

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: P195667

Luminaire Tested: **NAV-AF-01-D-UNV-SL3-7050-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195667
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-SL3-7050-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 5000K, 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: 6693 lumens
Efficiency: N/A
Efficacy: 99.9 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

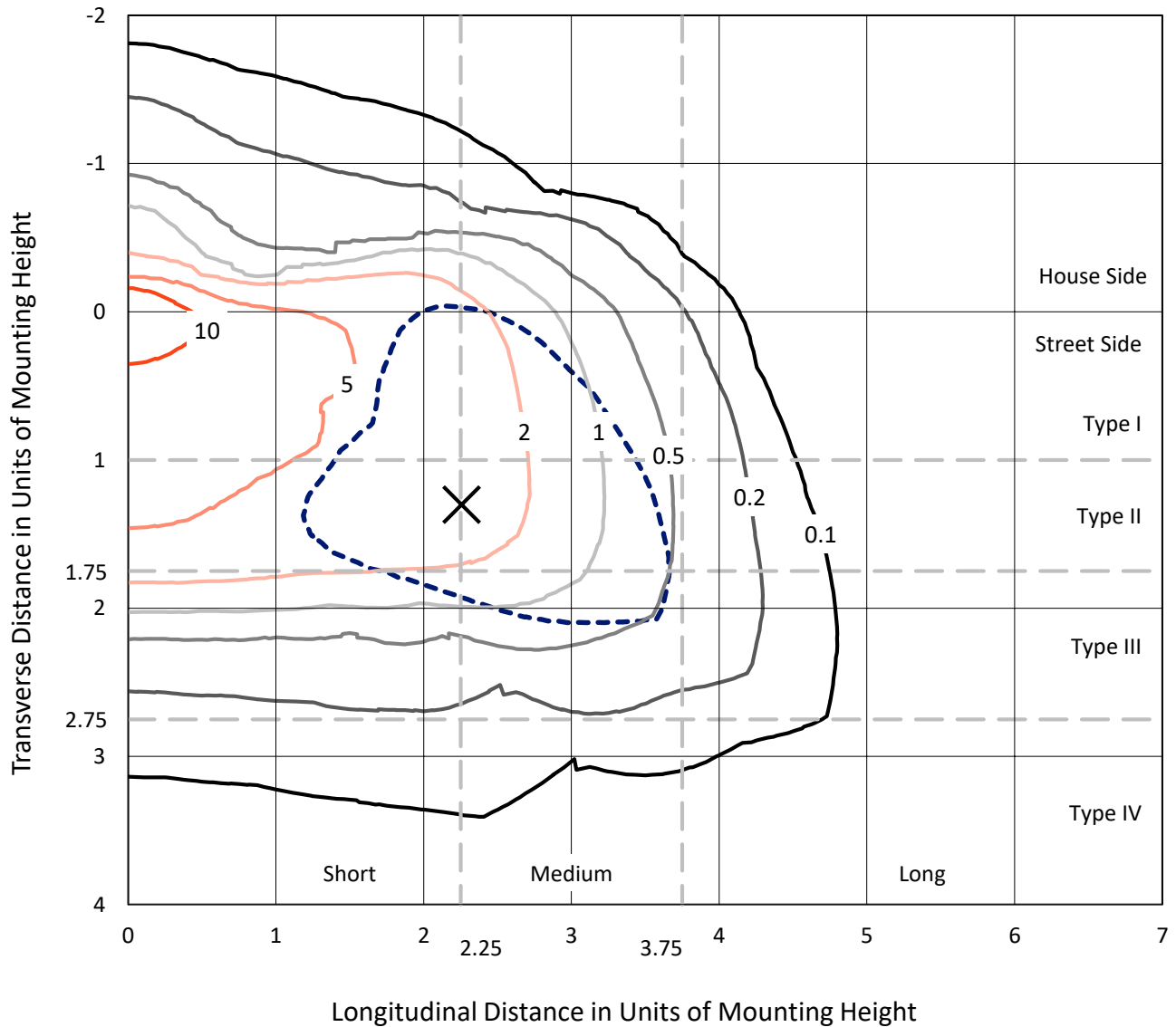
Input Watts (W): 67
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

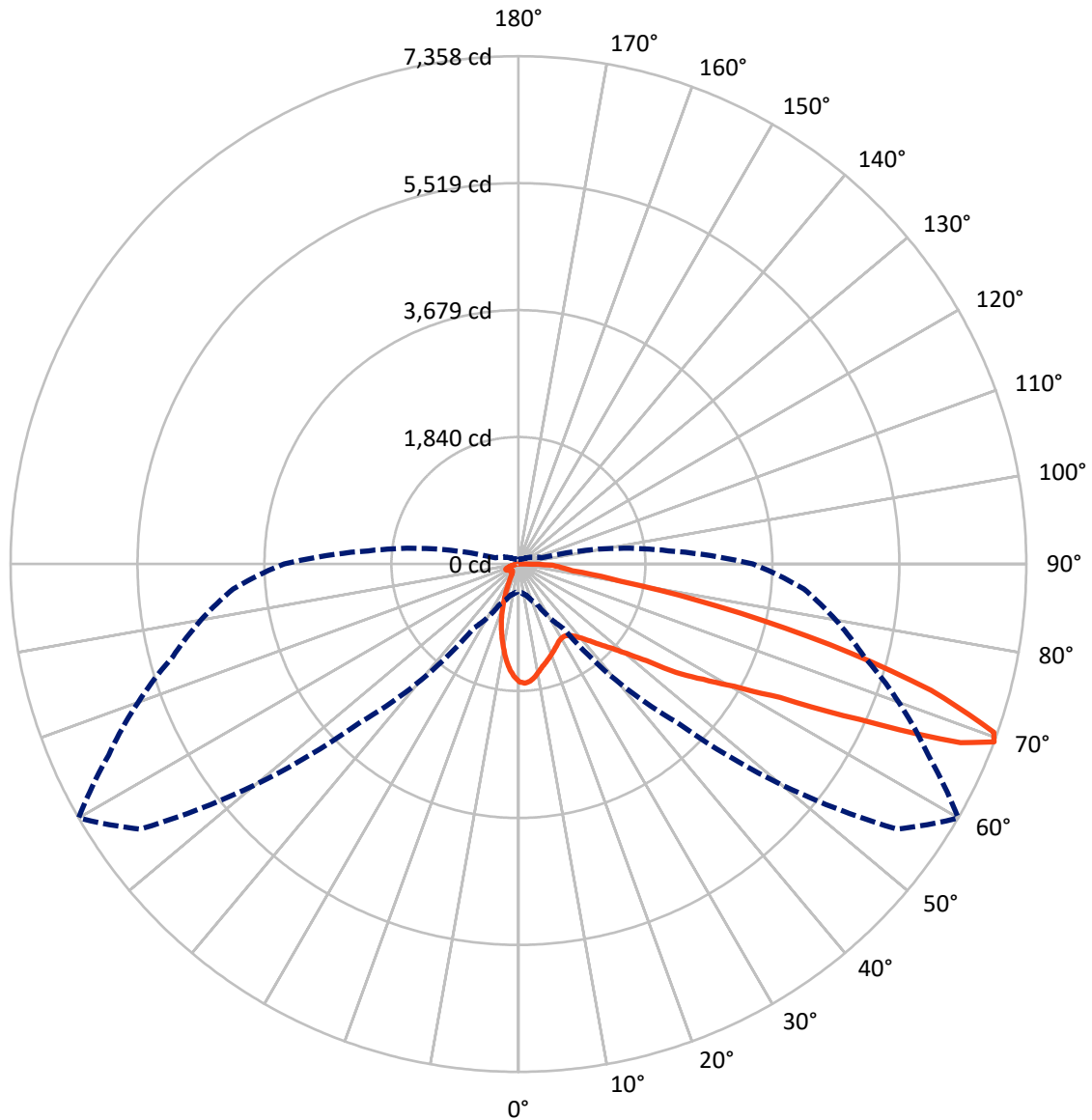
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 17.1 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
House Side	Lumens	954.6	0.0	954.6
	% Fixture	14.3	0.0	14.3
Street Side	Lumens	5738.4	0.0	5738.4
	% Fixture	85.7	0.0	85.7
Total	Lumens	6693.0	0.0	6693.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	144.9	2.2
10°-20°	310.2	4.6
20°-30°	395.7	5.9
30°-40°	544.5	8.1
40°-50°	882.0	13.2
50°-60°	1384.3	20.7
60°-70°	1845.6	27.6
70°-80°	1026.6	15.3
80°-90°	159.2	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°	6693.0	100.0
0°-180°	6693.0	100.0

Coefficient of Utilization



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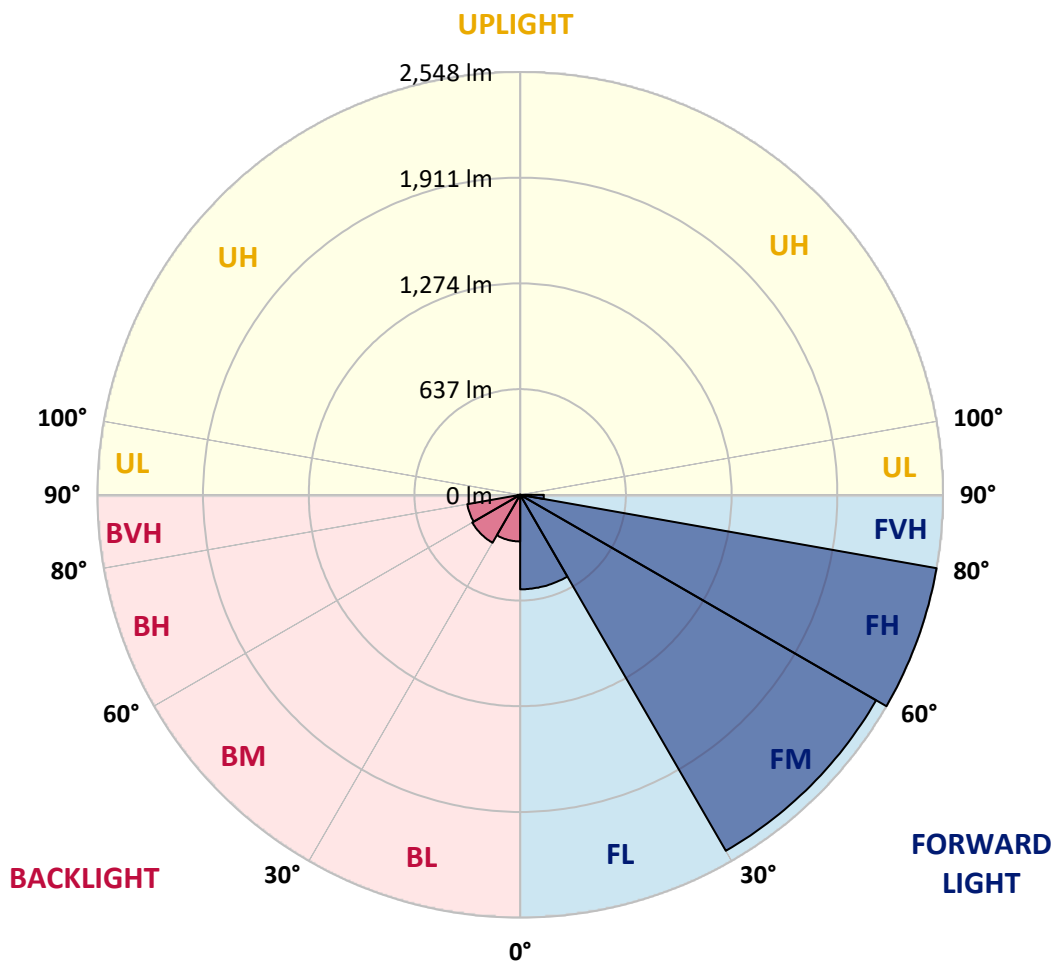
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	569.4	8.5			
FM	(30°-60°)	2477.4	37.0			
FH	(60°-80°)	2548.4	38.1			G2/5000
FVH	(80°-90°)	143.1	2.1			G2/225
