

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: P196147

Luminaire Tested: **NAV-AF-01-D-UNV-SL3-1200**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196147  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24262)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-AF-01-D-UNV-SL3-1200  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(1) 70 CRI, 4000K, 1200mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE III  
SPILL LIGHT ELIMINATOR OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6846.6 lumens  
Efficiency: N/A  
Efficacy: 102.2 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type III - Medium - Non-Cutoff  
BUG Rating: B1 - U0 - G2

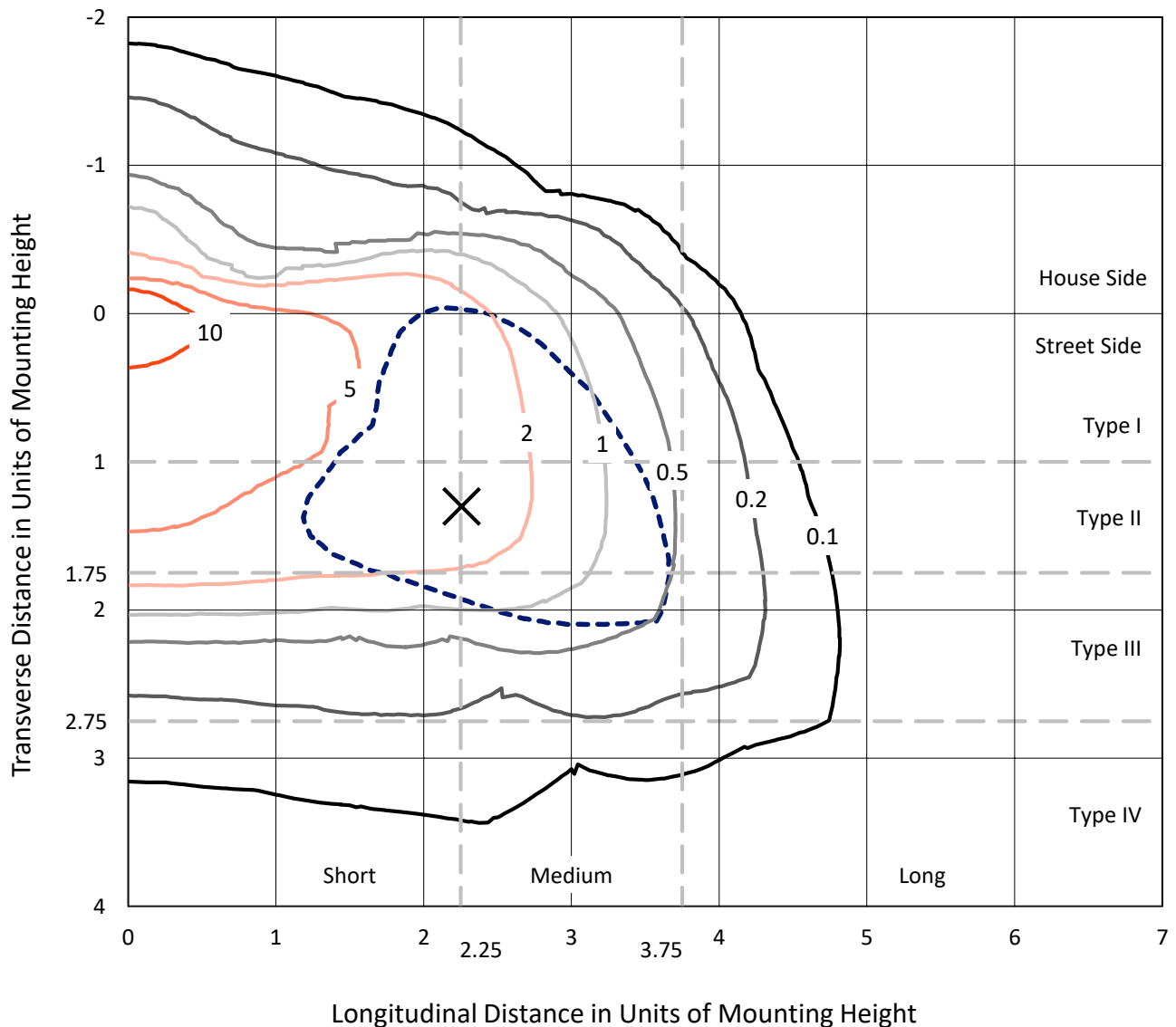
Input Watts (W): 67  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

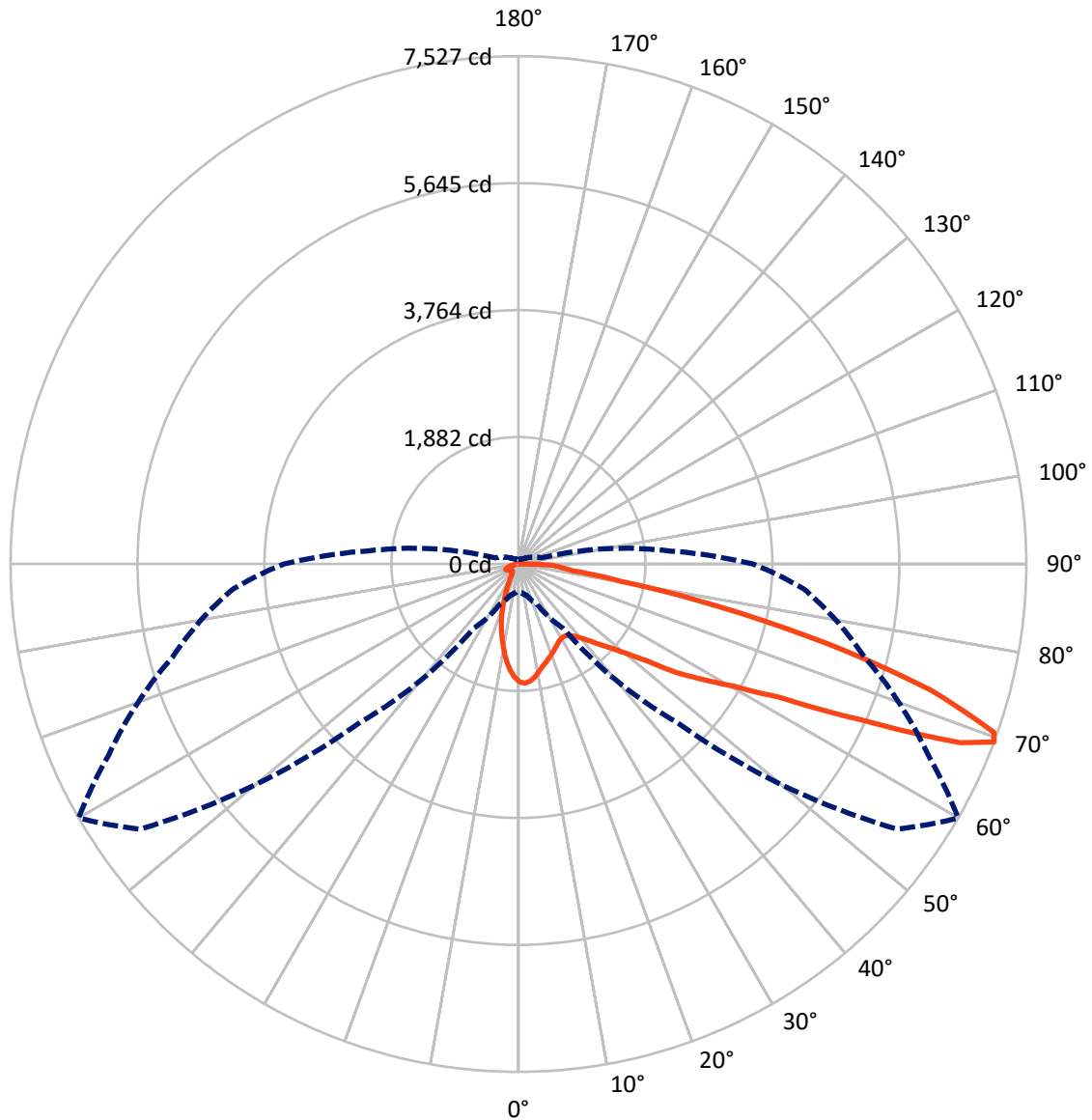
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 17.5 fc  
 Type III - Medium - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 60-Deg Lateral    - - - Horizontal Cone Through 69-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	976.5	0.0	976.5
	% Fixture	14.3	0.0	14.3
<b>Street Side</b>	Lumens	5870.1	0.0	5870.1
	% Fixture	85.7	0.0	85.7
<b>Total</b>	Lumens	6846.6	0.0	6846.6
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	148.2	2.2
10°-20°	317.3	4.6
20°-30°	404.8	5.9
30°-40°	557.0	8.1
40°-50°	902.3	13.2
50°-60°	1416.1	20.7
60°-70°	1887.9	27.6
70°-80°	1050.1	15.3
80°-90°	162.9	2.4
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°	6846.6	100.0
0°-180°	6846.6	100.0



