

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: P197090

Luminaire Tested: **NAV-AF-02-D-UNV-SL3-8030-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P197090  
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-02-D-UNV-SL3-8030-600  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(2) 80 CRI, 3000K, 615mA LIGHTSQUARES 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: 6540 lumens  
Efficiency: N/A  
Efficacy: 99.1 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type III - Medium - Non-Cutoff  
BUG Rating: B1 - U0 - G2

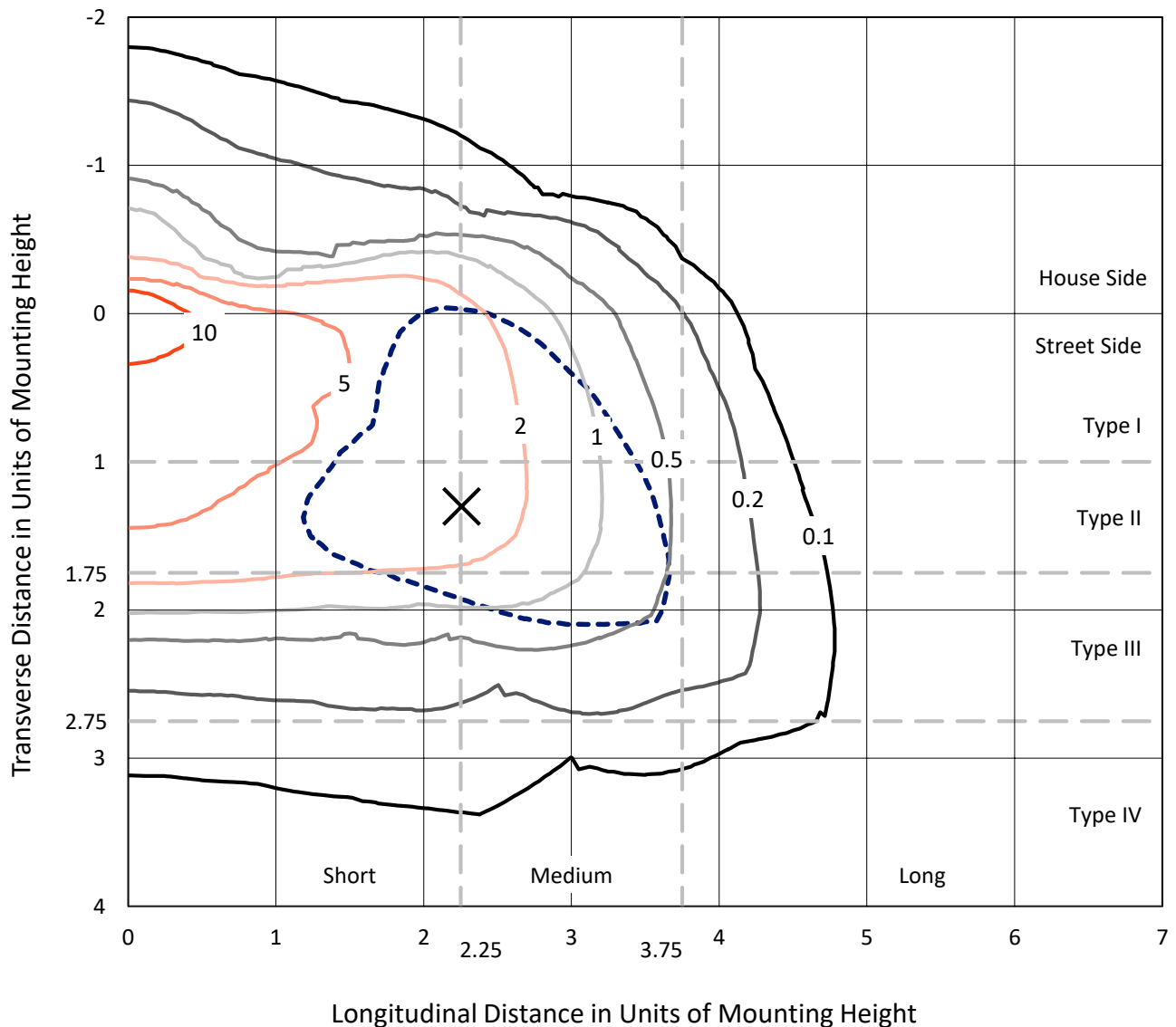
Input Watts (W): 66  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

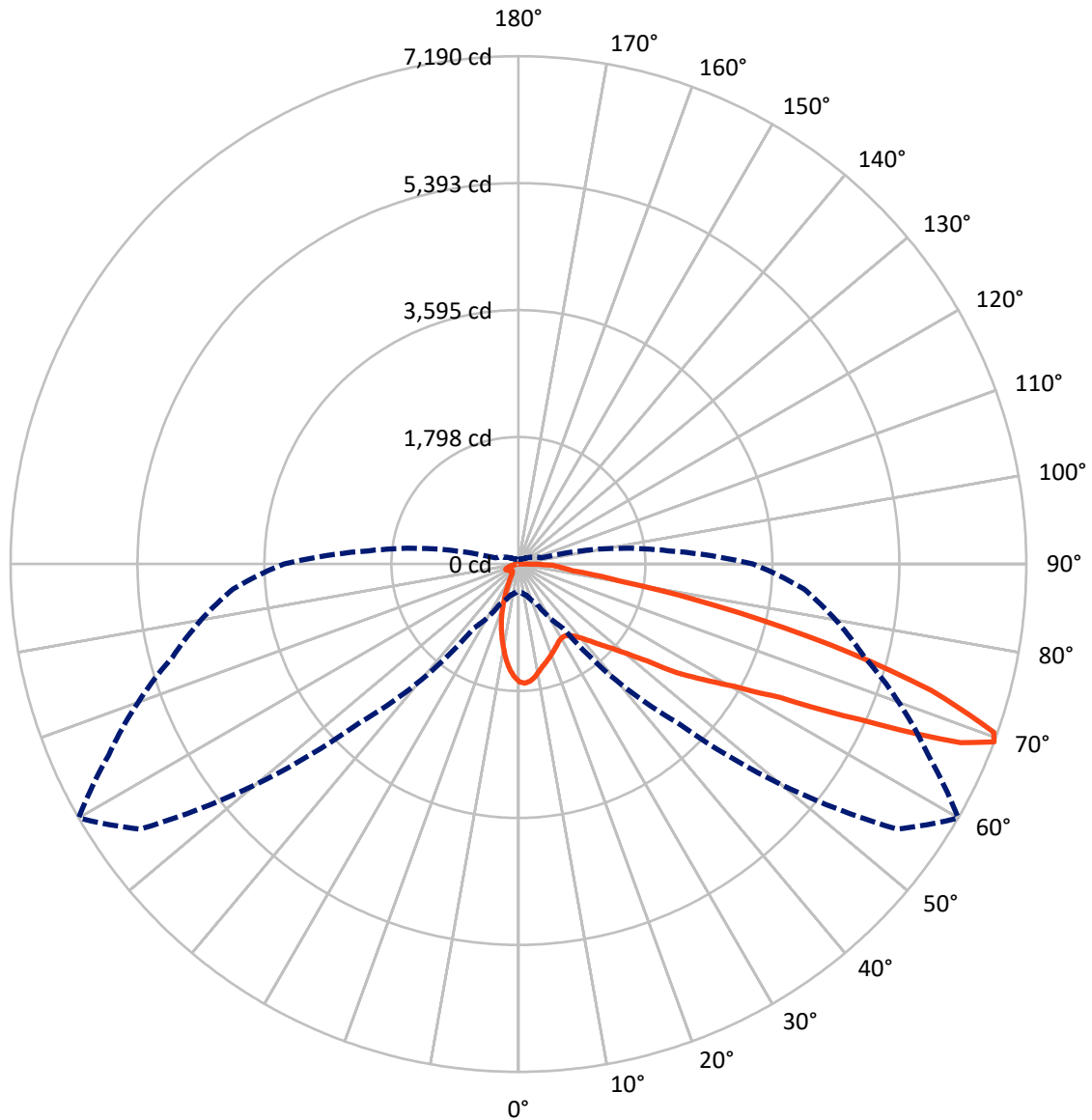
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 16.7 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	932.8	0.0	932.8
	% Fixture	14.3	0.0	14.3
<b>Street Side</b>	Lumens	5607.2	0.0	5607.2
	% Fixture	85.7	0.0	85.7
<b>Total</b>	Lumens	6540.0	0.0	6540.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	141.6	2.2
10°-20°	303.1	4.6
20°-30°	386.7	5.9
30°-40°	532.1	8.1
40°-50°	861.9	13.2
50°-60°	1352.7	20.7
60°-70°	1803.4	27.6
70°-80°	1003.1	15.3
80°-90°	155.6	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°	6540.0	100.0
0°-180°	6540.0	100.0

**Coefficient of Utilization**



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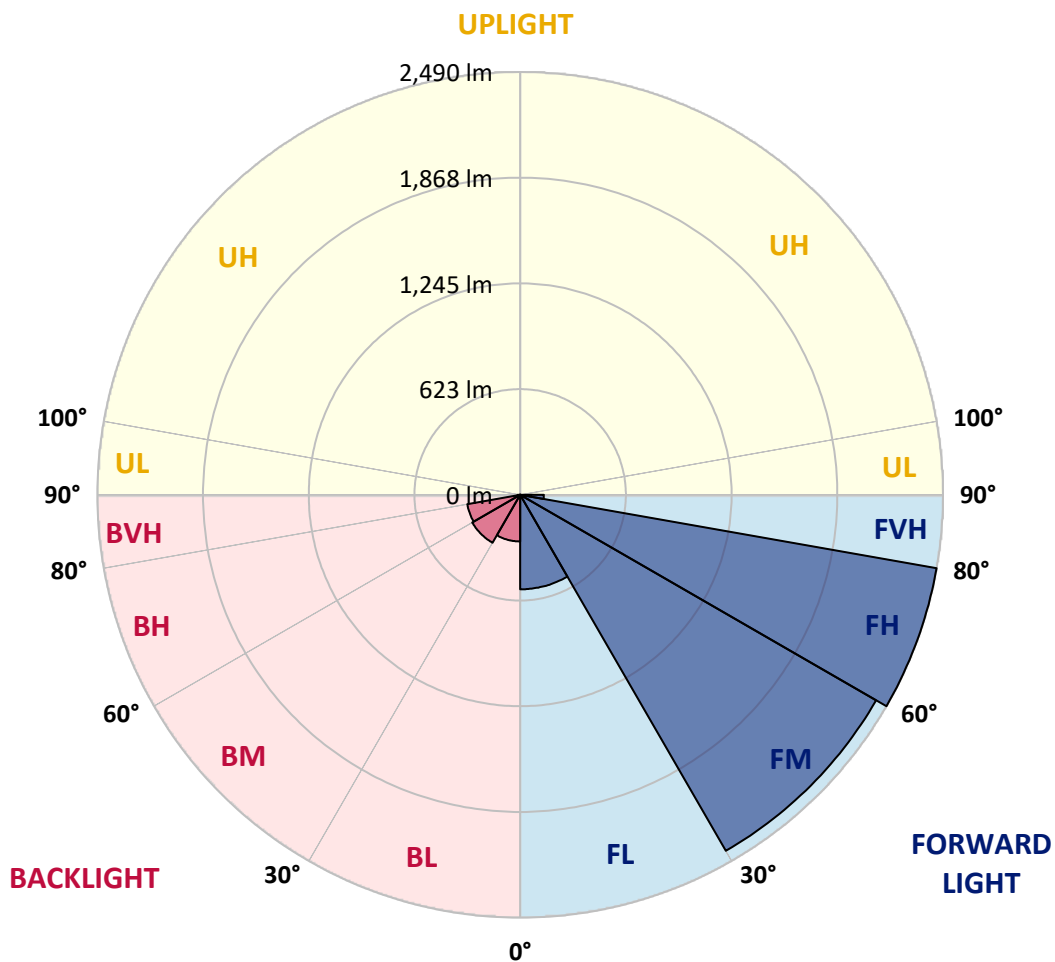
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	556.4	8.5			
