

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: P195122

Luminaire Tested: **NAV-AF-02-D-UNV-SL2-7060-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195122
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24257)
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-SL2-7060-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 5700K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II SPILL
LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7868 lumens
Efficiency: N/A
Efficacy: 119.2 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type II - Medium - Semi-Cutoff
BUG Rating: B1 - U0 - G2

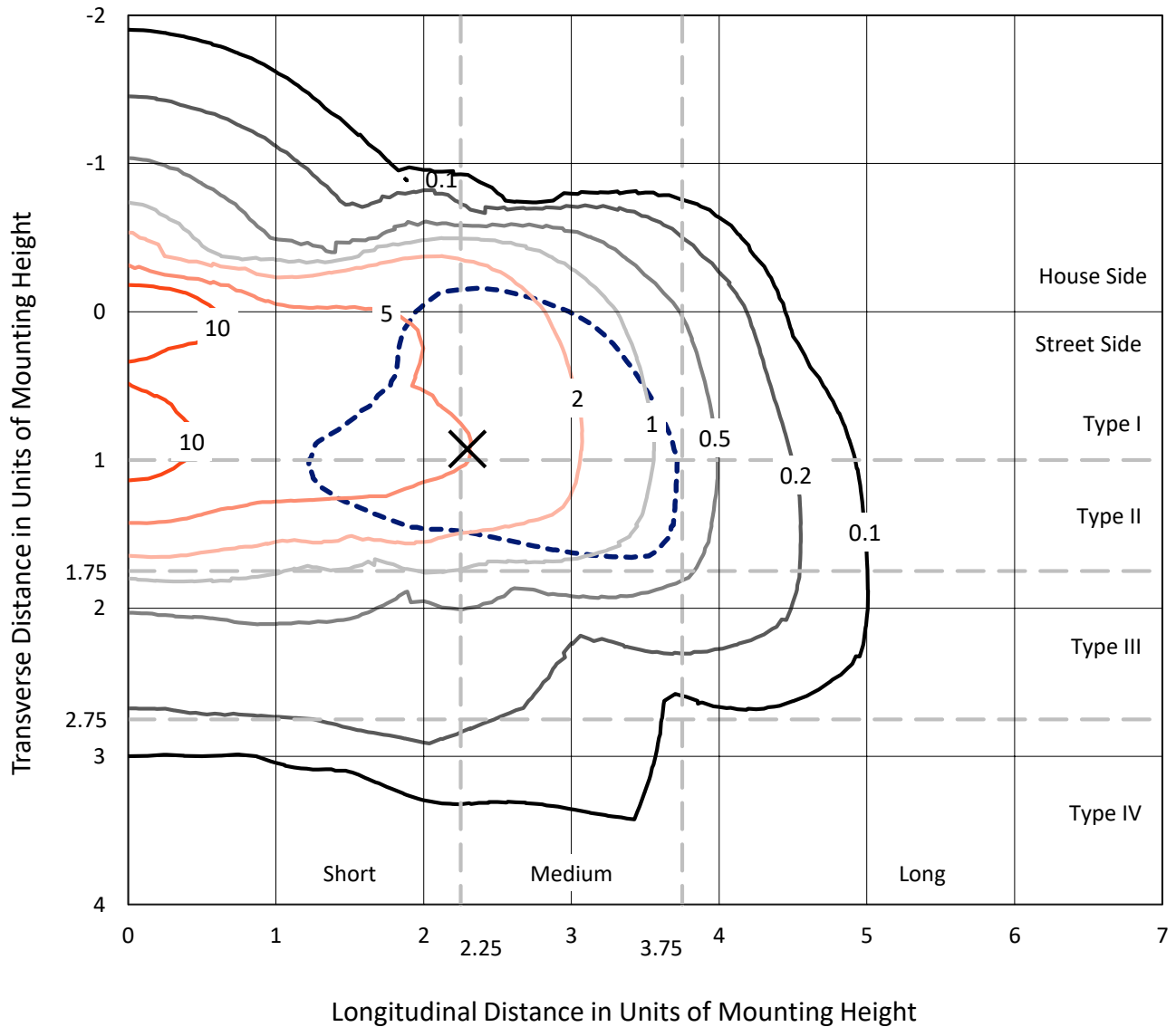
Input Watts (W): 66
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

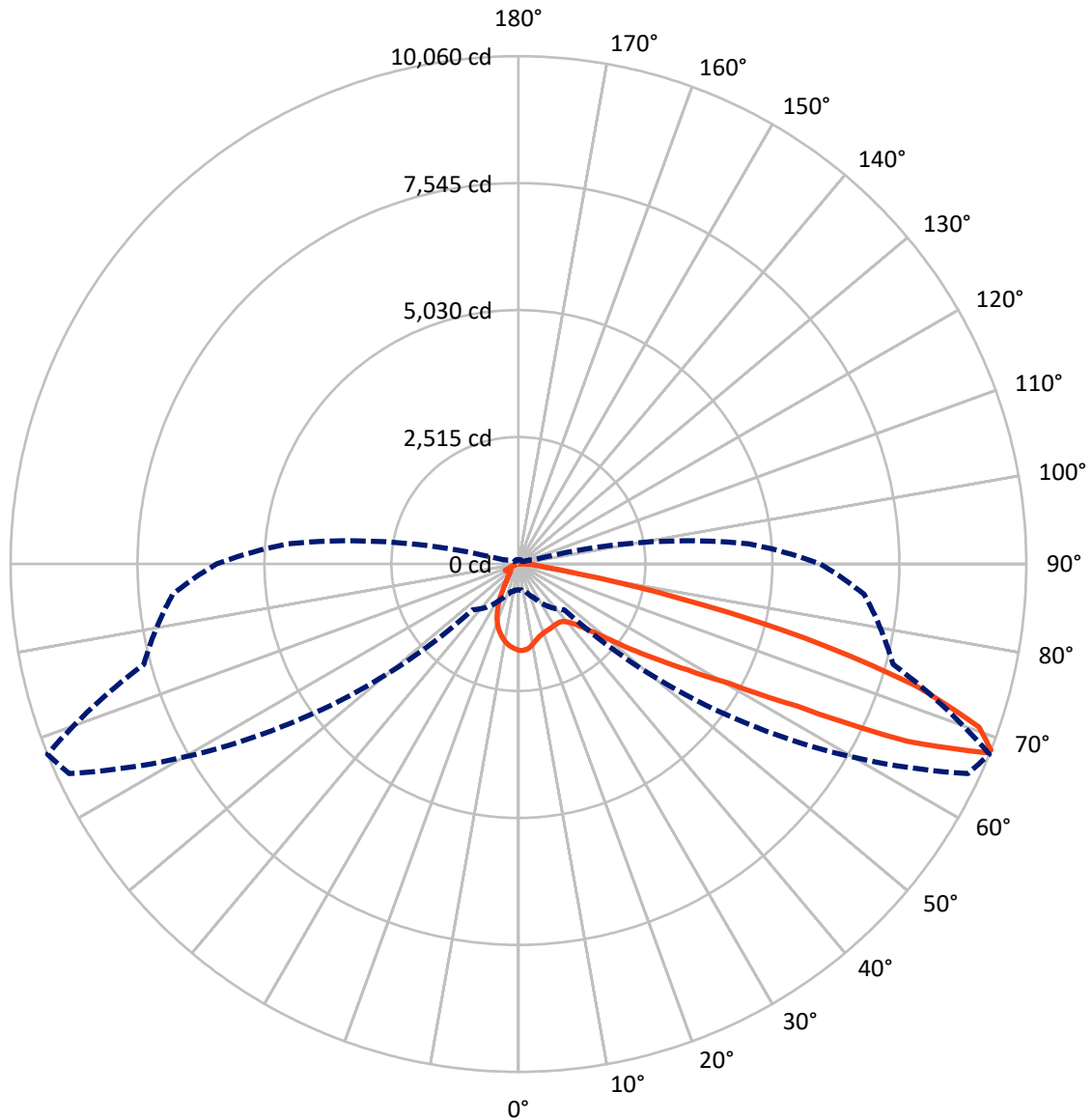
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 17.1 fc
 Type II - Medium - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 68-Deg Lateral - - - Horizontal Cone Through 68-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1287.2	0.0	1287.2
	% Fixture	16.4	0.0	16.4
Street Side	Lumens	6580.8	0.0	6580.8
	% Fixture	83.6	0.0	83.6
Total	Lumens	7868.0	0.0	7868.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	146.7	1.9
10°-20°	340.2	4.3
20°-30°	460.1	5.8
30°-40°	648.8	8.2
40°-50°	1066.8	13.6
50°-60°	1653.7	21.0
60°-70°	2144.1	27.3
70°-80°	1230.4	15.6
80°-90°	177.0	2.2
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°	7868.0	100.0
0°-180°	7868.0	100.0

Coefficient of Utilization



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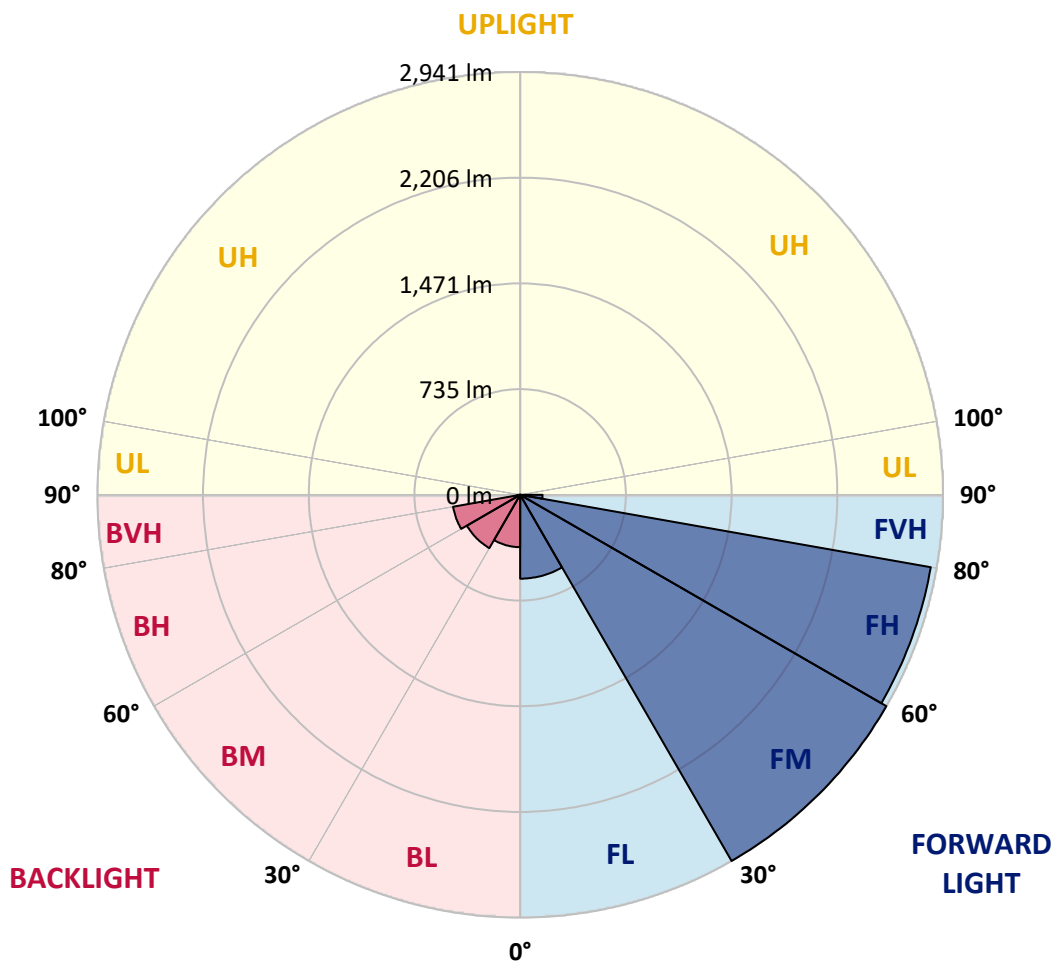
