

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: P196562

Luminaire Tested: **NAV-AF-02-D-UNV-SL2-7030-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196562
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-SL2-7030-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 3000K, 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: 7609.9 lumens
Efficiency: N/A
Efficacy: 115.3 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

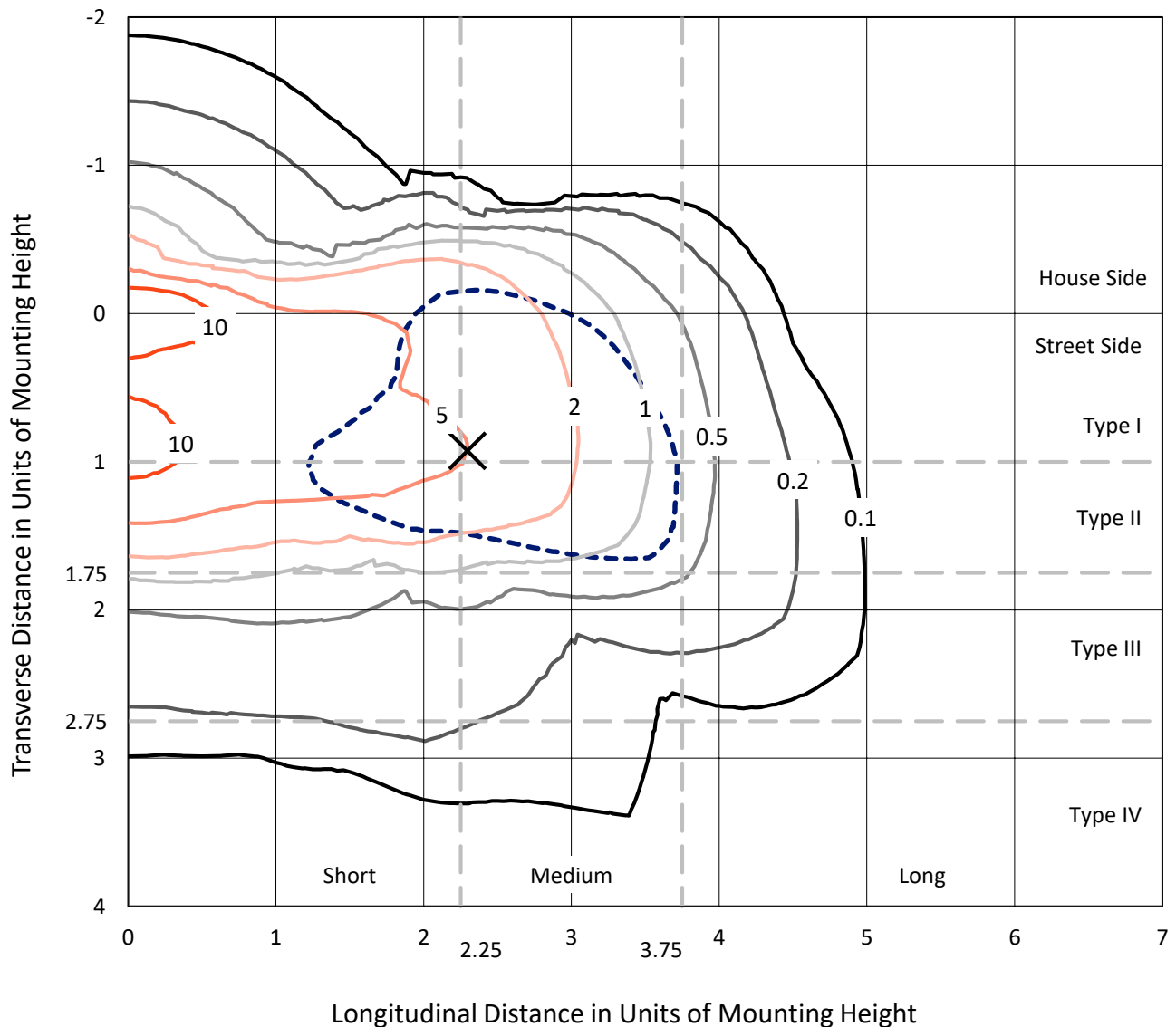
Input Watts (W): 66
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

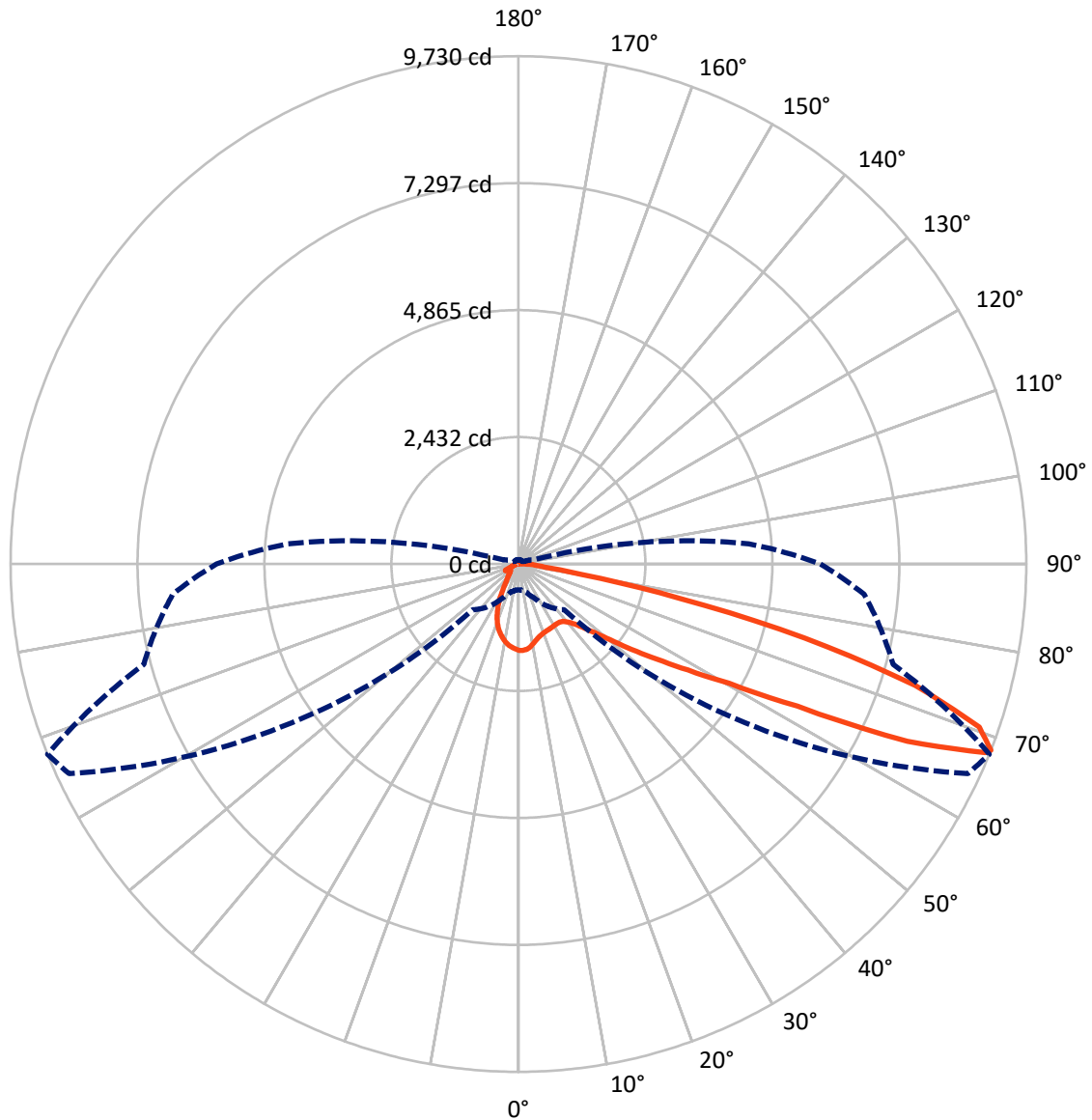
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 16.6 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	1245.0	0.0	1245.0
	% Fixture	16.4	0.0	16.4
Street Side	Lumens	6364.9	0.0	6364.9
	% Fixture	83.6	0.0	83.6
Total	Lumens	7609.9	0.0	7609.9
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	141.9	1.9
10°-20°	329.1	4.3
20°-30°	445.0	5.8
30°-40°	627.5	8.2
40°-50°	1031.8	13.6
50°-60°	1599.5	21.0
60°-70°	2073.8	27.3
70°-80°	1190.1	15.6
80°-90°	171.2	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°	7609.9	100.0
0°-180°	7609.9	100.0



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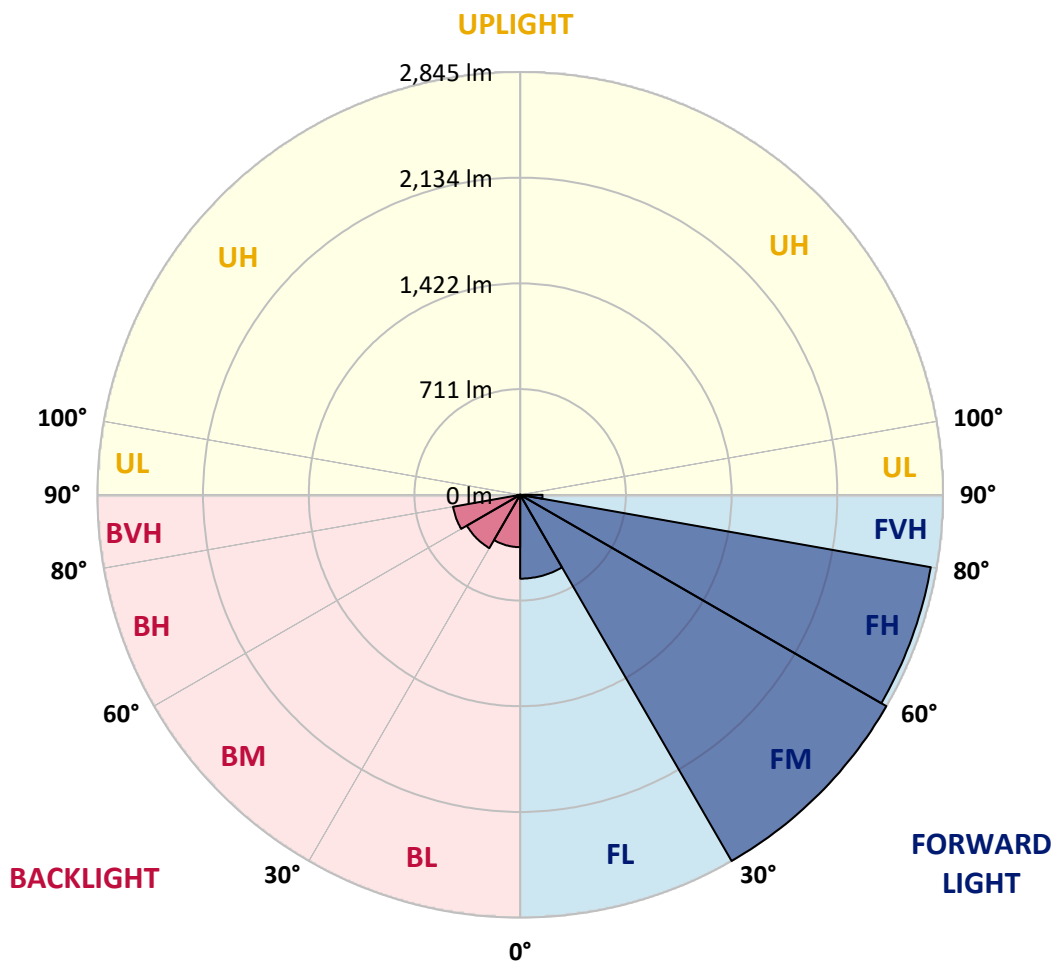
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	564.0	7.4			
FM (30°-60°)	2844.7	37.4			
FH (60°-80°)	2805.3	36.9			G2/5000
FVH (80°-90°)	150.8	2.0			G2/225
BL (0°-30°)	352.0	4.6	B1/500		
