

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: P196135

Luminaire Tested: **NAV-AF-01-D-UNV-SL3-800**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196135  
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-SL3-800  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(1) 70 CRI, 4000K, 800mA 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: 5043.2 lumens  
Efficiency: N/A  
Efficacy: 114.6 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

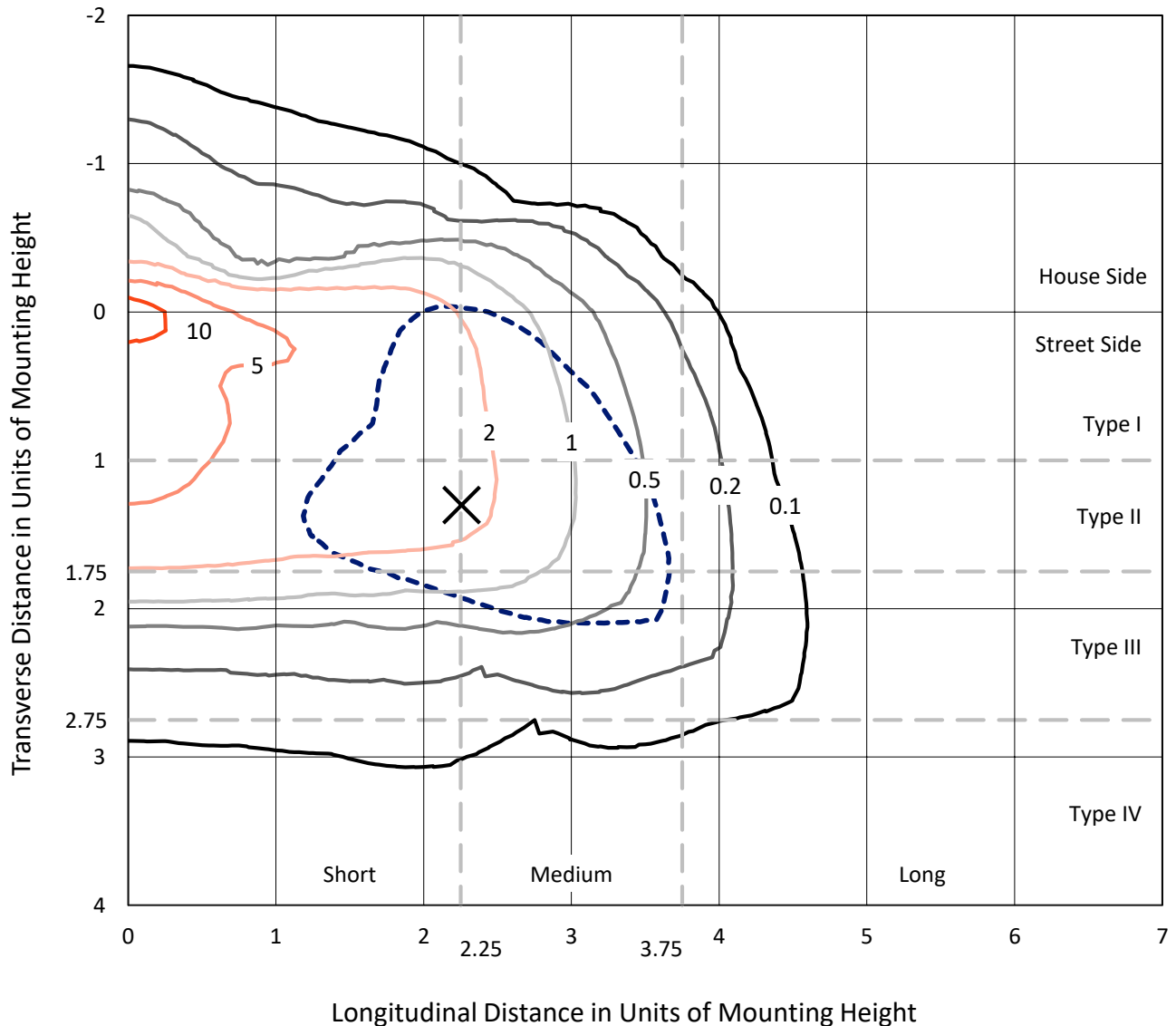
Input Watts (W): 44  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



