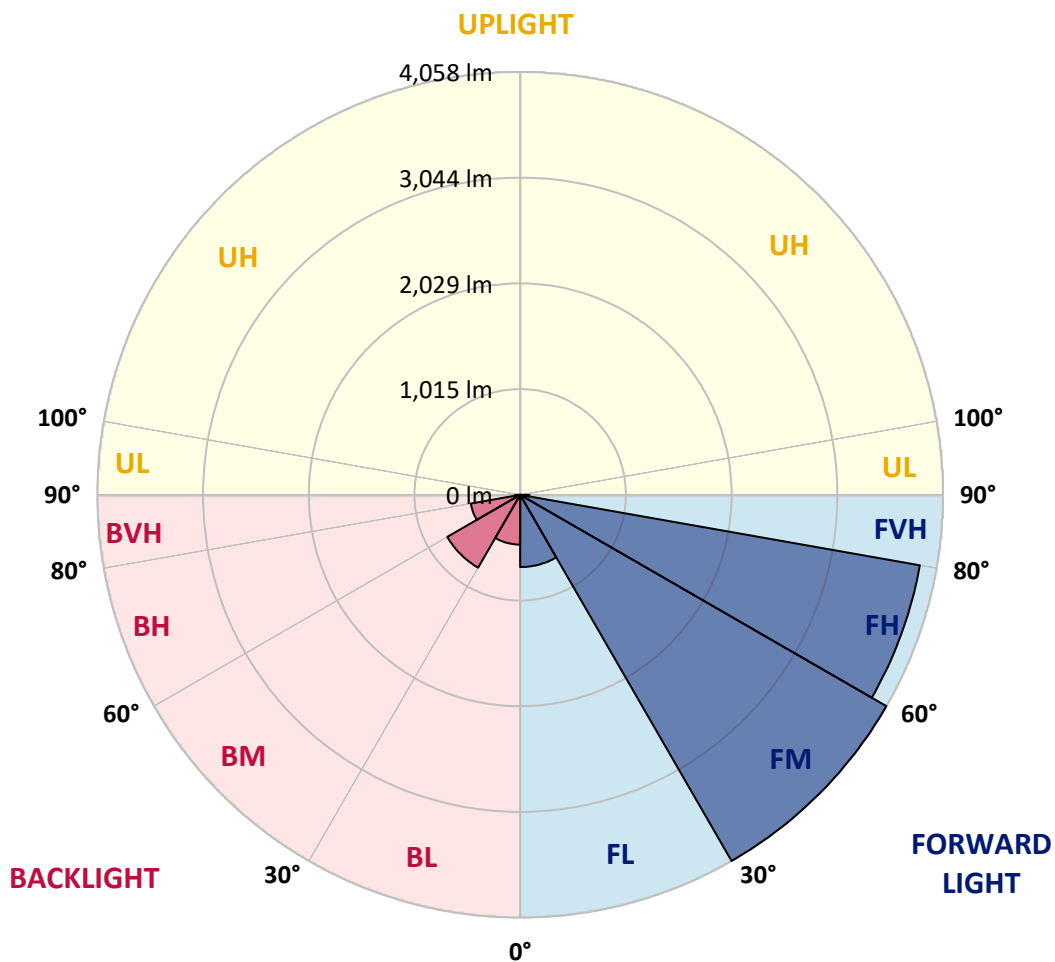
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	693.5	6.6			
FM	(30°-60°)	4058.2	38.5			
FH	(60°-80°)	3895.2	36.9			G2/5000
FVH	(80°-90°)	86.8	0.8			G1/100
BL	(0°-30°)	478.0	4.5	B1/500		
BM	(30°-60°)	806.9	7.7	B1/1000		
BH	(60°-80°)	480.5	4.6	B1/500		G1/500
BVH	(80°-90°)	46.8	0.4			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-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°	1552.1	1552.1	1552.1	1552.1	1552.1	1552.1	1552.1	1552.1	1552.1	1552.1	1552.1
2.5°	1391.7	1398.2	1398.9	1417.9	1426.2	1447.8	1471.2	1492.2	1510.4	1516.9	1528.6
5°	1252.2	1252.2	1254.3	1266.6	1290.8	1325.3	1374.1	1427.5	1483.6	1497.4	1531.9
7.5°	1179.3	1180.6	1181.8	1194.2	1213.2	1243.8	1292.7	1365.7	1458.8	1481.8	1542.3
10°	1185.8	1183.7	1177.3	1174.7	1182.4	1202.0	1244.4	1319.4	1438.0	1473.2	1561.3
12.5°	1288.1	1284.1	1262.7	1231.3	1202.7	1195.6	1224.8	1296.0	1428.2	1473.2	1593.1
15°	1463.5	1466.0	1423.6	1358.4	1283.5	1232.7	1228.8	1287.5	1425.0	1477.2	1630.3
17.5°	1691.6	1692.9	1634.2	1539.8	1415.2	1310.3	1255.6	1287.5	1425.0	1481.0	1666.1
20°	1934.1	1925.0	1858.5	1739.8	1578.1	1417.9	1304.3	1295.3	1428.9	1487.0	1700.0
22.5°	2142.1	2133.6	2063.9	1939.4	1754.2	1544.9	1370.3	1321.3	1450.5	1510.9	1747.7
25°	2323.9	2329.1	2261.4	2121.2	1929.5	1688.4	1468.6	1381.4	1495.4	1554.6	1806.3
27.5°	2544.9	2535.0	2456.9	2323.2	2110.1	1836.9	1591.8	1457.0	1548.9	1607.4	1878.0
30°	2800.5	2795.9	2690.2	2552.8	2309.0	2003.2	1713.7	1538.3	1618.6	1679.9	1967.9
32.5°	3110.7	3110.0	2996.7	2827.9	2532.5	2191.0	1857.9	1649.8	1720.3	1782.1	2087.3
35°	3462.1	3461.3	3344.1	3121.2	2790.0	2398.8	2027.4	1785.6	1846.0	1911.2	2229.5
37.5°	3705.9	3701.9	3640.7	3424.2	3074.9	2640.7	2239.1	1967.9	1988.8	2061.9	2400.8
40°	3752.8	3776.3	3829.0	3701.2	3385.8	2909.3	2451.7	2164.1	2183.8	2277.7	2616.7
42.5°	3701.9	3732.5	3907.9	3943.7	3696.7	3234.5	2717.6	2436.1	2460.7	2577.4	2870.2
45°	3657.5	3684.4	3904.0	4078.0	4003.7	3589.2	3049.4	2767.9	2814.7	2959.5	3159.6
47.5°	3582.0	3606.8	3827.0	4102.2	4179.2	3930.8	3449.0	3166.7	3247.6	3422.9	3489.5
