

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: P195661

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

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P195661  
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  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(1) 70 CRI, 5000K, 1050mA 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: 6102 lumens  
Efficiency: N/A  
Efficacy: 103.4 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

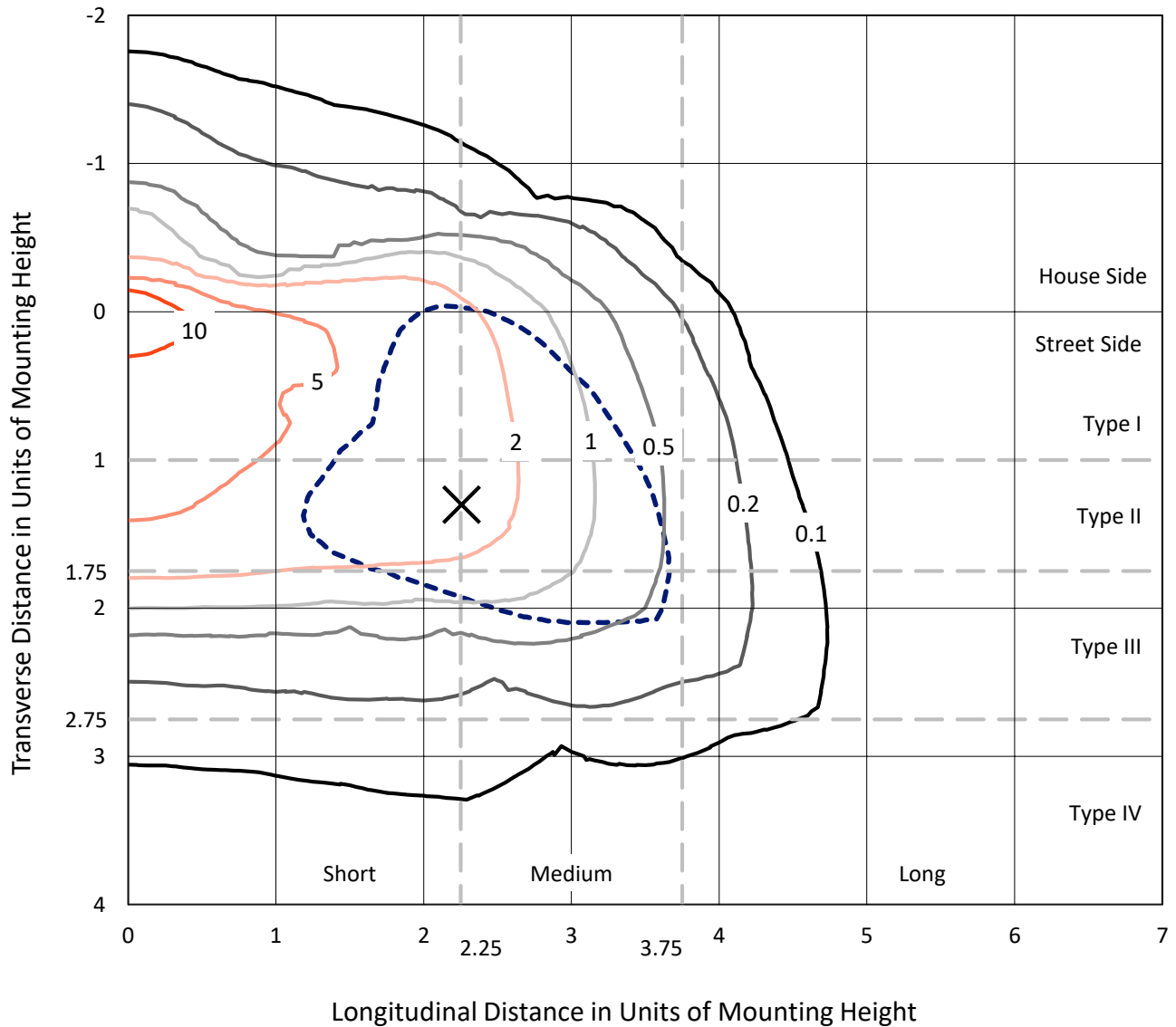
Input Watts (W): 59  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

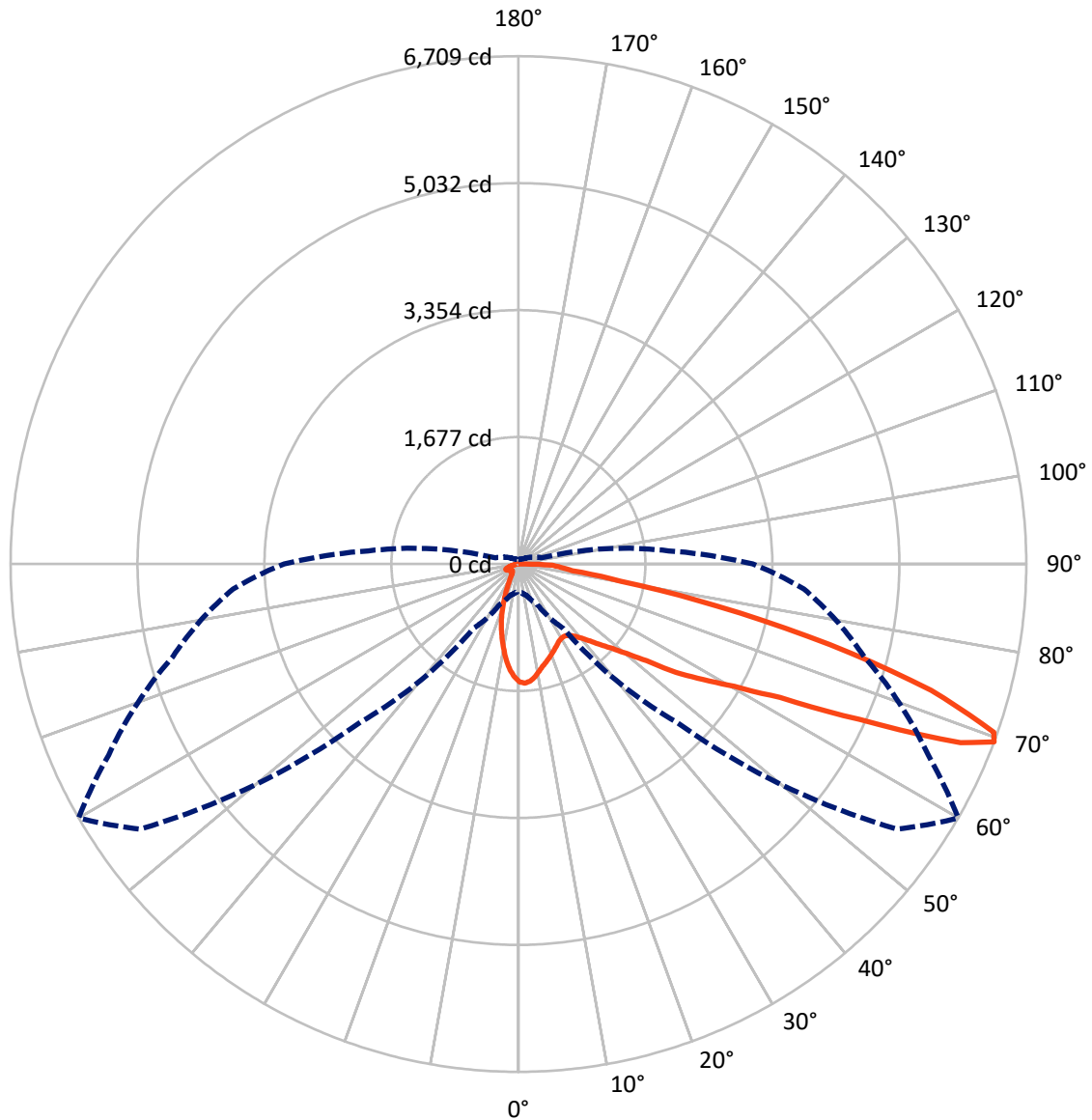
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 15.6 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	870.3	0.0	870.3
	% Fixture	14.3	0.0	14.3
<b>Street Side</b>	Lumens	5231.7	0.0	5231.7
	% Fixture	85.7	0.0	85.7
<b>Total</b>	Lumens	6102.0	0.0	6102.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	132.1	2.2
10°-20°	282.8	4.6
20°-30°	360.8	5.9
30°-40°	496.4	8.1
40°-50°	804.2	13.2
50°-60°	1262.1	20.7
60°-70°	1682.6	27.6
70°-80°	935.9	15.3
80°-90°	145.2	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°	6102.0	100.0
0°-180°	6102.0	100.0



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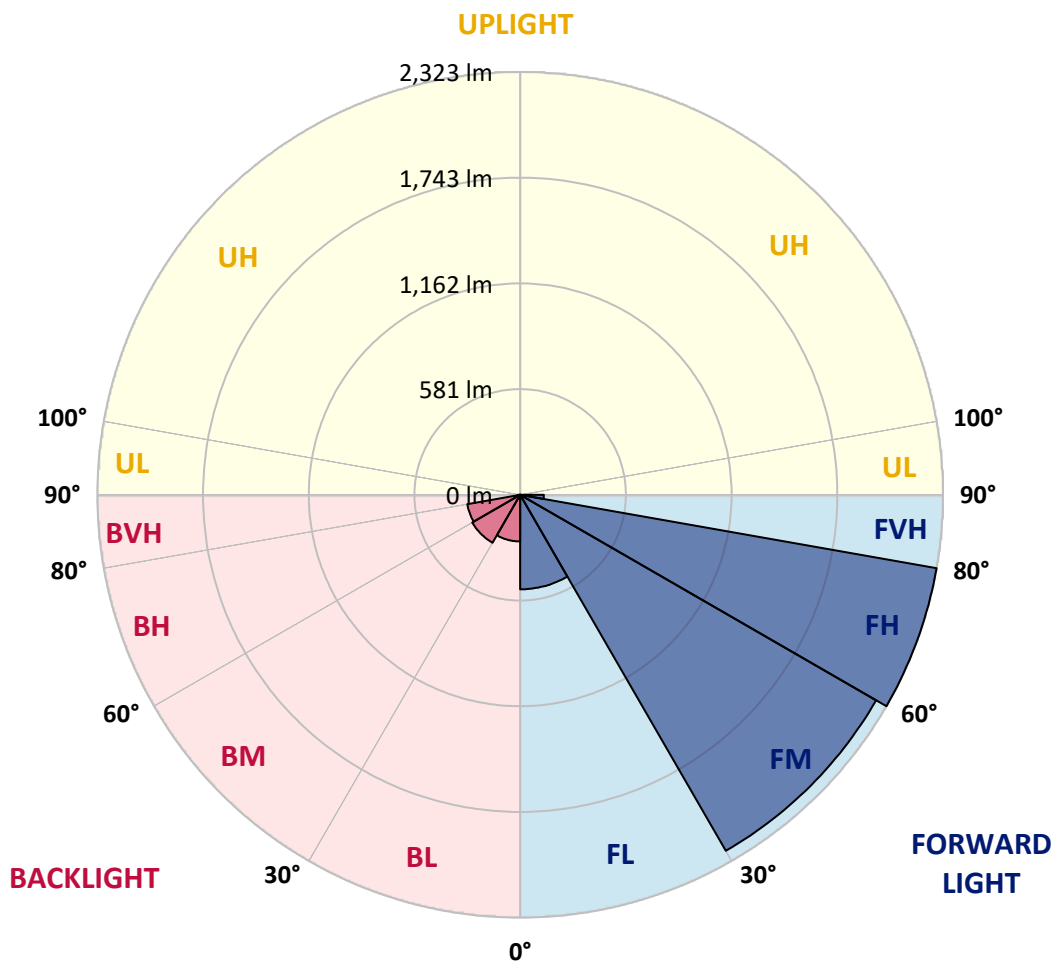
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	519.2	8.5			
FM	(30°-60°)	2258.6	37.0			
FH	(60°-80°)	2323.4	38.1			G2/5000
FVH	(80°-90°)	130.4	2.1			G2/225
BL	(0°-30°)	256.5	4.2	B1/500		