REPORT NUMBER: P196135  
 CATALOG NUMBER: NAV-AF-01-D-UNV-SL3-800

### Iso-Footcandle Lines of Horizontal Illumination

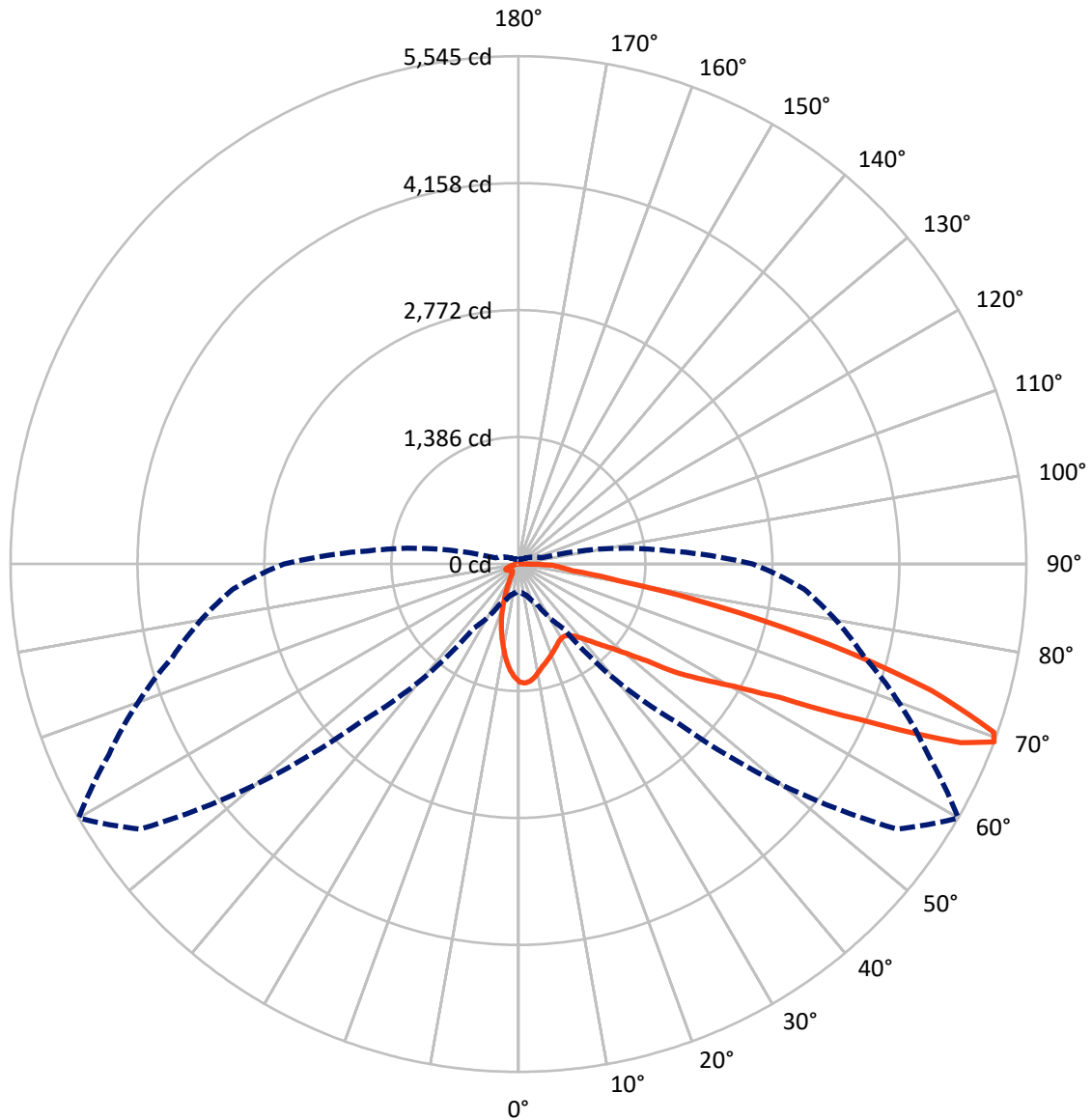
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 12.9 fc  
 Type III - Medium - Non-Cutoff

