

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: P270393

Luminaire Tested: **NAV-AF-02-D-UNV-T4FT-7027**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P270393  
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-02-D-UNV-T4FT-7027  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(2) 70 CRI, 2700K, 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: 10666.7 lumens  
Efficiency: N/A  
Efficacy: 94.4 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type IV - Short - Non-Cutoff  
BUG Rating: B2 - U0 - G2

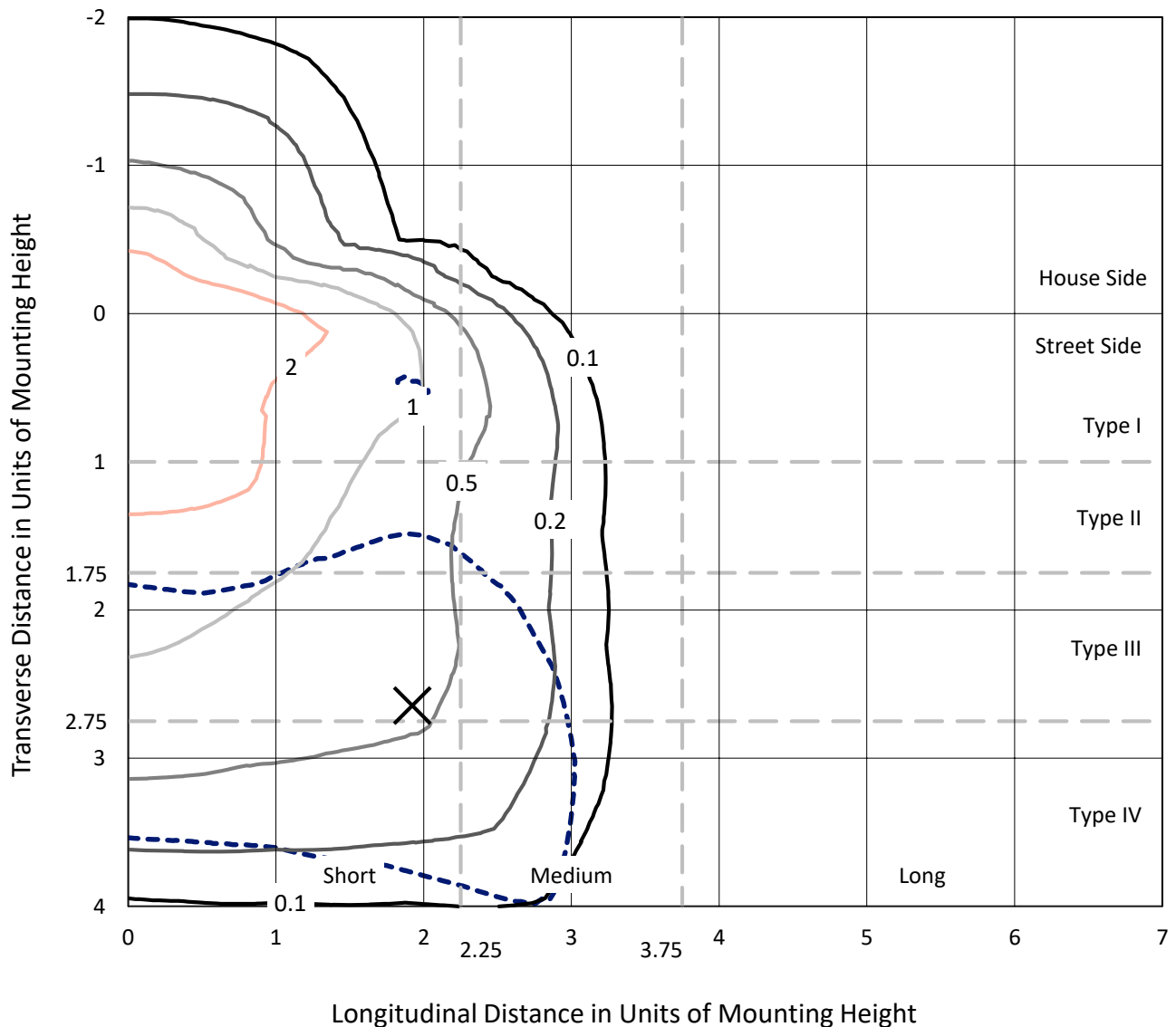
Input Watts (W): 113  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