BM	(30°-60°)	304.1	5.0	B1/1000		
BH	(60°-80°)	295.1	4.8	B1/500		G1/500
BVH	(80°-90°)	14.7	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°	1556.9	1556.9	1556.9	1556.9	1556.9	1556.9	1556.9	1556.9	1556.9	1556.9	1556.9
2.5°	1598.4	1602.7	1602.7	1599.2	1597.2	1585.9	1579.2	1574.6	1566.3	1551.1	1537.4
5°	1541.3	1549.5	1553.0	1554.6	1564.8	1561.2	1561.6	1558.5	1551.5	1535.0	1512.7
7.5°	1436.4	1438.0	1444.3	1454.8	1479.5	1496.7	1510.8	1513.5	1511.9	1499.8	1468.5
10°	1333.1	1335.9	1343.3	1361.3	1384.8	1409.4	1439.9	1452.5	1461.9	1457.9	1418.4
12.5°	1247.4	1247.8	1256.0	1276.8	1303.0	1333.9	1375.4	1395.0	1417.3	1426.3	1382.0
15°	1164.9	1170.3	1178.2	1203.2	1235.7	1274.8	1322.6	1349.6	1378.9	1404.7	1353.9
17.5°	1102.3	1106.6	1111.3	1132.0	1169.6	1218.5	1277.6	1306.5	1345.3	1384.8	1324.9
20°	1067.8	1069.4	1065.9	1076.0	1107.7	1160.6	1229.0	1263.9	1310.0	1365.6	1295.2
22.5°	1060.8	1060.8	1047.9	1045.9	1060.0	1104.6	1179.0	1221.6	1278.0	1352.3	1268.6
25°	1093.7	1091.3	1067.0	1044.7	1039.7	1062.4	1131.2	1183.7	1250.6	1351.9	1248.6
27.5°	1155.9	1152.7	1122.6	1085.0	1052.6	1042.8	1094.4	1148.0	1229.0	1365.2	1238.4
30°	1233.3	1232.2	1201.7	1154.7	1101.1	1050.6	1080.0	1129.7	1214.6	1389.9	1238.0
32.5°	1318.3	1312.8	1294.0	1247.0	1177.4	1094.0	1088.6	1130.4	1210.7	1425.9	1247.0
35°	1408.6	1404.7	1400.0	1352.7	1274.4	1170.7	1126.5	1157.4	1229.8	1475.9	1272.5
37.5°	1523.7	1519.4	1527.2	1475.6	1389.9	1271.3	1190.7	1211.4	1269.0	1548.7	1319.8