FM	(30°-60°)	2420.8	37.0			
FH	(60°-80°)	2490.2	38.1			G2/5000
FVH	(80°-90°)	139.8	2.1			G2/225
BL	(0°-30°)	274.9	4.2	B1/500		
BM	(30°-60°)	325.9	5.0	B1/1000		
BH	(60°-80°)	316.3	4.8	B1/500		G1/500
BVH	(80°-90°)	15.8	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°	1668.7	1668.7	1668.7	1668.7	1668.7	1668.7	1668.7	1668.7	1668.7	1668.7	1668.7
2.5°	1713.2	1717.8	1717.8	1714.0	1711.9	1699.7	1692.6	1687.6	1678.8	1662.4	1647.7
5°	1651.9	1660.7	1664.5	1666.2	1677.1	1673.3	1673.7	1670.4	1662.8	1645.2	1621.3
7.5°	1539.5	1541.2	1547.9	1559.2	1585.7	1604.1	1619.2	1622.2	1620.5	1607.5	1573.9
10°	1428.8	1431.8	1439.7	1459.0	1484.2	1510.6	1543.3	1556.7	1566.8	1562.6	1520.2
12.5°	1337.0	1337.4	1346.2	1368.4	1396.5	1429.7	1474.1	1495.1	1519.0	1528.6	1481.2
15°	1248.5	1254.4	1262.7	1289.6	1324.4	1366.3	1417.5	1446.4	1477.9	1505.6	1451.0
17.5°	1181.4	1186.0	1191.0	1213.3	1253.5	1305.9	1369.3	1400.3	1441.8	1484.2	1420.0
20°	1144.5	1146.2	1142.4	1153.3	1187.3	1243.9	1317.3	1354.6	1404.1	1463.6	1388.1
22.5°	1136.9	1136.9	1123.1	1121.0	1136.1	1183.9	1263.6	1309.3	1369.7	1449.4	1359.6
25°	1172.2	1169.6	1143.6	1119.7	1114.3	1138.6	1212.4	1268.6	1340.3	1448.9	1338.2
27.5°	1238.8	1235.5	1203.2	1162.9	1128.1	1117.6	1173.0	1230.5	1317.3	1463.2	1327.3
30°	1321.9	1320.6	1287.9	1237.6	1180.1	1126.0	1157.5	1210.7	1301.7	1489.6	1326.9
32.5°	1412.9	1407.0	1386.9	1336.6	1261.9	1172.6	1166.7	1211.6	1297.6	1528.2	1336.6
35°	1509.8	1505.6	1500.5	1449.8	1365.9	1254.8	1207.4	1240.5	1318.1	1581.9	1363.8