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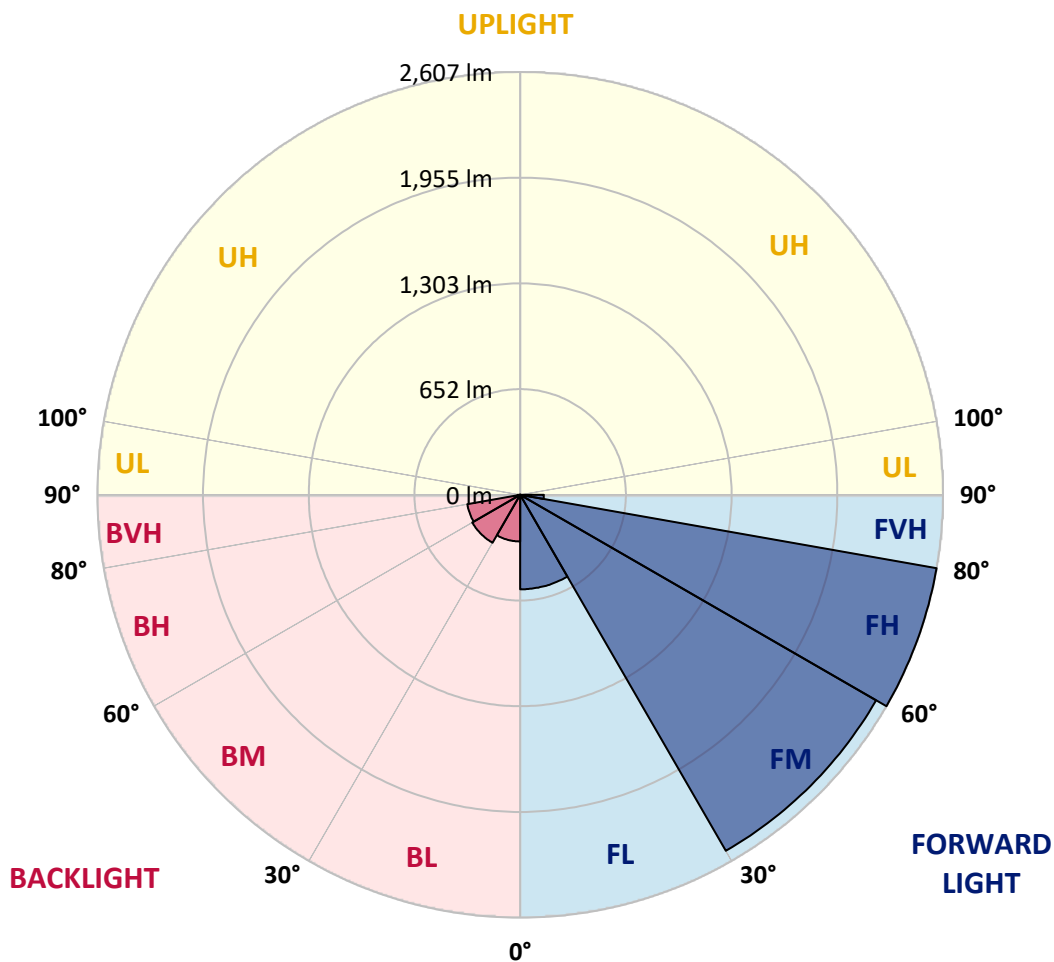
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	582.5	8.5			
FM	(30°-60°)	2534.3	37.0			
FH	(60°-80°)	2606.9	38.1			G2/5000
FVH	(80°-90°)	146.4	2.1			G2/225
BL	(0°-30°)	287.8	4.2	B1/500		
BM	(30°-60°)	341.2	5.0	B1/1000		
BH	(60°-80°)	331.1	4.8	B1/500		G1/500
BVH	(80°-90°)	16.5	0.2			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°	60°	65°	75°	85°
0°	1746.9	1746.9	1746.9	1746.9	1746.9	1746.9	1746.9	1746.9	1746.9	1746.9	1746.9
2.5°	1793.4	1798.3	1798.3	1794.4	1792.1	1779.4	1772.0	1766.7	1757.4	1740.3	1725.0
5°	1729.4	1738.6	1742.5	1744.3	1755.7	1751.8	1752.2	1748.7	1740.8	1722.3	1697.3
7.5°	1611.8	1613.5	1620.5	1632.3	1660.0	1679.3	1695.1	1698.2	1696.5	1682.9	1647.7
10°	1495.8	1498.8	1507.2	1527.4	1553.8	1581.4	1615.6	1629.7	1640.2	1635.9	1591.5
12.5°	1399.7	1400.1	1409.3	1432.5	1462.0	1496.7	1543.2	1565.2	1590.2	1600.3	1550.7
15°	1307.0	1313.2	1322.0	1350.1	1386.5	1430.4	1484.0	1514.3	1547.2	1576.2	1519.1
17.5°	1236.7	1241.6	1246.9	1270.1	1312.2	1367.2	1433.5	1466.0	1509.4	1553.8	1486.6
20°	1198.2	1199.9	1195.9	1207.4	1242.9	1302.2	1379.0	1418.1	1469.9	1532.3	1453.2
22.5°	1190.2	1190.2	1175.8	1173.5	1189.4	1239.4	1322.8	1370.7	1433.9	1517.3	1423.3
25°	1227.1	1224.5	1197.3	1172.2	1166.6	1191.9	1269.3	1328.1	1403.2	1516.8	1400.9
27.5°	1296.9	1293.4	1259.6	1217.4	1181.0	1170.1	1228.0	1288.1	1379.0	1531.8	1389.6
30°	1383.8	1382.5	1348.2	1295.6	1235.4	1178.8	1211.8	1267.5	1362.8	1559.5	1389.2