REPORT NUMBER: P196135  
CATALOG NUMBER: NAV-AF-01-D-UNV-SL3-800

### Luminous Intensity Polar Plot



— Vertical Plane Through 60-Deg Lateral      - - - Horizontal Cone Through 69-Deg Vertical

REPORT NUMBER: P196135

CATALOG NUMBER: NAV-AF-01-D-UNV-SL3-800

**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	719.3	0.0	719.3
	% Fixture	14.3	0.0	14.3
<b>Street Side</b>	Lumens	4323.8	0.0	4323.8
	% Fixture	85.7	0.0	85.7
<b>Total</b>	Lumens	5043.2	0.0	5043.2
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	109.2	2.2
10°-20°	233.7	4.6
20°-30°	298.2	5.9
30°-40°	410.3	8.1
40°-50°	664.6	13.2
50°-60°	1043.1	20.7
60°-70°	1390.6	27.6
70°-80°	773.5	15.3
80°-90°	120.0	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°	5043.2	100.0
0°-180°	5043.2	100.0



REPORT NUMBER: P196135

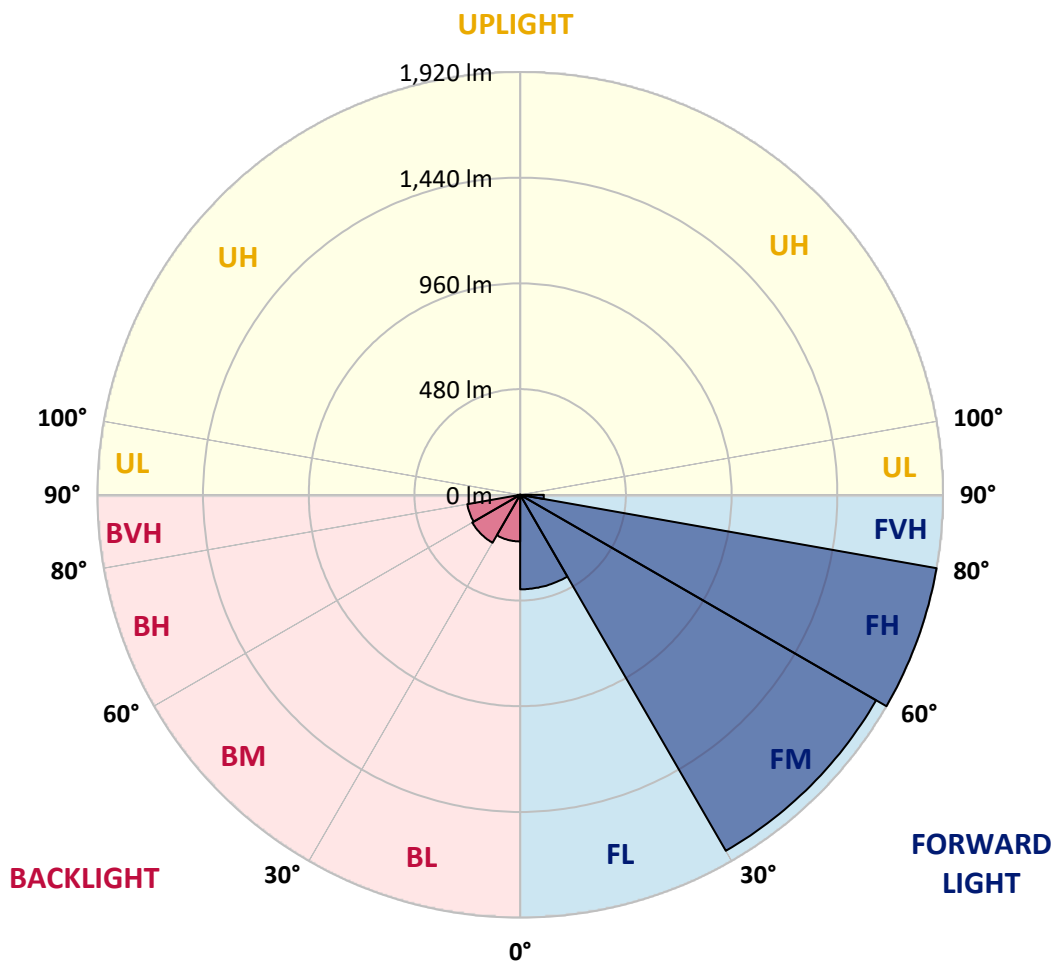
CATALOG NUMBER: NAV-AF-01-D-UNV-SL3-800

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

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	429.1	8.5			
FM	(30°-60°)	1866.7	37.0			
FH	(60°-80°)	1920.2	38.1			G2/5000
FVH	(80°-90°)	107.8	2.1			G2/225
BL	(0°-30°)	212.0	4.2	B1/500		
BM	(30°-60°)	251.3	5.0	B1/1000		
BH	(60°-80°)	243.9	4.8	B1/500		G1/500
BVH	(80°-90°)	12.2	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