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	583.1	7.4			
FM (30°-60°)	2941.2	37.4			
FH (60°-80°)	2900.5	36.9			G2/5000
FVH (80°-90°)	155.9	2.0			G2/225
BL (0°-30°)	363.9	4.6	B1/500		
BM (30°-60°)	428.1	5.4	B1/1000		
BH (60°-80°)	474.1	6.0	B1/500		G1/500
BVH (80°-90°)	21.1	0.3			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 II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	68°	75°	85°
0°	1712.0	1712.0	1712.0	1712.0	1712.0	1712.0	1712.0	1712.0	1712.0	1712.0	1712.0
2.5°	1666.3	1679.6	1679.6	1689.4	1698.1	1705.3	1711.5	1711.5	1711.5	1707.4	1703.8
5°	1491.0	1509.0	1511.6	1536.2	1568.6	1608.2	1652.4	1691.4	1699.2	1713.5	1719.2
7.5°	1369.2	1374.8	1384.6	1401.6	1434.5	1483.3	1552.7	1640.1	1661.1	1706.4	1730.0
10°	1282.8	1287.5	1295.7	1312.7	1342.5	1386.7	1455.0	1568.6	1603.6	1683.7	1730.5
12.5°	1219.6	1223.2	1230.9	1246.4	1276.7	1316.3	1386.2	1504.4	1547.5	1661.1	1737.7
15°	1170.3	1176.5	1182.6	1197.5	1228.4	1266.4	1337.3	1457.6	1504.4	1643.1	1751.1
17.5°	1150.8	1153.8	1154.9	1162.6	1190.3	1228.9	1299.8	1424.7	1473.0	1628.7	1761.3
20°	1163.1	1163.6	1153.3	1148.2	1164.1	1199.6	1268.5	1400.0	1449.4	1615.9	1765.5
22.5°	1217.1	1217.1	1190.3	1167.7	1156.9	1179.0	1247.4	1383.1	1436.5	1606.1	1765.5
25°	1319.9	1315.2	1273.6	1228.9	1181.1	1171.8	1234.0	1372.3	1426.8	1601.0	1758.8
27.5°	1455.0	1450.9	1398.0	1331.7	1245.3	1187.3	1229.4	1363.5	1417.0	1593.3	1744.4
30°	1619.5	1615.9	1555.8	1468.9	1341.4	1236.1	1240.2	1357.4	1409.3	1580.4	1720.2