BM (30°-60°)	414.1	5.4	B1/1000		
BH (60°-80°)	458.5	6.0	B1/500		G1/500
BVH (80°-90°)	20.4	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°	1655.9	1655.9	1655.9	1655.9	1655.9	1655.9	1655.9	1655.9	1655.9	1655.9	1655.9
2.5°	1611.6	1624.5	1624.5	1634.0	1642.3	1649.4	1655.4	1655.4	1655.4	1651.4	1647.8
5°	1442.1	1459.4	1462.0	1485.8	1517.2	1555.5	1598.1	1635.9	1643.4	1657.4	1662.8
7.5°	1324.3	1329.8	1339.2	1355.6	1387.4	1434.7	1501.8	1586.2	1606.6	1650.4	1673.2
10°	1240.7	1245.2	1253.2	1269.6	1298.4	1341.1	1407.3	1517.2	1550.9	1628.5	1673.8
12.5°	1179.7	1183.1	1190.6	1205.4	1234.8	1273.1	1340.7	1455.0	1496.8	1606.6	1680.7
15°	1131.9	1137.8	1143.8	1158.2	1188.0	1224.9	1293.4	1409.8	1455.0	1589.2	1693.6
17.5°	1113.1	1116.0	1116.9	1124.5	1151.3	1188.5	1257.1	1378.0	1424.7	1575.3	1703.6
20°	1125.0	1125.5	1115.5	1110.5	1125.9	1160.3	1226.9	1354.2	1401.8	1562.9	1707.5
22.5°	1177.2	1177.2	1151.3	1129.4	1119.0	1140.3	1206.4	1337.7	1389.4	1553.4	1707.5
25°	1276.5	1272.1	1231.8	1188.5	1142.3	1133.3	1193.5	1327.3	1380.0	1548.4	1701.0
27.5°	1407.3	1403.3	1352.1	1287.9	1204.5	1148.4	1189.1	1318.8	1370.5	1541.0	1687.2
30°	1566.3	1562.9	1504.7	1420.7	1297.5	1195.6	1199.5	1312.9	1363.0	1528.5	1663.8
32.5°	1724.9	1722.9	1676.7	1590.7	1425.8	1275.6	1226.9	1311.8	1359.0	1513.7	1635.5
35°	1884.5	1884.5	1856.2	1783.6	1598.1	1395.9	1284.1	1330.2	1366.5	1505.7	1611.1
37.5°	2120.1	2110.7	2058.0	1982.9	1815.5	1551.9	1376.4	1369.0	1395.4	1519.1	1603.2