REPORT NUMBER: P270393  
 CATALOG NUMBER: NAV-AF-02-D-UNV-T4FT-7027

### Iso-Footcandle Lines of Horizontal Illumination

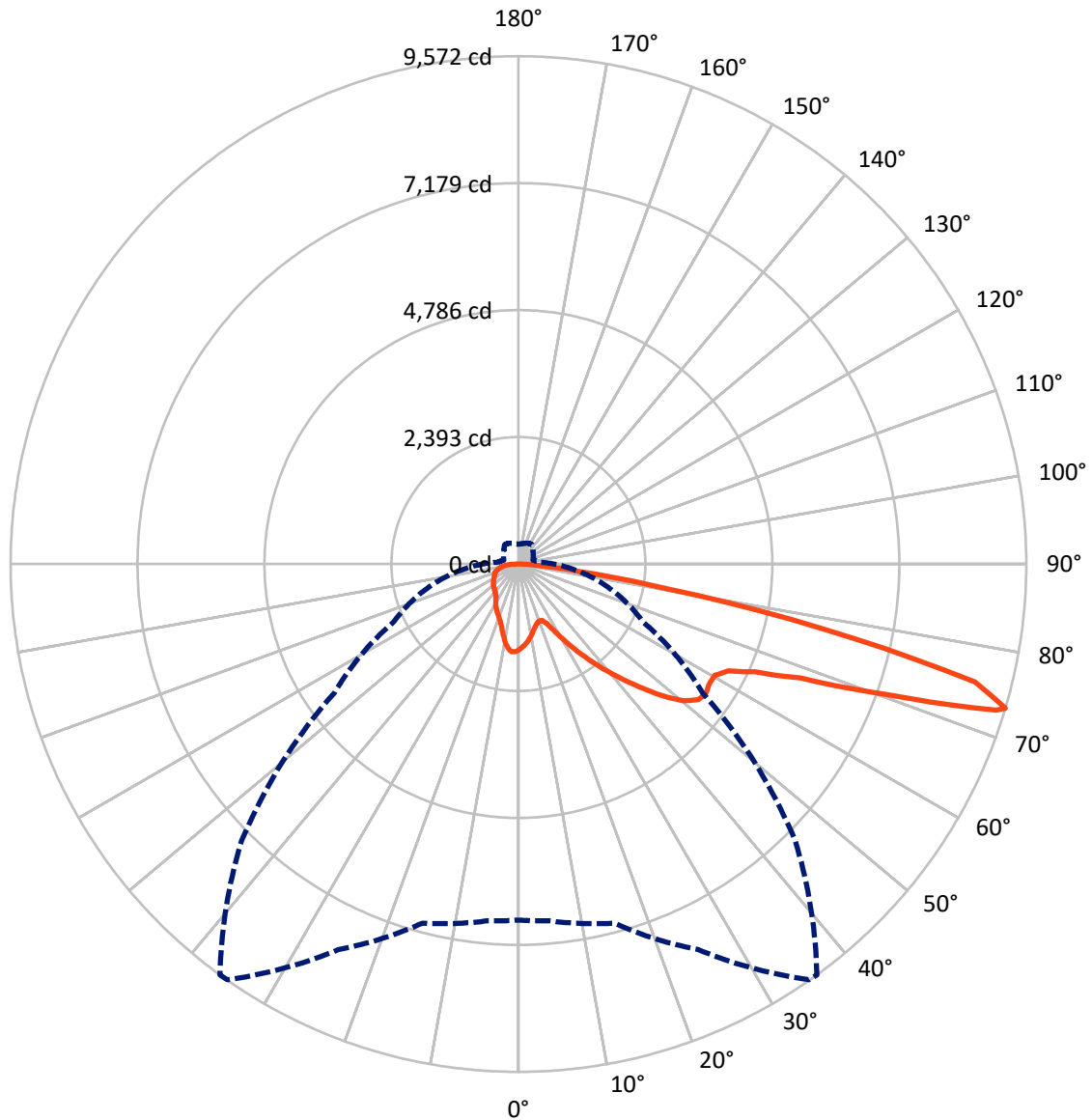
× Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 4 fc  
 Type IV - Short - Non-Cutoff