BL	(0°-30°)	281.3	4.2	B1/500		
BM	(30°-60°)	333.5	5.0	B1/1000		
BH	(60°-80°)	323.7	4.8	B1/500		G1/500
BVH	(80°-90°)	16.1	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°	1707.7	1707.7	1707.7	1707.7	1707.7	1707.7	1707.7	1707.7	1707.7	1707.7	1707.7
2.5°	1753.2	1758.0	1758.0	1754.1	1751.9	1739.5	1732.2	1727.1	1718.0	1701.3	1686.3
5°	1690.6	1699.6	1703.4	1705.2	1716.3	1712.5	1712.9	1709.5	1701.7	1683.7	1659.2
7.5°	1575.6	1577.3	1584.1	1595.7	1622.8	1641.6	1657.1	1660.1	1658.4	1645.1	1610.7
10°	1462.2	1465.2	1473.4	1493.1	1518.9	1545.9	1579.4	1593.1	1603.4	1599.2	1555.8
12.5°	1368.3	1368.7	1377.7	1400.4	1429.2	1463.1	1508.6	1530.1	1554.5	1564.4	1515.9
15°	1277.7	1283.7	1292.3	1319.8	1355.4	1398.3	1450.7	1480.3	1512.5	1540.8	1485.0
17.5°	1209.0	1213.7	1218.9	1241.6	1282.8	1336.5	1401.3	1433.1	1475.5	1518.9	1453.2
20°	1171.3	1173.0	1169.1	1180.3	1215.0	1273.0	1348.1	1386.3	1436.9	1497.9	1420.6
22.5°	1163.5	1163.5	1149.4	1147.2	1162.7	1211.6	1293.1	1339.9	1401.7	1483.3	1391.4
25°	1199.6	1197.0	1170.4	1145.9	1140.4	1165.2	1240.8	1298.3	1371.7	1482.8	1369.5
27.5°	1267.8	1264.4	1231.3	1190.1	1154.5	1143.8	1200.4	1259.2	1348.1	1497.4	1358.4
30°	1352.8	1351.5	1318.0	1266.5	1207.7	1152.4	1184.6	1239.1	1332.2	1524.5	1358.0
32.5°	1445.9	1439.9	1419.3	1367.8	1291.4	1200.0	1194.0	1239.9	1327.9	1564.0	1367.8
35°	1545.1	1540.8	1535.6	1483.7	1397.9	1284.1	1235.6	1269.5	1348.9	1618.9	1395.7
37.5°	1671.3	1666.5	1675.1	1618.5	1524.5	1394.4	1306.0	1328.8	1391.9	1698.7	1447.7