37.5°	1633.1	1628.4	1636.8	1581.5	1489.6	1362.6	1276.2	1298.4	1360.0	1659.9	1414.6
40°	1852.4	1839.0	1815.5	1730.4	1633.9	1494.7	1375.6	1378.9	1431.8	1764.3	1495.9
42.5°	2212.6	2169.4	2053.3	1896.8	1786.1	1648.2	1505.1	1489.2	1530.7	1902.3	1614.2
45°	2573.7	2525.1	2328.8	2078.4	1943.8	1813.0	1665.3	1627.2	1654.0	2062.9	1766.4
47.5°	2806.9	2783.0	2561.6	2260.0	2109.0	1992.5	1848.6	1785.7	1805.0	2244.9	1954.3
50°	2875.2	2854.7	2680.7	2402.2	2265.1	2209.3	2075.5	1992.0	1995.4	2457.6	2179.5
52.5°	2824.1	2815.7	2700.4	2490.3	2408.5	2437.8	2389.6	2273.4	2245.8	2690.7	2423.6
55°	2755.7	2758.7	2714.2	2578.8	2554.4	2650.9	2800.6	2707.1	2589.7	2933.5	2677.7
57.5°	2540.6	2542.7	2659.3	2747.3	2832.9	2949.5	3120.6	3081.2	2944.4	3195.7	2962.5
60°	2045.7	2062.1	2321.7	2712.5	3151.2	3537.9	3579.8	3511.9	3321.9	3497.6	3332.8
62.5°	1461.5	1476.2	1776.9	2354.8	3113.9	4203.8	4427.8	4157.7	3833.9	3949.3	3853.7
65°	767.9	765.4	998.1	1627.2	2622.8	4358.2	5763.9	5304.3	4696.6	4570.4	4356.9
67.5°	429.0	442.9	533.0	820.7	1709.4	3835.6	6617.4	6752.8	5896.0	5063.1	4335.1
69°	396.7	401.3	461.7	634.5	1114.3	3164.6	6544.0	7190.2	6401.8	5065.2	4055.8
70°	385.4	390.4	445.4	584.6	936.0	2593.0	6276.8	7139.1	6524.7	4952.8	3801.7
72.5°	345.6	352.3	405.5	525.5	788.8	1336.6	5056.0	6110.3	5910.3	4328.8	2947.8
75°	294.8	306.1	386.7	521.7	747.3	849.7	3371.8	4552.3	4398.8	3095.8	1672.5
77.5°	122.0	123.3	169.0	382.1	784.2	813.2	1812.1	2883.6	2552.7	1357.5	503.7