50°	3578.0	3589.2	3722.1	4021.4	4239.7	4190.2	3891.6	3633.6	3757.4	3959.5	3854.4
52.5°	3479.0	3556.6	3677.2	3892.3	4241.1	4341.5	4327.8	4145.1	4336.2	4559.7	4254.7
55°	2872.8	2962.2	3527.3	3829.0	4233.3	4471.1	4726.1	4689.5	4988.1	5223.5	4703.3
57.5°	2682.3	2720.2	3094.4	3848.0	4298.4	4685.6	5124.3	5274.3	5733.8	5990.6	5241.0
60°	2630.2	2670.0	3007.7	3857.1	4475.0	5076.1	5664.7	5934.7	6610.5	6883.1	5851.7
62.5°	2572.2	2623.8	3014.3	3865.5	4785.5	5653.7	6381.7	6651.1	7510.8	7754.0	6424.1
65°	2402.7	2471.2	2893.6	3812.0	5125.0	6378.5	7329.6	7398.0	8254.5	8409.2	6769.6
67°	2081.5	2156.4	2562.4	3503.1	5093.7	6866.7	8087.7	7865.4	8570.8	8589.7	6657.5
67.5°	1979.8	2057.3	2450.3	3374.8	5004.4	6930.7	8221.9	7930.0	8568.2	8547.4	6553.2
70°	1333.1	1420.4	1735.3	2477.7	4014.2	6450.2	8189.4	7731.2	8006.2	7767.0	5630.1
72.5°	661.6	664.2	865.6	1357.2	2432.2	4626.4	6831.6	6613.9	6490.0	6038.2	4131.6
75°	318.8	324.6	408.6	599.7	1025.3	2388.5	4658.9	4462.7	3799.7	3290.0	2067.7
77.5°	243.1	249.0	317.5	390.5	427.7	779.0	2307.7	1865.1	1101.1	879.4	582.8
80°	187.7	198.9	268.0	299.9	282.8	312.3	725.6	571.1	428.3	393.1	288.7
82.5°	146.7	153.3	227.5	227.5	195.7	209.2	337.7	329.9	266.0	239.8	155.1
85°	103.7	116.7	183.2	169.5	128.4	129.7	202.1	193.7	136.9	110.1	60.6
87.5°	46.4	59.3	130.3	110.9	68.5	52.8	82.7	71.1	54.1	41.7	28.0
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°	1552.1	1552.1	1552.1	1552.1	1552.1	1552.1	1552.1	1552.1	1552.1	1552.1	1552.1
2.5°	1541.8	1552.1	1568.4	1578.1	1591.2	1596.4	1601.7	1610.8	1617.9	1616.1	1612.6
5°	1556.0	1573.7	1593.9	1600.3	1600.3	1593.9	1589.9	1590.5	1588.7	1587.2	1583.4
7.5°	1576.9	1601.0	1615.3	1608.9	1588.7	1563.2	1539.1	1524.8	1510.9	1502.5	1505.2
10°	1606.2	1632.8	1633.6	1604.9	1556.7	1501.2	1453.6	1423.0	1393.7	1380.7	1384.6
12.5°	1648.6	1675.2	1652.5	1590.5	1505.7	1419.1	1331.7	1268.5	1211.9	1198.1	1194.2
15°	1694.3	1715.0	1664.2	1559.9	1432.7	1290.1	1143.4	1048.9	985.6	974.5	970.6
17.5°	1734.0	1745.6	1658.4	1505.2	1317.5	1092.5	921.8	857.8	844.9	851.4	851.4
20°	1769.1	1765.3	1632.8	1420.4	1135.5	873.5	774.3	773.8	791.3	807.7	809.0