40°	1895.7	1882.0	1858.0	1770.8	1672.1	1529.6	1407.7	1411.2	1465.2	1805.6	1530.9
42.5°	2264.4	2220.2	2101.3	1941.2	1827.9	1686.7	1540.4	1524.0	1566.5	1946.8	1651.9
45°	2633.9	2584.1	2383.3	2127.1	1989.3	1855.4	1704.3	1665.3	1692.7	2111.2	1807.7
47.5°	2872.6	2848.1	2621.5	2312.9	2158.4	2039.1	1891.9	1827.5	1847.2	2297.4	2000.0
50°	2942.5	2921.5	2743.4	2458.4	2318.0	2261.0	2124.1	2038.6	2042.1	2515.0	2230.5
52.5°	2890.2	2881.6	2763.5	2548.5	2464.8	2494.9	2445.5	2326.6	2298.3	2753.7	2480.3
55°	2820.2	2823.2	2777.7	2639.1	2614.2	2712.9	2866.1	2770.4	2650.2	3002.2	2740.4
57.5°	2600.0	2602.2	2721.5	2811.6	2899.2	3018.5	3193.6	3153.2	3013.3	3270.4	3031.8
60°	2093.6	2110.3	2376.0	2776.0	3224.9	3620.6	3663.6	3594.0	3399.6	3579.4	3410.8
62.5°	1495.7	1510.7	1818.5	2409.9	3186.7	4302.2	4531.4	4255.0	3923.6	4041.7	3943.8
65°	785.8	783.3	1021.5	1665.3	2684.1	4460.1	5898.8	5428.4	4806.5	4677.3	4458.8
67.5°	439.1	453.2	545.5	839.9	1749.4	3925.4	6772.2	6910.8	6034.0	5181.6	4436.5
69°	406.0	410.7	472.5	649.4	1140.4	3238.7	6697.1	7358.4	6551.6	5183.7	4150.7
70°	394.4	399.6	455.8	598.3	957.9	2653.7	6423.7	7306.1	6677.3	5068.7	3890.6
72.5°	353.7	360.5	415.0	537.8	807.3	1367.8	5174.3	6253.3	6048.6	4430.1	3016.8
75°	301.7	313.3	395.7	533.9	764.8	869.5	3450.7	4658.8	4501.8	3168.3	1711.6
77.5°	124.9	126.2	173.0	391.0	802.6	832.2	1854.5	2951.1	2612.5	1389.3	515.5
80°	87.1	85.4	86.3	114.2	647.6	837.8	951.5	1500.9	1166.5	366.5	241.2