80°	85.1	83.5	84.3	111.6	632.8	818.6	929.8	1466.6	1139.9	358.1	235.7
82.5°	71.7	70.9	74.2	70.0	214.3	928.9	777.5	764.5	536.8	192.9	112.4
85°	47.4	46.1	60.8	63.7	101.9	737.7	836.2	601.0	400.1	103.2	47.8
87.5°	23.1	23.5	34.8	43.2	54.1	233.6	801.0	475.2	309.1	44.9	19.3
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°	1668.7	1668.7	1668.7	1668.7	1668.7	1668.7	1668.7	1668.7	1668.7	1668.7	1668.7
2.5°	1641.9	1629.3	1618.0	1603.7	1592.8	1583.6	1571.0	1570.6	1568.5	1571.4	1572.2
5°	1605.4	1584.4	1552.5	1516.9	1491.7	1458.6	1426.3	1415.4	1403.2	1402.0	1405.8
7.5°	1550.4	1517.7	1463.2	1408.7	1354.2	1298.4	1245.6	1218.7	1192.7	1184.7	1188.5
10°	1489.2	1447.7	1364.2	1275.3	1198.6	1115.5	1035.0	983.0	935.6	915.5	920.5
12.5°	1441.4	1388.6	1271.1	1155.8	1040.9	921.8	815.7	712.9	635.4	600.5	602.6
15°	1400.3	1332.8	1183.9	1030.4	886.6	723.4	576.2	457.1	389.2	364.0	363.2
17.5°	1355.8	1274.1	1092.9	913.8	727.2	525.5	385.8	315.4	288.5	280.1	280.1
20°	1308.5	1213.7	997.7	786.8	559.4	367.0	290.2	262.9	252.9	250.4	249.9
22.5°	1264.4	1154.5	902.1	651.3	404.7	278.5	247.0	236.5	234.9	236.9	236.9
25°	1229.6	1102.5	805.2	508.7	294.4	233.2	219.8	218.5	224.8	232.3	233.6
27.5°	1203.6	1056.0	709.6	371.6	231.5	203.0	198.4	203.8	218.5	233.6	236.5
30°	1185.6	1016.2	595.1	267.1	192.9	177.8	179.9	189.6	211.8	234.9	241.1
32.5°	1177.6	983.9	479.8	205.1	164.8	156.4	161.9	174.5	197.5	220.6	228.1
35°	1185.2	960.4	373.2	170.3	144.3	138.0	144.3	157.3	172.4	183.7	188.3
37.5°	1212.4	952.0	281.0	151.0	130.8	124.6	129.6	138.4	145.1	149.3	151.4