REPORT NUMBER: P270393  
CATALOG NUMBER: NAV-AF-02-D-UNV-T4FT-7027

### Luminous Intensity Polar Plot



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

REPORT NUMBER: P270393

CATALOG NUMBER: NAV-AF-02-D-UNV-T4FT-7027

**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2056.9	0.0	2056.9
	% Fixture	19.3	0.0	19.3
<b>Street Side</b>	Lumens	8609.9	0.0	8609.9
	% Fixture	80.7	0.0	80.7
<b>Total</b>	Lumens	10666.7	0.0	10666.7
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	146.8	1.4
10°-20°	368.6	3.5
20°-30°	590.9	5.5
30°-40°	977.4	9.2
40°-50°	1512.5	14.2
50°-60°	2024.7	19.0
60°-70°	2644.9	24.8
70°-80°	2160.5	20.3
80°-90°	240.5	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°	10666.7	100.0
0°-180°	10666.7	100.0



REPORT NUMBER: P270393

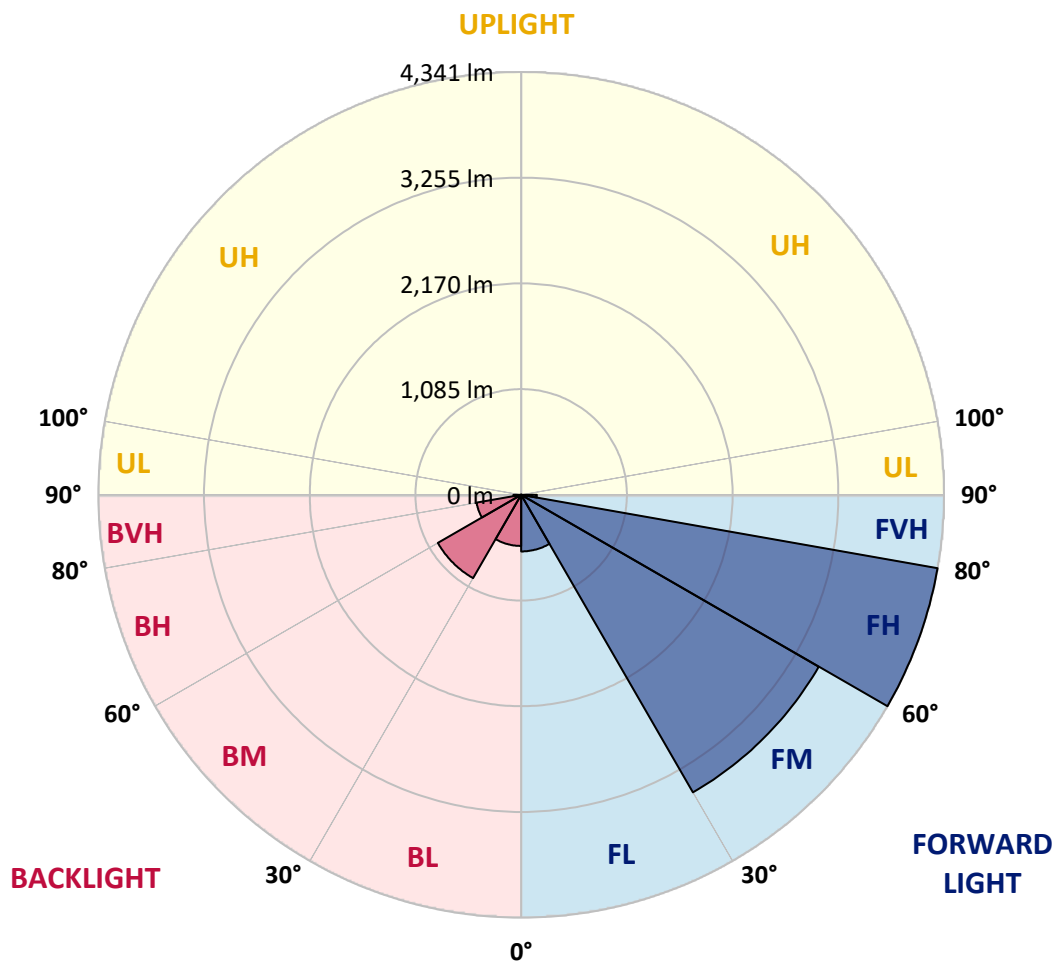
CATALOG NUMBER: NAV-AF-02-D-UNV-T4FT-7027