32.5°	1479.1	1472.9	1451.9	1399.2	1321.0	1227.5	1221.4	1268.4	1358.4	1599.9	1399.2
35°	1580.6	1576.2	1570.8	1517.8	1430.0	1313.6	1264.0	1298.6	1379.9	1656.1	1427.7
37.5°	1709.7	1704.7	1713.5	1655.6	1559.5	1426.4	1336.0	1359.3	1423.8	1737.7	1480.9
40°	1939.2	1925.2	1900.6	1811.4	1710.5	1564.7	1440.0	1443.6	1498.8	1847.0	1566.0
42.5°	2316.4	2271.2	2149.5	1985.8	1869.9	1725.4	1575.8	1559.0	1602.5	1991.5	1689.8
45°	2694.4	2643.4	2438.0	2175.9	2035.0	1898.0	1743.4	1703.5	1731.5	2159.7	1849.2
47.5°	2938.5	2913.5	2681.7	2366.0	2207.9	2085.9	1935.3	1869.4	1889.6	2350.1	2045.9
50°	3010.0	2988.6	2806.4	2514.8	2371.2	2312.9	2172.8	2085.4	2089.0	2572.7	2281.7
52.5°	2956.5	2947.7	2826.9	2607.0	2521.4	2552.2	2501.6	2380.0	2351.0	2816.9	2537.2
55°	2884.9	2888.0	2841.5	2699.7	2674.2	2775.2	2931.9	2834.0	2711.0	3071.1	2803.3
57.5°	2659.7	2661.9	2784.0	2876.1	2965.7	3087.8	3266.9	3225.6	3082.5	3345.5	3101.4
60°	2141.6	2158.7	2430.5	2839.7	3298.9	3703.7	3747.7	3676.5	3477.6	3661.6	3489.1
62.5°	1530.0	1545.4	1860.2	2465.2	3259.8	4400.9	4635.4	4352.7	4013.6	4134.5	4034.3
65°	803.8	801.3	1044.9	1703.5	2745.7	4562.5	6034.2	5553.0	4916.8	4784.6	4561.1
67.5°	449.2	463.6	558.0	859.2	1789.6	4015.5	6927.6	7069.4	6172.5	5300.5	4538.3
69°	415.3	420.1	483.3	664.3	1166.6	3313.0	6850.8	7527.3	6702.0	5302.7	4246.0
70°	403.5	408.8	466.3	612.0	979.9	2714.6	6571.1	7473.8	6830.5	5185.0	3979.9
72.5°	361.8	368.8	424.5	550.1	825.8	1399.2	5293.1	6396.8	6187.4	4531.8	3086.0
75°	308.6	320.5	404.8	546.2	782.4	889.5	3529.9	4765.7	4605.1	3241.0	1750.9