32.5°	1783.4	1781.4	1733.6	1644.7	1474.0	1318.8	1268.5	1356.3	1405.2	1565.0	1690.9
35°	1948.4	1948.4	1919.1	1844.1	1652.4	1443.2	1327.6	1375.4	1412.9	1556.8	1665.8
37.5°	2192.0	2182.3	2127.8	2050.2	1877.0	1604.6	1423.2	1415.5	1442.7	1570.7	1657.5
40°	2569.3	2541.0	2404.8	2274.3	2122.1	1811.2	1563.0	1493.1	1509.5	1618.0	1677.1
42.5°	2964.0	2919.3	2738.9	2530.2	2375.5	2066.1	1746.4	1619.0	1618.5	1709.4	1739.2
45°	3302.7	3279.6	3084.3	2819.6	2664.9	2352.9	1978.2	1806.1	1787.6	1851.3	1859.0
47.5°	3499.6	3484.1	3366.4	3125.9	3008.2	2691.6	2272.2	2065.6	2030.7	2068.7	2056.9
50°	3445.1	3460.0	3426.1	3303.2	3377.2	3167.5	2646.9	2421.3	2355.0	2393.0	2364.2
52.5°	3158.3	3198.4	3228.7	3252.3	3589.5	3804.3	3117.7	2865.3	2810.3	2803.7	2775.9
55°	2641.8	2705.5	2801.1	2974.8	3532.5	4315.7	3940.0	3402.4	3322.2	3280.1	3290.9
57.5°	1797.8	1894.5	2100.6	2431.0	3235.9	4533.7	5156.1	4096.3	3960.6	3810.5	3845.5
60°	990.4	1071.1	1316.3	1649.3	2559.0	4501.3	6233.8	5223.9	4796.8	4399.0	4471.0
62.5°	640.9	658.4	840.8	1126.6	1570.7	3974.0	6832.6	7108.6	6203.5	5175.1	5276.3
65°	515.0	527.3	616.8	908.7	1094.2	2556.4	6859.3	9063.7	8467.0	6229.7	6232.8
67.5°	503.2	508.8	560.7	764.3	1026.4	1391.8	5929.1	9834.7	9972.9	7474.5	6872.7
68°	510.4	517.0	569.5	740.6	1025.9	1282.8	5479.9	9822.8	10059.8	7682.7	6872.7
70°	450.2	458.5	580.8	766.3	982.2	1103.0	3752.4	9301.2	9682.5	8161.2	6521.1
72.5°	235.4	228.7	287.3	604.9	1105.5	1149.2	1982.4	7770.6	8215.7	7558.3	5634.0
75°	183.5	167.0	160.9	239.0	972.4	1191.9	1151.3	5523.0	5859.2	5448.5	3765.8