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	581.2	5.4			
FM (30°-60°)	3526.8	33.1			
FH (60°-80°)	4340.6	40.7			G2/5000
FVH (80°-90°)	161.3	1.5			G2/225
BL (0°-30°)	525.0	4.9	B2/1000		
BM (30°-60°)	987.8	9.3	B1/1000		
BH (60°-80°)	464.8	4.4	B1/500		G1/500
BVH (80°-90°)	79.2	0.7			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 IV Short





REPORT NUMBER: P270393

CATALOG NUMBER: NAV-AF-02-D-UNV-T4FT-7027

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	1615.7	1615.7	1615.7	1615.7	1615.7	1615.7	1615.7	1615.7	1615.7	1615.7	1615.7
2.5°	1554.0	1558.1	1558.7	1563.5	1563.5	1562.8	1564.8	1573.0	1577.1	1586.5	1594.8
5°	1477.4	1482.3	1484.2	1492.4	1502.5	1503.3	1510.7	1526.2	1541.1	1562.2	1579.8
7.5°	1391.4	1396.8	1402.3	1419.1	1434.1	1435.4	1449.7	1474.7	1494.4	1520.1	1552.0
10°	1308.0	1309.4	1314.8	1336.5	1356.1	1358.1	1378.4	1406.9	1433.3	1469.3	1505.2
12.5°	1239.7	1243.7	1242.3	1258.5	1275.5	1276.9	1303.9	1339.8	1378.4	1419.1	1461.8
15°	1215.9	1215.1	1200.9	1200.2	1207.7	1209.1	1235.4	1277.5	1320.9	1371.1	1425.9
17.5°	1232.1	1226.6	1189.4	1166.4	1161.6	1162.9	1182.6	1228.7	1274.9	1332.5	1398.1
20°	1321.5	1300.6	1213.2	1157.6	1141.9	1141.9	1153.6	1190.8	1241.5	1308.7	1391.4
22.5°	1533.6	1501.2	1314.8	1215.9	1161.0	1155.5	1146.7	1175.3	1231.4	1312.1	1419.1
25°	1800.7	1785.1	1501.2	1371.1	1257.8	1240.2	1182.0	1192.1	1252.4	1348.6	1495.0
27.5°	2048.0	2020.9	1745.9	1596.7	1436.7	1409.7	1286.4	1245.1	1302.6	1416.4	1604.8
30°	2192.5	2174.2	1997.2	1854.9	1664.5	1630.0	1453.1	1349.3	1392.1	1528.2	1760.8
32.5°	2349.6	2338.8	2249.4	2119.9	1911.2	1871.2	1668.5	1519.5	1528.9	1676.6	1948.5
35°	2502.1	2516.4	2465.6	2370.6	2176.9	2139.7	1957.9	1741.8	1697.6	1843.4	2149.0
37.5°	2685.2	2688.5	2656.6	2595.1	2456.1	2425.7	2275.8	1979.0	1881.4	2020.9	2342.9