REPORT NUMBER: P196135

CATALOG NUMBER: NAV-AF-01-D-UNV-SL3-800

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	60°	65°	75°	85°
0°	1286.8	1286.8	1286.8	1286.8	1286.8	1286.8	1286.8	1286.8	1286.8	1286.8	1286.8
2.5°	1321.0	1324.6	1324.6	1321.7	1320.1	1310.7	1305.2	1301.3	1294.5	1282.0	1270.6
5°	1273.9	1280.6	1283.5	1284.8	1293.2	1290.4	1290.7	1288.1	1282.3	1268.7	1250.3
7.5°	1187.1	1188.5	1193.7	1202.4	1222.7	1237.0	1248.6	1250.9	1249.5	1239.5	1213.7
10°	1101.8	1104.1	1110.2	1125.0	1144.5	1164.8	1190.1	1200.4	1208.2	1204.9	1172.3
12.5°	1030.9	1031.3	1038.1	1055.3	1076.9	1102.4	1136.7	1152.9	1171.3	1178.7	1142.2
15°	962.7	967.3	973.7	994.4	1021.3	1053.6	1093.0	1115.4	1139.7	1160.9	1118.9
17.5°	911.0	914.5	918.4	935.6	966.6	1007.0	1055.9	1079.8	1111.8	1144.5	1095.0
20°	882.5	883.8	881.0	889.4	915.5	959.2	1015.8	1044.5	1082.7	1128.6	1070.4
22.5°	876.7	876.7	866.0	864.4	876.1	913.0	974.4	1009.7	1056.2	1117.7	1048.4
25°	903.9	901.9	881.9	863.5	859.3	878.0	934.9	978.2	1033.6	1117.3	1032.0
27.5°	955.3	952.7	927.8	896.7	869.9	861.8	904.5	948.8	1015.8	1128.3	1023.6
30°	1019.4	1018.3	993.2	954.3	910.0	868.3	892.5	933.6	1003.8	1148.7	1023.3
32.5°	1089.5	1084.9	1069.5	1030.6	973.1	904.2	899.7	934.3	1000.5	1178.4	1030.6
35°	1164.2	1160.9	1157.1	1118.0	1053.3	967.6	931.1	956.6	1016.4	1219.9	1051.7
37.5°	1259.3	1255.8	1262.2	1219.5	1148.7	1050.7	984.1	1001.3	1048.7	1280.0	1090.8
40°	1428.4	1418.1	1400.0	1334.3	1260.0	1152.6	1060.7	1063.4	1104.1	1360.5	1153.6
42.5°	1706.2	1672.9	1583.3	1462.7	1377.3	1270.9	1160.6	1148.4	1180.4	1466.9	1244.7