22.5°	1813.5	1782.9	1592.5	1294.5	918.4	728.7	711.8	728.7	748.4	766.7	768.6
25°	1866.3	1802.4	1538.3	1115.3	738.5	661.6	668.8	683.2	695.6	709.9	710.5
27.5°	1919.0	1817.5	1462.1	904.9	640.9	618.7	626.5	632.2	635.6	644.8	644.8
30°	1980.4	1829.2	1351.9	724.9	595.8	580.8	576.3	573.7	576.3	588.6	589.3
32.5°	2057.3	1850.0	1201.5	621.8	574.9	554.1	530.5	517.6	526.6	548.9	552.7
35°	2144.7	1874.8	1020.8	580.8	567.8	541.0	498.0	477.8	481.1	501.3	504.6
37.5°	2254.1	1906.7	842.9	571.1	574.9	539.7	483.0	454.4	440.0	440.7	440.0
40°	2394.3	1938.6	702.0	573.7	590.5	543.0	475.8	430.8	401.0	402.3	404.7
42.5°	2540.9	1959.6	612.7	581.5	609.5	547.5	473.2	408.1	382.0	404.1	424.4
45°	2712.4	1953.6	566.6	588.6	623.9	549.6	463.4	405.5	383.9	450.4	488.3
47.5°	2909.3	1928.2	540.4	592.0	627.7	548.9	456.2	413.8	400.3	515.6	558.7
50°	3123.0	1888.4	519.5	586.8	625.8	546.3	464.2	424.4	406.8	530.0	563.1
52.5°	3357.1	1851.9	498.0	574.9	616.0	538.4	473.9	419.8	388.4	488.3	513.7
55°	3634.2	1843.5	473.9	554.8	599.7	530.0	468.6	405.5	368.3	432.9	448.4
57.5°	3950.9	1896.3	442.7	530.0	577.6	513.0	456.2	397.6	361.1	393.7	402.3
60°	4353.1	2012.9	409.4	503.9	550.2	487.6	445.2	399.6	363.1	387.9	389.9
62.5°	4667.4	2117.9	379.4	472.0	513.7	457.0	433.5	401.5	368.9	395.7	392.4
65°	4781.5	2066.5	342.3	424.4	462.2	423.0	417.3	402.9	368.9	400.3	393.1
67°	4547.4	1820.7	307.0	376.7	413.3	393.1	401.5	397.6	362.5	399.6	387.2
67.5°	4436.0	1734.0	297.9	368.9	400.3	383.9	397.6	395.1	360.5	398.3	383.9
70°	3658.3	1243.8	251.6	309.6	335.1	338.3	373.5	378.0	344.8	374.1	348.2
72.5°	2602.8	778.3	217.1	239.8	270.5	289.4	340.9	355.3	324.0	325.2	303.7
75°	1288.1	417.8	193.7	185.1	210.6	241.1	297.2	324.0	293.3	271.2	264.0
77.5°	434.8	236.7	163.6	149.3	163.6	193.7	246.4	282.8	258.8	229.4	224.8
80°	224.8	172.0	127.7	120.0	129.0	149.9	193.0	235.4	221.1	222.3	183.2
82.5°	140.1	104.9	91.8	91.3	97.7	114.8	142.1	191.0	189.7	162.4	117.9
85°	65.1	60.6	58.7	60.6	62.6	65.1	92.5	136.3	144.1	87.3	77.6
87.5°	27.4	26.7	23.4	25.4	28.0	27.4	37.2	58.0	80.8	54.7	50.1
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)