82.5°	73.4	72.5	76.0	71.7	219.3	950.7	795.7	782.4	549.4	197.4	115.0
85°	48.5	47.2	62.2	65.2	104.3	754.9	855.8	615.0	409.4	105.6	48.9
87.5°	23.6	24.0	35.6	44.2	55.4	239.1	819.7	486.3	316.3	45.9	19.7
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°	1707.7	1707.7	1707.7	1707.7	1707.7	1707.7	1707.7	1707.7	1707.7	1707.7	1707.7
2.5°	1680.3	1667.4	1655.8	1641.2	1630.1	1620.6	1607.7	1607.3	1605.2	1608.2	1609.0
5°	1642.9	1621.5	1588.9	1552.4	1526.6	1492.7	1459.7	1448.5	1436.1	1434.8	1438.6
7.5°	1586.7	1553.2	1497.4	1441.6	1385.8	1328.8	1274.7	1247.2	1220.6	1212.5	1216.3
10°	1524.0	1481.6	1396.1	1305.2	1226.6	1141.6	1059.2	1006.0	957.5	936.9	942.1
12.5°	1475.1	1421.0	1300.9	1182.8	1065.2	943.4	834.8	729.6	650.2	614.6	616.7
15°	1433.1	1364.0	1211.6	1054.5	907.3	740.3	589.7	467.8	398.3	372.5	371.7
17.5°	1387.6	1303.9	1118.5	935.2	744.2	537.8	394.9	322.7	295.3	286.7	286.7
20°	1339.1	1242.1	1021.0	805.2	572.5	375.5	297.0	269.1	258.8	256.2	255.8
22.5°	1294.0	1181.6	923.2	666.5	414.2	285.0	252.8	242.1	240.3	242.5	242.5
25°	1258.4	1128.3	824.0	520.6	301.3	238.6	224.9	223.6	230.0	237.8	239.1
27.5°	1231.8	1080.7	726.2	380.3	236.9	207.7	203.0	208.6	223.6	239.1	242.1
30°	1213.3	1039.9	609.0	273.4	197.4	182.0	184.1	194.0	216.7	240.3	246.8
32.5°	1205.2	1006.9	491.0	209.9	168.7	160.1	165.7	178.5	202.1	225.8	233.5
35°	1212.9	982.8	382.0	174.3	147.6	141.2	147.6	160.9	176.4	188.0	192.7
37.5°	1240.8	974.3	287.6	154.5	133.9	127.5	132.6	141.6	148.5	152.8	154.9