45°	1984.6	1947.2	1795.8	1602.8	1498.9	1398.1	1284.2	1254.8	1275.4	1590.8	1362.2
47.5°	2164.5	2146.0	1975.3	1742.8	1626.3	1536.5	1425.5	1377.0	1391.8	1731.1	1507.0
50°	2217.1	2201.3	2067.1	1852.4	1746.7	1703.6	1600.5	1536.1	1538.7	1895.1	1680.7
52.5°	2177.8	2171.2	2082.3	1920.3	1857.3	1879.9	1842.6	1753.1	1731.8	2074.9	1868.8
55°	2125.0	2127.2	2093.0	1988.5	1969.8	2044.2	2159.7	2087.5	1996.9	2262.2	2064.8
57.5°	1959.2	1960.7	2050.6	2118.5	2184.5	2274.4	2406.4	2376.0	2270.5	2464.3	2284.5
60°	1577.5	1590.1	1790.3	2091.7	2429.9	2728.1	2760.4	2708.1	2561.6	2697.1	2570.0
62.5°	1127.0	1138.3	1370.2	1815.8	2401.2	3241.6	3414.4	3206.1	2956.4	3045.4	2971.7
65°	592.1	590.1	769.7	1254.8	2022.5	3360.7	4444.7	4090.3	3621.7	3524.4	3359.7
67.5°	330.8	341.5	411.0	632.9	1318.2	2957.8	5102.8	5207.2	4546.6	3904.3	3342.9
69°	306.0	309.4	356.1	489.3	859.3	2440.4	5046.2	5544.6	4936.6	3905.9	3127.6
70°	297.2	301.1	343.4	450.8	721.8	1999.6	4840.2	5505.1	5031.3	3819.3	2931.6
72.5°	266.5	271.7	312.7	405.2	608.3	1030.6	3898.8	4711.8	4557.6	3338.1	2273.1
75°	227.3	236.1	298.2	402.3	576.3	655.2	2600.0	3510.5	3392.1	2387.3	1289.7
77.5°	94.1	95.0	130.3	294.6	604.8	627.1	1397.4	2223.7	1968.5	1046.8	388.4
80°	65.7	64.3	65.0	86.0	487.9	631.3	717.0	1130.9	879.0	276.2	181.8
82.5°	55.3	54.6	57.3	54.0	165.2	716.3	599.6	589.5	414.0	148.7	86.6
85°	36.5	35.6	46.9	49.2	78.6	568.9	644.9	463.4	308.5	79.6	36.8
87.5°	17.8	18.1	26.8	33.3	41.7	180.1	617.7	366.4	238.3	34.6	14.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P196135