40°	2485.0	2457.7	2325.9	2199.7	2052.6	1751.8	1511.7	1444.1	1460.0	1564.9	1622.1
42.5°	2866.8	2823.6	2649.1	2447.2	2297.6	1998.4	1689.1	1565.9	1565.3	1653.3	1682.1
45°	3194.4	3172.1	2983.1	2727.1	2577.4	2275.8	1913.3	1746.8	1728.9	1790.5	1798.0
47.5°	3384.8	3369.9	3256.0	3023.4	2909.6	2603.3	2197.6	1997.8	1964.1	2000.9	1989.4
50°	3332.1	3346.5	3313.8	3194.8	3266.5	3063.6	2560.1	2341.9	2277.7	2314.5	2286.7
52.5°	3054.7	3093.4	3122.8	3145.7	3471.7	3679.6	3015.4	2771.4	2718.2	2711.7	2684.8
55°	2555.1	2616.8	2709.2	2877.3	3416.5	4174.1	3810.8	3290.8	3213.4	3172.6	3182.9
57.5°	1738.9	1832.3	2031.6	2351.3	3129.7	4384.9	4986.9	3962.0	3830.6	3685.6	3719.3
60°	957.8	1036.0	1273.1	1595.1	2475.0	4353.7	6029.4	5052.5	4639.4	4254.7	4324.3
62.5°	619.9	636.8	813.2	1089.7	1519.1	3843.6	6608.4	6875.4	6000.0	5005.2	5103.3
65°	498.1	510.0	596.5	878.9	1058.2	2472.5	6634.3	8766.4	8189.3	6025.4	6028.4
67.5°	486.6	492.1	542.4	739.1	992.7	1346.2	5734.6	9512.0	9645.7	7229.3	6647.3
68°	493.7	500.1	550.7	716.3	992.2	1240.7	5300.0	9500.6	9729.7	7430.7	6647.3
70°	435.5	443.4	561.7	741.3	950.0	1066.8	3629.4	8996.1	9364.9	7893.4	6307.2
72.5°	227.7	221.2	277.8	585.1	1069.3	1111.5	1917.3	7515.7	7946.2	7310.4	5449.2
75°	177.4	161.6	155.5	231.2	940.5	1152.8	1113.5	5341.9	5666.9	5269.8	3642.2
77.5°	167.0	147.6	136.2	136.7	414.1	1199.5	900.8	3143.7	3143.7	2513.8	1162.2
80°	134.2	116.4	108.8	124.2	199.8	1105.6	940.0	1432.6	1221.8	649.8	320.1
82.5°	88.5	79.0	79.5	100.9	151.7	738.1	1088.7	707.4	531.4	287.8	188.4