40°	1299.6	983.3	225.3	144.2	126.2	118.9	120.2	124.5	129.2	132.6	133.0
42.5°	1393.1	1012.9	200.4	140.3	121.5	112.0	109.9	112.9	118.0	122.7	123.6
45°	1517.6	1062.2	197.9	141.6	119.3	106.4	102.1	105.2	112.0	119.7	121.0
47.5°	1678.6	1140.4	209.9	148.5	120.6	103.4	97.0	100.0	109.0	119.3	121.0
50°	1869.1	1248.5	232.2	158.8	126.6	103.4	94.9	97.4	106.9	118.5	120.2
52.5°	2093.6	1399.2	255.4	169.1	135.2	107.3	95.7	95.3	103.9	114.6	116.7
55°	2341.2	1586.3	277.7	178.1	139.9	112.4	97.9	92.7	99.6	108.2	109.9
57.5°	2632.6	1842.5	316.7	186.7	142.5	116.3	100.4	90.1	94.0	100.0	101.3
60°	3027.9	2218.9	392.7	201.3	147.2	118.0	100.9	87.6	87.1	91.4	91.8
62.5°	3543.4	2659.7	465.2	218.5	156.7	118.5	99.1	85.8	81.5	82.8	82.8
65°	3909.9	2821.9	444.2	233.0	165.2	118.0	97.4	84.6	77.3	75.1	75.1
67.5°	3701.3	2492.7	377.3	236.9	166.1	113.3	93.6	81.5	73.4	68.2	68.2
69°	3394.9	2185.0	346.4	230.0	159.2	107.7	89.3	78.5	70.8	64.8	64.8
70°	3145.1	1951.9	327.5	221.9	151.1	103.0	85.4	75.5	68.2	63.1	62.7
72.5°	2348.1	1302.6	279.8	191.4	124.0	87.1	74.7	67.4	61.4	57.9	57.9
75°	1239.1	652.8	229.2	156.2	95.7	69.5	61.4	56.7	53.2	52.8	52.4
77.5°	406.0	295.3	164.8	117.6	70.4	54.1	48.9	45.9	45.5	47.2	47.2
80°	219.3	176.4	106.0	79.4	48.9	40.3	37.8	37.3	38.6	41.2	41.2
82.5°	106.4	87.1	63.1	48.9	33.5	29.6	29.6	30.0	31.8	34.8	34.8
85°	45.9	41.2	36.5	27.5	20.6	18.5	21.0	23.2	24.5	26.6	27.5
87.5°	21.9	19.3	16.7	10.7	9.0	9.4	11.2	13.7	16.3	18.0	18.5
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)