CATALOG NUMBER: NAV-AF-01-D-UNV-SL3-800

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1286.8	1286.8	1286.8	1286.8	1286.8	1286.8	1286.8	1286.8	1286.8	1286.8	1286.8
2.5°	1266.1	1256.4	1247.7	1236.6	1228.3	1221.1	1211.4	1211.1	1209.4	1211.8	1212.4
5°	1238.0	1221.8	1197.2	1169.7	1150.3	1124.7	1099.9	1091.5	1082.1	1081.1	1084.0
7.5°	1195.6	1170.4	1128.3	1086.3	1044.2	1001.3	960.4	939.8	919.7	913.6	916.5
10°	1148.4	1116.3	1052.0	983.5	924.2	860.2	798.1	758.0	721.5	705.9	709.8
12.5°	1111.5	1070.7	980.2	891.3	802.6	710.8	629.0	549.7	489.9	463.1	464.7
15°	1079.8	1027.8	913.0	794.5	683.6	557.8	444.4	352.5	300.1	280.7	280.1
17.5°	1045.6	982.4	842.8	704.7	560.8	405.2	297.5	243.2	222.5	216.0	216.0
20°	1008.9	935.9	769.4	606.7	431.4	282.9	223.8	202.7	195.0	193.0	192.7
22.5°	975.1	890.3	695.6	502.3	312.1	214.7	190.5	182.4	181.1	182.7	182.7
25°	948.2	850.2	620.9	392.3	227.0	179.8	169.5	168.5	173.3	179.1	180.1
27.5°	928.1	814.3	547.2	286.5	178.5	156.5	152.9	157.1	168.5	180.1	182.4
30°	914.2	783.6	458.9	206.0	148.7	137.1	138.7	146.2	163.3	181.1	186.0
32.5°	908.1	758.7	370.0	158.1	127.1	120.6	124.8	134.5	152.3	170.1	175.9
35°	913.9	740.6	287.9	131.3	111.3	106.4	111.3	121.3	132.9	141.7	145.2
37.5°	934.9	734.1	216.7	116.4	100.9	96.1	99.9	106.7	111.9	115.1	116.7
40°	979.3	740.9	169.8	108.6	95.0	89.6	90.5	93.8	97.4	99.9	100.2
42.5°	1049.8	763.2	151.0	105.8	91.6	84.4	82.8	85.0	88.9	92.5	93.1
45°	1143.6	800.4	149.0	106.7	89.9	80.2	76.9	79.3	84.4	90.2	91.2
47.5°	1264.8	859.3	158.1	111.9	90.8	77.9	73.0	75.4	82.1	89.9	91.2
50°	1408.4	940.7	174.9	119.7	95.4	77.9	71.5	73.4	80.5	89.3	90.5
52.5°	1577.5	1054.3	192.4	127.5	101.9	80.8	72.1	71.8	78.3	86.3	88.0
55°	1764.1	1195.2	209.2	134.2	105.5	84.7	73.8	69.9	75.0	81.5	82.8
57.5°	1983.7	1388.3	238.7	140.7	107.4	87.7	75.7	67.9	70.8	75.4	76.3
60°	2281.5	1671.9	295.9	151.7	110.9	88.9	76.0	66.0	65.7	68.8	69.3
62.5°	2669.9	2004.1	350.6	164.6	118.0	89.3	74.7	64.7	61.5	62.4	62.4
65°	2946.1	2126.3	334.7	175.6	124.5	88.9	73.4	63.7	58.2	56.6	56.6
67.5°	2789.0	1878.2	284.3	178.5	125.1	85.4	70.5	61.5	55.3	51.5	51.5
69°	2558.0	1646.3	261.0	173.3	120.0	81.2	67.3	59.2	53.4	48.8	48.8
70°	2369.8	1470.8	246.7	167.2	113.9	77.6	64.3	56.9	51.5	47.6	47.3
72.5°	1769.3	981.5	210.8	144.2	93.5	65.7	56.3	50.7	46.2	43.7	43.7
75°	933.6	491.8	172.7	117.7	72.1	52.4	46.2	42.7	40.1	39.8	39.5
77.5°	306.0	222.5	124.2	88.6	53.0	40.7	36.8	34.6	34.3	35.6	35.6
80°	165.2	132.9	79.9	59.8	36.8	30.4	28.4	28.1	29.2	31.0	31.0
82.5°	80.2	65.7	47.6	36.8	25.3	22.3	22.3	22.6	23.9	26.2	26.2
85°	34.6	31.0	27.5	20.7	15.5	13.9	15.9	17.5	18.4	20.0	20.7
87.5°	16.5	14.5	12.6	8.1	6.8	7.2	8.4	10.3	12.3	13.6	13.9
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)