77.5°	127.8	129.1	177.0	400.0	821.0	851.3	1897.1	3018.8	2672.5	1421.2	527.3
80°	89.1	87.4	88.3	116.8	662.5	857.0	973.3	1535.3	1193.3	374.9	246.7
82.5°	75.1	74.2	77.7	73.3	224.3	972.5	814.0	800.4	562.0	201.9	117.6
85°	49.6	48.3	63.6	66.7	106.7	772.2	875.4	629.1	418.8	108.0	50.0
87.5°	24.1	24.6	36.4	45.2	56.7	244.6	838.5	497.5	323.6	47.0	20.2
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°	1746.9	1746.9	1746.9	1746.9	1746.9	1746.9	1746.9	1746.9	1746.9	1746.9	1746.9
2.5°	1718.9	1705.7	1693.8	1678.9	1667.5	1657.8	1644.6	1644.2	1642.0	1645.1	1645.9
5°	1680.6	1658.7	1625.4	1588.0	1561.6	1527.0	1493.2	1481.7	1469.1	1467.7	1471.6
7.5°	1623.1	1588.8	1531.8	1474.7	1417.6	1359.3	1304.0	1275.8	1248.6	1240.3	1244.2
10°	1559.0	1515.6	1428.1	1335.2	1254.8	1167.8	1083.5	1029.1	979.5	958.4	963.7
12.5°	1509.0	1453.6	1330.8	1209.9	1089.6	965.1	854.0	746.3	665.1	628.7	630.9
15°	1466.0	1395.3	1239.4	1078.7	928.1	757.3	603.2	478.5	407.4	381.0	380.2
17.5°	1419.4	1333.8	1144.2	956.7	761.3	550.1	404.0	330.1	302.1	293.3	293.3
20°	1369.8	1270.6	1044.4	823.7	585.6	384.1	303.8	275.3	264.7	262.1	261.7
22.5°	1323.7	1208.7	944.4	681.8	423.7	291.5	258.6	247.7	245.8	248.1	248.1
25°	1287.3	1154.2	842.9	532.5	308.2	244.1	230.1	228.7	235.3	243.3	244.6
27.5°	1260.1	1105.5	742.9	389.0	242.3	212.5	207.7	213.4	228.7	244.6	247.7
30°	1241.1	1063.8	623.0	279.7	201.9	186.2	188.3	198.5	221.7	245.8	252.5
32.5°	1232.9	1030.0	502.3	214.7	172.6	163.8	169.5	182.6	206.7	231.0	238.9
35°	1240.7	1005.4	390.8	178.3	151.0	144.4	151.0	164.6	180.4	192.3	197.1