40°	3050.5	2996.9	2872.2	2823.5	2740.6	2721.8	2550.9	2196.5	2052.2	2203.4	2525.9
42.5°	3445.5	3362.1	3167.1	3087.0	3053.9	3036.2	2780.1	2341.5	2212.0	2385.5	2705.4
45°	3764.1	3696.3	3505.1	3406.3	3410.3	3381.8	2979.9	2471.0	2385.5	2568.6	2906.0
47.5°	4077.9	3964.7	3750.6	3736.3	3783.8	3741.7	3171.0	2600.5	2566.5	2767.9	3106.7
50°	4098.2	3995.2	3908.4	4022.3	4103.6	4051.4	3344.6	2769.8	2754.3	3009.1	3365.6
52.5°	3850.9	3835.9	3968.2	4160.0	4294.7	4247.9	3486.2	2944.0	2946.1	3310.8	3680.7
55°	3760.8	3741.7	3900.4	4136.2	4318.5	4290.7	3592.0	3140.6	3158.9	3676.7	4018.8
57.5°	3912.5	3865.0	3896.3	4091.4	4262.8	4246.6	3701.7	3358.9	3392.0	4098.2	4331.4
60°	4383.5	4286.6	4121.2	4157.9	4265.0	4255.5	3858.9	3602.2	3657.7	4537.3	4529.3
62.5°	5089.1	4979.2	4642.4	4479.8	4456.0	4437.7	4118.5	3901.0	3928.7	4854.6	4414.0
65°	5863.0	5745.1	5344.6	5078.2	4938.6	4899.3	4537.3	4261.6	4087.4	4853.9	3965.4
67.5°	6731.9	6607.2	6207.9	5953.8	5802.7	5735.6	5217.1	4553.0	4035.8	4443.1	3173.2
70°	7621.7	7503.2	7320.1	7409.0	7475.3	7373.0	6288.0	4649.8	3665.9	3483.4	2130.8
72.5°	7149.3	7139.9	7278.7	8120.5	9400.8	9421.1	7357.4	4376.2	2832.3	2070.5	1135.8
73°	6710.9	6750.9	7008.3	8015.4	9565.4	9572.2	7378.4	4234.4	2600.5	1783.8	997.6
75°	3476.7	3747.8	4703.4	6499.3	8857.2	8889.1	6504.2	3205.6	1549.9	990.8	672.3
77.5°	931.3	919.0	1515.4	3166.3	5905.1	5863.0	4109.7	1552.0	742.8	621.4	471.7
80°	319.2	323.3	515.7	1158.3	2756.3	2854.5	1783.8	677.1	488.7	433.1	334.1
82.5°	162.7	168.1	269.8	492.7	1152.9	1128.5	574.0	398.5	327.3	262.9	187.0
85°	86.7	89.4	148.4	255.5	422.9	427.7	201.9	212.8	208.0	149.1	92.2
87.5°	42.7	44.0	71.1	112.5	156.6	151.2	70.4	92.2	102.3	84.0	50.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P270393