40°	1728.3	1715.8	1693.9	1614.5	1524.5	1394.6	1283.4	1286.6	1335.9	1646.2	1395.7
42.5°	2064.4	2024.1	1915.8	1769.8	1666.5	1537.8	1404.3	1389.5	1428.2	1774.9	1506.1
45°	2401.3	2356.0	2172.8	1939.2	1813.6	1691.5	1553.8	1518.2	1543.2	1924.8	1648.1
47.5°	2618.9	2596.6	2390.0	2108.7	1967.8	1859.0	1724.8	1666.1	1684.1	2094.6	1823.4
50°	2682.7	2663.5	2501.1	2241.3	2113.4	2061.3	1936.5	1858.6	1861.8	2293.0	2033.5
52.5°	2634.9	2627.1	2519.5	2323.5	2247.2	2274.6	2229.6	2121.2	2095.4	2510.5	2261.3
55°	2571.2	2573.9	2532.4	2406.0	2383.4	2473.3	2613.0	2525.8	2416.2	2737.1	2498.4
57.5°	2370.4	2372.4	2481.2	2563.3	2643.2	2751.9	2911.6	2874.8	2747.3	2981.6	2764.1
60°	1908.7	1924.0	2166.2	2530.9	2940.2	3300.9	3340.1	3276.7	3099.4	3263.4	3109.6
62.5°	1363.6	1377.3	1657.9	2197.1	2905.3	3922.3	4131.2	3879.3	3577.2	3684.8	3595.6
65°	716.5	714.1	931.3	1518.2	2447.1	4066.3	5377.9	4949.0	4382.1	4264.3	4065.1
67.5°	400.3	413.2	497.3	765.8	1594.9	3578.7	6174.2	6300.6	5501.2	4724.0	4044.8
69°	370.2	374.5	430.8	592.0	1039.7	2952.7	6105.7	6708.7	5973.0	4726.0	3784.2
70°	359.6	364.3	415.6	545.5	873.4	2419.3	5856.4	6660.9	6087.7	4621.1	3547.0
72.5°	322.4	328.7	378.4	490.3	736.0	1247.0	4717.4	5701.1	5514.5	4038.9	2750.4
75°	275.1	285.6	360.8	486.8	697.3	792.8	3146.0	4247.5	4104.2	2888.5	1560.5
77.5°	113.9	115.0	157.7	356.5	731.7	758.7	1690.8	2690.5	2381.8	1266.6	469.9
80°	79.4	77.9	78.6	104.1	590.5	763.8	867.5	1368.3	1063.5	334.2	219.9
82.5°	66.9	66.1	69.3	65.3	199.9	866.7	725.5	713.3	500.9	180.0	104.9