85°	56.2	48.2	53.6	70.6	113.3	329.1	1077.8	491.6	352.0	161.6	94.0
87.5°	28.3	21.9	26.9	36.8	69.1	94.4	887.3	438.9	261.0	67.0	51.3
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°	1655.9	1655.9	1655.9	1655.9	1655.9	1655.9	1655.9	1655.9	1655.9	1655.9	1655.9
2.5°	1647.8	1636.9	1631.5	1622.5	1611.6	1600.6	1593.2	1589.7	1587.7	1588.7	1588.2
5°	1659.8	1645.5	1622.1	1588.7	1554.4	1518.1	1490.3	1469.0	1455.6	1451.5	1450.5
7.5°	1668.8	1647.8	1604.2	1543.5	1484.9	1421.3	1367.1	1323.7	1294.5	1281.1	1280.5
10°	1667.3	1640.4	1571.3	1481.9	1395.9	1302.4	1217.3	1144.8	1092.1	1066.8	1065.9
12.5°	1668.8	1632.0	1531.0	1409.8	1286.5	1152.8	1026.5	913.6	835.2	797.8	796.4
15°	1674.7	1623.0	1489.9	1329.2	1158.7	969.9	789.4	647.7	576.2	551.8	551.8
17.5°	1674.3	1608.1	1442.1	1235.8	1007.2	754.1	538.8	451.4	444.3	466.7	470.3
20°	1664.3	1584.3	1380.5	1125.0	829.2	521.9	365.4	352.9	408.6	470.3	477.3
22.5°	1648.9	1553.4	1309.4	996.2	621.9	340.1	281.9	300.8	376.3	452.9	463.8
25°	1627.5	1516.2	1227.8	846.5	413.5	244.5	235.1	258.5	311.7	362.8	370.8
27.5°	1596.2	1469.0	1138.8	684.5	264.0	201.4	204.8	221.2	244.0	265.9	270.4
30°	1557.0	1413.7	1041.9	505.1	200.4	180.0	186.0	195.9	205.9	219.7	222.7
32.5°	1517.2	1357.5	941.0	347.0	175.1	168.5	174.5	180.0	188.4	197.9	199.8
35°	1481.3	1305.4	837.2	242.1	164.0	161.0	164.0	167.5	176.0	185.4	186.4
37.5°	1455.6	1262.6	728.8	191.4	157.6	154.6	156.1	157.6	167.5	181.5	182.9