77.5°	172.7	152.6	140.8	141.3	428.1	1240.2	931.3	3250.3	3250.3	2599.1	1201.6
80°	138.8	120.3	112.6	128.5	206.6	1143.1	971.9	1481.2	1263.3	671.7	331.0
82.5°	91.5	81.7	82.2	104.3	156.8	763.2	1125.6	731.4	549.4	297.6	194.8
85°	58.1	49.9	55.5	73.0	117.2	340.2	1114.3	508.3	363.9	167.0	97.1
87.5°	29.3	22.6	27.8	38.0	71.4	97.7	917.4	453.8	269.8	69.4	52.9
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°	1712.0	1712.0	1712.0	1712.0	1712.0	1712.0	1712.0	1712.0	1712.0	1712.0	1712.0
2.5°	1703.8	1692.5	1686.8	1677.6	1666.3	1655.0	1647.2	1643.6	1641.6	1642.6	1642.1
5°	1716.1	1701.2	1677.1	1642.6	1607.2	1569.6	1540.9	1518.8	1504.9	1500.8	1499.7
7.5°	1725.4	1703.8	1658.6	1595.9	1535.2	1469.4	1413.4	1368.7	1338.4	1324.5	1324.0
10°	1723.8	1696.1	1624.6	1532.1	1443.2	1346.6	1258.7	1183.7	1129.2	1103.0	1101.9
12.5°	1725.4	1687.3	1583.0	1457.6	1330.1	1191.9	1061.3	944.7	863.5	824.9	823.4
15°	1731.5	1678.1	1540.3	1374.3	1198.0	1002.7	816.2	669.7	595.7	570.5	570.5
17.5°	1731.0	1662.7	1491.0	1277.7	1041.3	779.7	557.1	466.7	459.5	482.6	486.2
20°	1720.7	1638.0	1427.3	1163.1	857.3	539.7	377.8	364.9	422.5	486.2	493.4
22.5°	1704.8	1606.1	1353.8	1030.0	643.0	351.5	291.4	310.9	389.1	468.2	479.5
25°	1682.7	1567.6	1269.5	875.3	427.6	252.9	243.1	267.3	322.3	375.2	383.4
27.5°	1650.3	1518.8	1177.5	707.7	272.9	208.2	211.8	228.7	252.4	275.0	279.6
30°	1609.7	1461.7	1077.3	522.2	207.1	186.1	192.2	202.5	212.8	227.2	230.3
32.5°	1568.6	1403.6	972.9	358.7	180.9	174.2	180.4	186.1	194.8	204.6	206.6
35°	1531.6	1349.7	865.5	250.3	169.6	166.5	169.6	173.2	181.9	191.7	192.7