85°	44.2	43.0	56.7	59.5	95.1	688.3	780.2	560.7	373.3	96.3	44.6
87.5°	21.5	21.9	32.5	40.3	50.5	217.9	747.4	443.3	288.4	41.9	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



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**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1556.9	1556.9	1556.9	1556.9	1556.9	1556.9	1556.9	1556.9	1556.9	1556.9	1556.9
2.5°	1531.9	1520.2	1509.6	1496.3	1486.1	1477.5	1465.8	1465.4	1463.4	1466.2	1466.9
5°	1497.9	1478.3	1448.6	1415.3	1391.8	1360.9	1330.8	1320.6	1309.3	1308.1	1311.6
7.5°	1446.6	1416.1	1365.2	1314.3	1263.5	1211.4	1162.1	1137.1	1112.8	1105.4	1108.9
10°	1389.5	1350.7	1272.9	1189.9	1118.3	1040.8	965.7	917.2	873.0	854.2	858.9
12.5°	1344.9	1295.6	1186.0	1078.4	971.2	860.1	761.1	665.2	592.8	560.3	562.3
15°	1306.5	1243.5	1104.6	961.4	827.2	675.0	537.6	426.5	363.1	339.6	338.9
17.5°	1265.0	1188.7	1019.7	852.6	678.5	490.3	360.0	294.3	269.2	261.4	261.4
20°	1220.8	1132.4	930.9	734.1	522.0	342.4	270.8	245.3	235.9	233.6	233.2
22.5°	1179.7	1077.2	841.7	607.7	377.6	259.8	230.5	220.7	219.1	221.1	221.1
25°	1147.3	1028.7	751.3	474.6	274.7	217.6	205.0	203.9	209.7	216.8	217.9
27.5°	1123.0	985.3	662.1	346.7	216.0	189.4	185.1	190.2	203.9	217.9	220.7
30°	1106.2	948.1	555.2	249.3	180.0	165.9	167.9	176.9	197.6	219.1	225.0
32.5°	1098.7	918.0	447.6	191.3	153.8	146.0	151.0	162.8	184.3	205.8	212.9
35°	1105.8	896.1	348.2	158.9	134.6	128.7	134.6	146.7	160.8	171.4	175.7
37.5°	1131.2	888.2	262.2	140.9	122.1	116.2	120.9	129.1	135.4	139.3	141.3