40°	1452.0	1234.3	618.9	172.0	152.6	148.6	147.6	148.6	161.6	177.4	178.9
42.5°	1485.8	1235.8	511.6	164.0	148.6	144.1	140.2	142.1	153.6	166.1	167.0
45°	1565.9	1270.5	418.6	160.6	145.2	141.7	135.7	136.7	142.1	148.6	149.5
47.5°	1707.0	1346.6	347.5	158.5	142.1	139.2	131.7	128.7	129.3	132.8	132.8
50°	1932.7	1473.9	304.2	156.6	139.7	134.2	125.7	119.7	118.3	120.3	120.8
52.5°	2269.4	1692.1	283.3	152.6	135.3	127.8	118.3	112.3	109.8	111.9	111.9
55°	2724.2	2040.6	273.3	147.2	129.7	119.7	111.3	106.4	104.4	105.9	105.9
57.5°	3242.6	2493.6	290.3	139.7	122.8	111.3	105.4	101.9	100.4	101.9	102.3
60°	3858.5	3086.0	406.7	130.2	115.4	103.9	100.4	98.5	97.5	98.9	98.9
62.5°	4677.3	3874.5	629.4	122.8	107.4	96.9	95.9	94.9	94.0	95.5	95.5
65°	5561.1	4591.7	647.7	118.3	100.4	91.0	91.4	91.4	90.4	92.0	92.0
67.5°	5842.4	4529.6	361.8	112.9	92.0	85.0	87.0	87.0	86.6	88.0	87.5
68°	5782.8	4431.1	315.2	111.3	90.4	83.5	85.5	86.0	85.5	87.0	86.6
70°	5338.4	3890.2	207.3	102.9	84.0	78.5	81.5	82.1	81.5	83.5	83.0
72.5°	4406.9	2918.0	153.1	90.0	76.1	72.1	75.1	75.6	76.1	78.0	77.6
75°	2798.6	1611.6	120.8	76.6	68.1	64.6	67.6	69.1	70.2	73.1	71.6
77.5°	766.6	489.2	97.9	65.1	58.7	57.2	59.1	61.1	62.2	65.7	63.2
80°	268.4	216.3	81.5	55.1	48.7	48.2	50.3	52.2	53.2	56.2	53.2
82.5°	163.1	141.2	65.1	43.2	38.2	37.8	40.3	42.3	43.2	43.2	41.3
85°	85.0	74.6	47.7	30.4	26.3	24.8	29.3	31.8	32.3	31.8	30.4
87.5°	47.7	42.3	25.3	14.4	11.9	12.4	15.4	18.9	20.4	19.8	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)