40°	1269.9	960.8	220.2	140.9	123.3	116.2	117.4	121.6	126.2	129.6	130.0
42.5°	1361.3	989.7	195.8	137.1	118.7	109.5	107.4	110.3	115.3	119.9	120.8
45°	1482.9	1038.0	193.3	138.4	116.6	104.0	99.8	102.7	109.5	117.0	118.3
47.5°	1640.2	1114.3	205.1	145.1	117.8	101.1	94.8	97.7	106.5	116.6	118.3
50°	1826.4	1220.0	226.9	155.2	123.7	101.1	92.7	95.2	104.4	115.7	117.4
52.5°	2045.7	1367.2	249.5	165.2	132.1	104.8	93.5	93.1	101.5	112.0	114.1
55°	2287.7	1550.0	271.3	174.0	136.7	109.9	95.6	90.6	97.3	105.7	107.4
57.5°	2572.5	1800.4	309.5	182.4	139.2	113.7	98.1	88.1	91.8	97.7	99.0
60°	2958.7	2168.2	383.7	196.7	143.8	115.3	98.6	85.6	85.1	89.3	89.7
62.5°	3462.4	2598.9	454.6	213.5	153.1	115.7	96.9	83.9	79.7	80.9	80.9
65°	3820.5	2757.4	434.1	227.7	161.5	115.3	95.2	82.6	75.5	73.4	73.4
67.5°	3616.7	2435.7	368.6	231.5	162.3	110.7	91.4	79.7	71.7	66.7	66.7
69°	3317.3	2135.0	338.4	224.8	155.6	105.3	87.2	76.7	69.2	63.3	63.3
70°	3073.2	1907.3	320.0	216.8	147.6	100.7	83.5	73.8	66.7	61.6	61.2
72.5°	2294.4	1272.8	273.4	187.0	121.2	85.1	73.0	65.8	60.0	56.6	56.6
75°	1210.7	637.9	223.9	152.7	93.5	67.9	60.0	55.4	52.0	51.6	51.2
77.5°	396.7	288.5	161.0	114.9	68.8	52.8	47.8	44.9	44.5	46.1	46.1
80°	214.3	172.4	103.6	77.6	47.8	39.4	36.9	36.5	37.7	40.3	40.3
82.5°	104.0	85.1	61.6	47.8	32.7	28.9	28.9	29.4	31.0	34.0	34.0
85°	44.9	40.3	35.6	26.8	20.1	18.0	20.5	22.6	23.9	26.0	26.8
87.5°	21.4	18.9	16.4	10.5	8.8	9.2	10.9	13.4	15.9	17.6	18.0
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)