40°	1184.8	896.4	205.4	131.5	115.0	108.4	109.6	113.5	117.8	120.9	121.3
42.5°	1270.1	923.4	182.7	128.0	110.7	102.1	100.2	102.9	107.6	111.9	112.7
45°	1383.6	968.4	180.4	129.1	108.8	97.0	93.1	95.9	102.1	109.2	110.3
47.5°	1530.3	1039.7	191.3	135.4	110.0	94.3	88.4	91.2	99.4	108.8	110.3
50°	1704.1	1138.3	211.7	144.8	115.4	94.3	86.5	88.8	97.4	108.0	109.6
52.5°	1908.7	1275.6	232.8	154.2	123.3	97.8	87.3	86.9	94.7	104.5	106.4
55°	2134.5	1446.2	253.2	162.4	127.6	102.5	89.2	84.5	90.8	98.6	100.2
57.5°	2400.2	1679.8	288.8	170.2	129.9	106.0	91.6	82.2	85.7	91.2	92.3
60°	2760.6	2023.0	358.0	183.5	134.2	107.6	92.0	79.8	79.4	83.3	83.7
62.5°	3230.5	2424.8	424.2	199.2	142.8	108.0	90.4	78.3	74.3	75.5	75.5
65°	3564.7	2572.7	405.0	212.5	150.6	107.6	88.8	77.1	70.4	68.5	68.5
67.5°	3374.5	2272.6	343.9	216.0	151.4	103.3	85.3	74.3	66.9	62.2	62.2
69°	3095.1	1992.1	315.8	209.7	145.2	98.2	81.4	71.6	64.6	59.1	59.1
70°	2867.4	1779.6	298.6	202.3	137.7	93.9	77.9	68.9	62.2	57.5	57.1
72.5°	2140.7	1187.6	255.1	174.5	113.1	79.4	68.1	61.4	56.0	52.8	52.8
75°	1129.7	595.2	208.9	142.4	87.3	63.4	56.0	51.7	48.5	48.1	47.7
77.5°	370.2	269.2	150.3	107.2	64.2	49.3	44.6	41.9	41.5	43.0	43.0
80°	199.9	160.8	96.6	72.4	44.6	36.8	34.4	34.0	35.2	37.6	37.6
82.5°	97.0	79.4	57.5	44.6	30.5	27.0	27.0	27.4	29.0	31.7	31.7
85°	41.9	37.6	33.3	25.0	18.8	16.8	19.2	21.1	22.3	24.3	25.0
87.5°	20.0	17.6	15.3	9.8	8.2	8.6	10.2	12.5	14.9	16.4	16.8
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)