37.5°	1269.3	996.7	294.2	158.0	137.0	130.4	135.6	144.8	151.9	156.3	158.5
40°	1329.4	1005.9	230.5	147.5	129.1	121.6	123.0	127.4	132.2	135.6	136.1
42.5°	1425.1	1036.1	205.0	143.5	124.3	114.6	112.4	115.5	120.7	125.5	126.4
45°	1552.4	1086.6	202.4	144.8	122.0	108.8	104.4	107.6	114.6	122.4	123.8
47.5°	1717.1	1166.6	214.7	151.9	123.4	105.8	99.2	102.3	111.5	122.0	123.8
50°	1912.0	1277.2	237.5	162.4	129.5	105.8	97.1	99.6	109.4	121.2	123.0
52.5°	2141.6	1431.3	261.3	173.0	138.3	109.8	97.9	97.5	106.3	117.2	119.4
55°	2394.9	1622.7	284.1	182.2	143.1	115.0	100.1	94.8	101.9	110.7	112.4
57.5°	2693.0	1884.8	324.0	191.0	145.8	119.0	102.7	92.2	96.2	102.3	103.6
60°	3097.4	2269.8	401.7	205.9	150.6	120.7	103.2	89.6	89.1	93.5	93.9
62.5°	3624.7	2720.7	475.9	223.5	160.3	121.2	101.4	87.8	83.4	84.7	84.7
65°	3999.6	2886.7	454.4	238.3	169.0	120.7	99.6	86.5	79.1	76.8	76.8
67.5°	3786.2	2549.9	386.0	242.3	169.9	115.9	95.7	83.4	75.1	69.8	69.8
69°	3472.8	2235.1	354.4	235.3	162.9	110.2	91.3	80.3	72.4	66.3	66.3
70°	3217.3	1996.7	335.0	227.0	154.6	105.4	87.4	77.2	69.8	64.5	64.1
72.5°	2402.0	1332.5	286.2	195.8	126.8	89.1	76.4	68.9	62.8	59.2	59.2
75°	1267.5	667.8	234.5	159.8	97.9	71.1	62.8	58.0	54.4	54.0	53.6
77.5°	415.3	302.1	168.6	120.3	72.0	55.3	50.0	47.0	46.5	48.3	48.3
80°	224.3	180.4	108.4	81.2	50.0	41.2	38.7	38.2	39.5	42.1	42.1
82.5°	108.8	89.1	64.5	50.0	34.3	30.3	30.3	30.7	32.5	35.6	35.6
85°	47.0	42.1	37.3	28.1	21.1	18.9	21.5	23.7	25.1	27.2	28.1
87.5°	22.4	19.7	17.1	10.9	9.2	9.6	11.5	14.0	16.7	18.4	18.9
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)