CATALOG NUMBER: NAV-AF-02-D-UNV-T4FT-7027

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1615.7	1615.7	1615.7	1615.7	1615.7	1615.7	1615.7	1615.7	1615.7	1615.7	1615.7
2.5°	1604.8	1604.8	1613.6	1628.5	1639.4	1649.6	1656.4	1667.3	1673.4	1672.6	1671.9
5°	1594.0	1600.8	1618.3	1636.7	1648.8	1657.1	1657.1	1661.8	1661.8	1659.8	1657.1
7.5°	1568.9	1580.5	1606.2	1622.5	1625.8	1617.0	1599.4	1585.9	1568.9	1560.1	1556.8
10°	1528.9	1543.8	1576.3	1583.8	1566.3	1535.1	1492.4	1455.8	1423.3	1408.4	1403.6
12.5°	1489.7	1509.3	1539.8	1528.2	1486.2	1425.3	1359.6	1309.4	1272.8	1258.5	1253.9
15°	1457.1	1480.9	1504.5	1468.5	1395.4	1310.7	1238.3	1191.4	1163.7	1152.9	1150.1
17.5°	1435.4	1463.2	1471.3	1404.2	1302.6	1207.7	1143.4	1112.8	1100.7	1095.9	1094.6
20°	1436.7	1468.0	1448.2	1341.9	1213.2	1117.6	1074.9	1066.1	1066.1	1066.1	1065.4
22.5°	1474.1	1501.2	1438.8	1283.6	1127.1	1041.7	1023.3	1030.8	1036.3	1036.3	1035.6
25°	1551.4	1566.3	1445.6	1227.4	1046.4	975.9	976.5	990.8	995.6	995.6	994.2
27.5°	1669.2	1657.1	1457.8	1165.0	967.1	916.4	925.8	938.6	942.1	939.9	939.4
30°	1817.0	1768.3	1468.0	1091.8	892.6	860.8	868.8	876.2	873.6	868.8	868.1
32.5°	1982.4	1881.4	1461.8	1009.9	826.8	803.2	807.8	811.9	807.8	796.3	796.3
35°	2146.4	1983.6	1428.7	920.4	774.7	747.5	746.9	759.7	759.1	745.6	746.2
37.5°	2290.0	2064.3	1364.3	838.4	730.0	706.8	709.7	717.7	721.8	703.6	701.4
40°	2415.5	2119.9	1273.4	768.5	694.0	695.4	687.9	675.0	670.2	662.1	660.9
42.5°	2533.3	2158.5	1177.1	710.3	675.6	691.2	666.3	635.7	622.9	630.3	635.0
45°	2649.2	2201.9	1084.3	662.1	652.7	679.1	644.5	610.7	595.8	599.1	603.8
47.5°	2790.9	2262.2	972.5	610.7	617.5	656.8	631.0	594.4	572.0	558.4	554.3
50°	2977.3	2349.6	827.5	555.1	580.1	632.2	619.4	570.7	546.3	519.1	512.4
52.5°	3210.5	2432.4	681.2	510.3	549.7	611.2	600.4	550.3	520.5	488.0	482.5
55°	3442.8	2443.8	555.1	471.7	515.1	582.8	577.4	534.0	492.0	465.6	460.2
57.5°	3605.4	2334.8	470.4	439.2	481.9	547.5	556.4	514.4	468.2	448.0	444.7
60°	3608.2	2073.8	418.8	417.5	456.8	517.2	534.8	491.4	453.5	439.8	437.1
62.5°	3321.6	1671.2	385.6	401.3	438.6	492.0	518.4	478.4	450.1	444.7	441.8
65°	2784.0	1234.8	359.2	386.4	421.6	471.0	504.8	474.5	448.7	446.5	444.7
67.5°	2055.5	846.6	336.9	367.3	402.6	449.3	492.0	468.2	440.4	448.7	446.0
70°	1293.1	565.3	315.8	345.7	377.5	424.3	475.2	457.4	430.4	425.5	416.9
72.5°	730.0	408.6	290.7	317.9	344.9	391.0	452.0	439.2	407.3	388.3	379.5
73°	659.4	387.0	284.7	311.1	337.6	384.2	446.5	433.7	400.6	379.5	371.4
75°	482.5	316.6	256.8	283.2	306.3	353.2	420.9	406.7	370.7	345.7	340.2
77.5°	349.7	244.0	221.0	244.7	265.0	309.7	382.3	366.0	330.8	317.2	311.7
80°	252.2	185.1	183.0	206.0	223.7	269.0	340.8	324.0	290.1	330.0	321.2
82.5°	150.5	118.5	134.1	160.0	178.3	225.7	296.3	276.5	244.0	246.7	210.2
85°	71.9	67.2	83.4	105.0	117.9	154.5	246.7	231.1	195.2	160.0	156.6
87.5°	31.9	30.5	40.0	46.7	63.1	92.9	168.7	149.7	141.7	84.7	66.5
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)