37.5°	1504.9	1305.5	753.5	197.9	162.9	159.8	161.4	162.9	173.2	187.6	189.1
40°	1501.3	1276.2	639.9	177.8	157.8	153.7	152.6	153.7	167.0	183.5	185.0
42.5°	1536.2	1277.7	528.9	169.6	153.7	149.0	144.9	147.0	158.8	171.7	172.7
45°	1619.0	1313.7	432.8	166.0	150.1	146.5	140.3	141.3	147.0	153.7	154.7
47.5°	1764.9	1392.3	359.3	164.0	147.0	143.9	136.2	133.1	133.6	137.2	137.2
50°	1998.3	1523.9	314.5	161.9	144.4	138.8	130.0	123.9	122.3	124.4	124.9
52.5°	2346.2	1749.5	293.0	157.8	139.8	132.1	122.3	116.2	113.6	115.6	115.6
55°	2816.5	2109.8	282.7	152.1	134.1	123.9	115.1	110.0	107.9	109.5	109.5
57.5°	3352.6	2578.0	300.2	144.4	126.9	115.1	109.0	105.4	103.8	105.4	105.9
60°	3989.4	3190.7	420.4	134.7	119.2	107.4	103.8	101.8	100.7	102.3	102.3
62.5°	4835.9	4005.8	650.7	126.9	111.0	100.2	99.2	98.2	97.1	98.7	98.7
65°	5749.7	4747.5	669.7	122.3	103.8	94.1	94.6	94.6	93.5	95.1	95.1
67.5°	6040.6	4683.2	374.2	116.7	95.1	87.9	89.9	89.9	89.4	91.0	90.5
68°	5978.9	4581.5	325.9	115.1	93.5	86.3	88.4	88.9	88.4	89.9	89.4
70°	5519.4	4022.3	214.3	106.4	86.9	81.2	84.3	84.8	84.3	86.3	85.8
72.5°	4556.3	3017.0	158.3	93.0	78.6	74.5	77.6	78.1	78.6	80.7	80.2
75°	2893.6	1666.3	124.9	79.2	70.4	66.8	69.9	71.4	72.5	75.6	74.0
77.5°	792.5	505.7	101.3	67.3	60.6	59.1	61.2	63.2	64.2	67.8	65.3
80°	277.5	223.6	84.3	57.0	50.4	49.9	51.9	54.0	55.0	58.1	55.0
82.5°	168.6	146.0	67.3	44.7	39.6	39.1	41.6	43.7	44.7	44.7	42.7
85°	87.9	77.1	49.3	31.4	27.2	25.7	30.3	32.9	33.4	32.9	31.4
87.5°	49.3	43.7	26.2	14.9	12.3	12.8	15.9	19.5	21.1	20.6	19.5
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)