

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: P270277

Luminaire Tested: **NAV-AF-01-D-UNV-SL3-7027-800-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P270277  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24263)  
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-SL3-7027-800-HSS  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(1) 70 CRI, 2700K, 800mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE III SPILL  
LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3640.3 lumens  
Efficiency: N/A  
Efficacy: 82.7 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type III - Medium - Non-Cutoff  
BUG Rating: B0 - U0 - G1

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

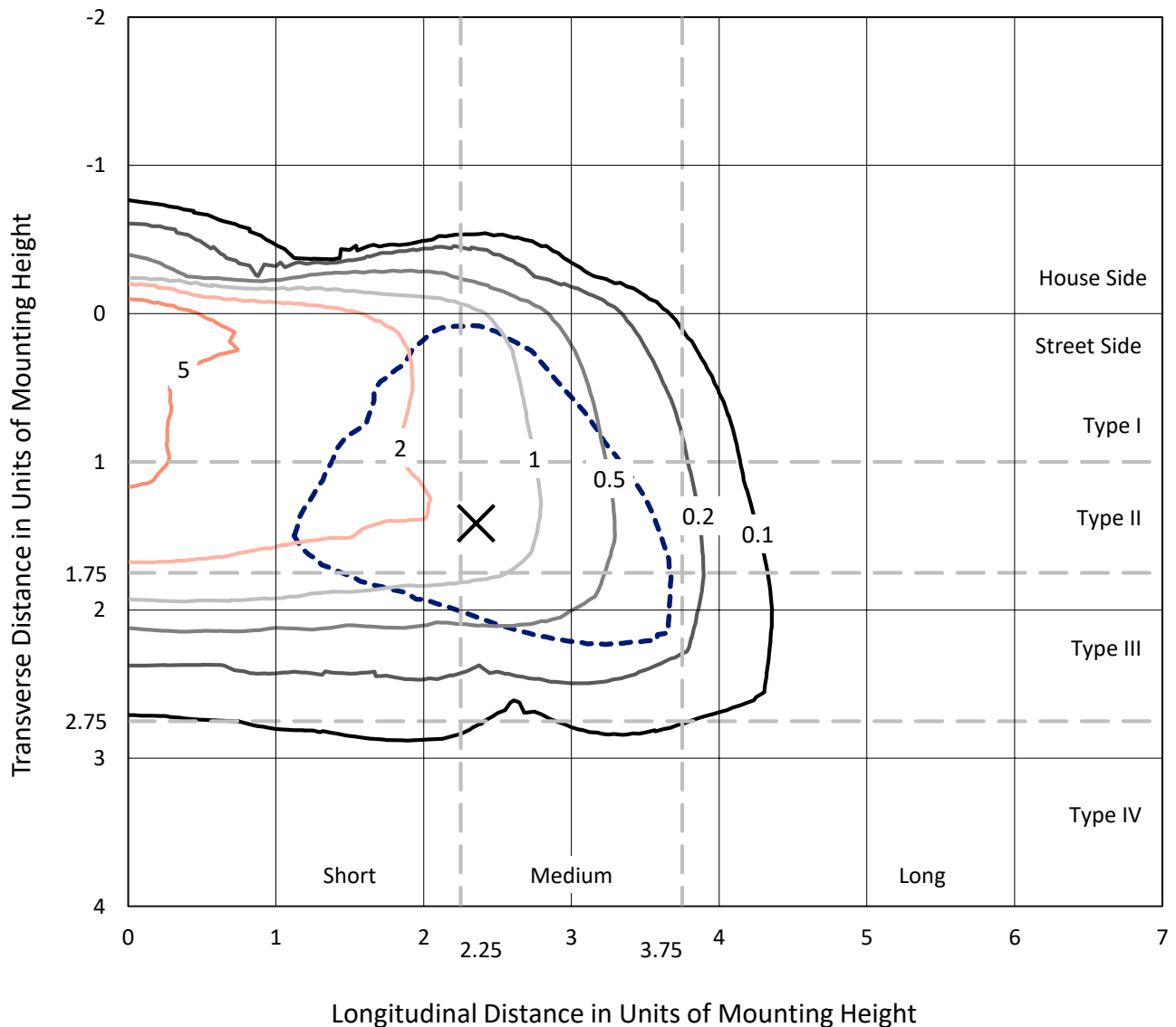


REPORT NUMBER: P270277

CATALOG NUMBER: NAV-AF-01-D-UNV-SL3-7027-800-HSS

### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

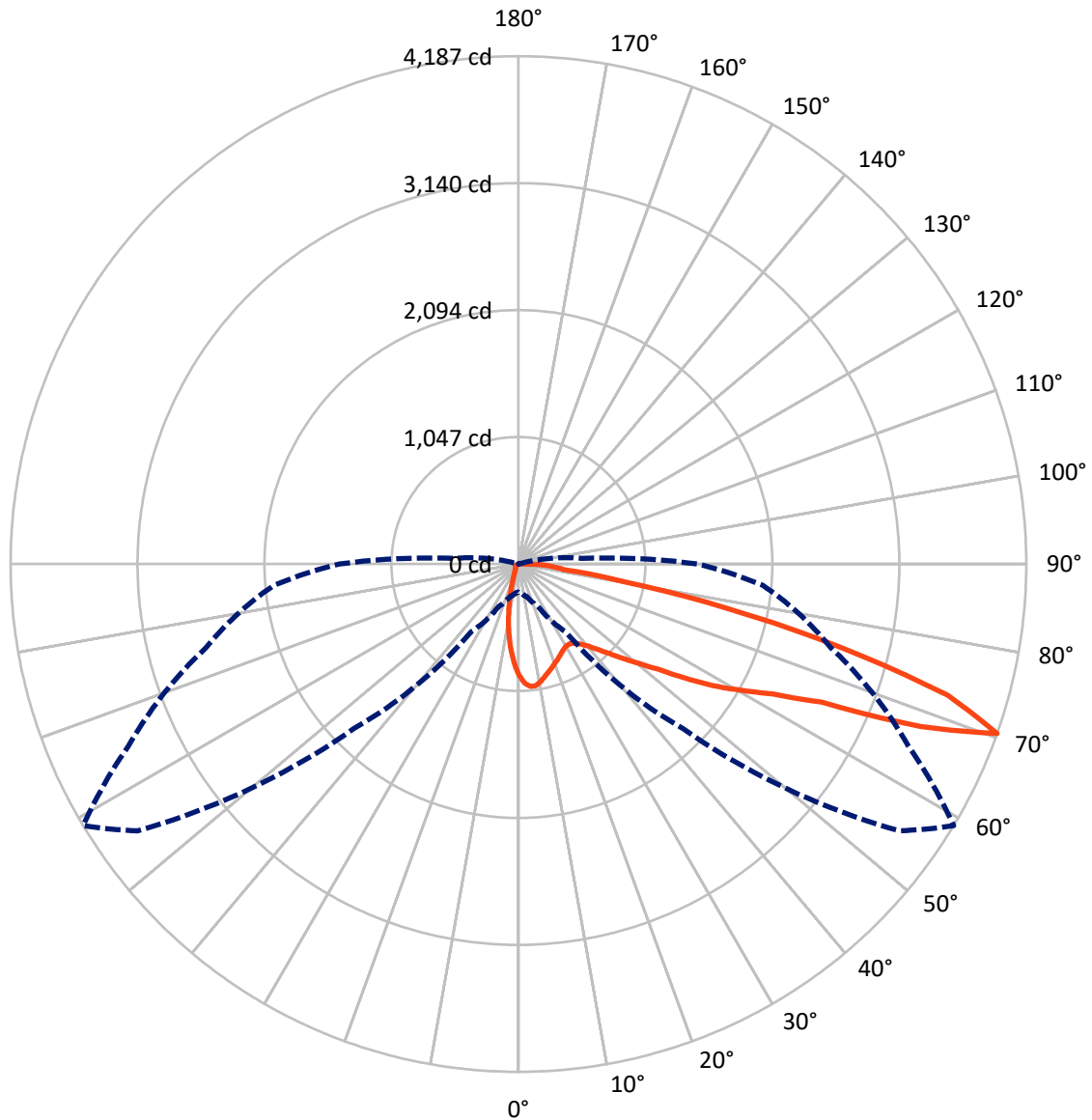


Based on 10 foot mounting height. Maximum calculated value = 9.8 fc  
 Type III - Medium - Non-Cutoff

REPORT NUMBER: P270277

CATALOG NUMBER: NAV-AF-01-D-UNV-SL3-7027-800-HSS

### Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral      - - - Horizontal Cone Through 70-Deg Vertical

REPORT NUMBER: P270277

CATALOG NUMBER: NAV-AF-01-D-UNV-SL3-7027-800-HSS

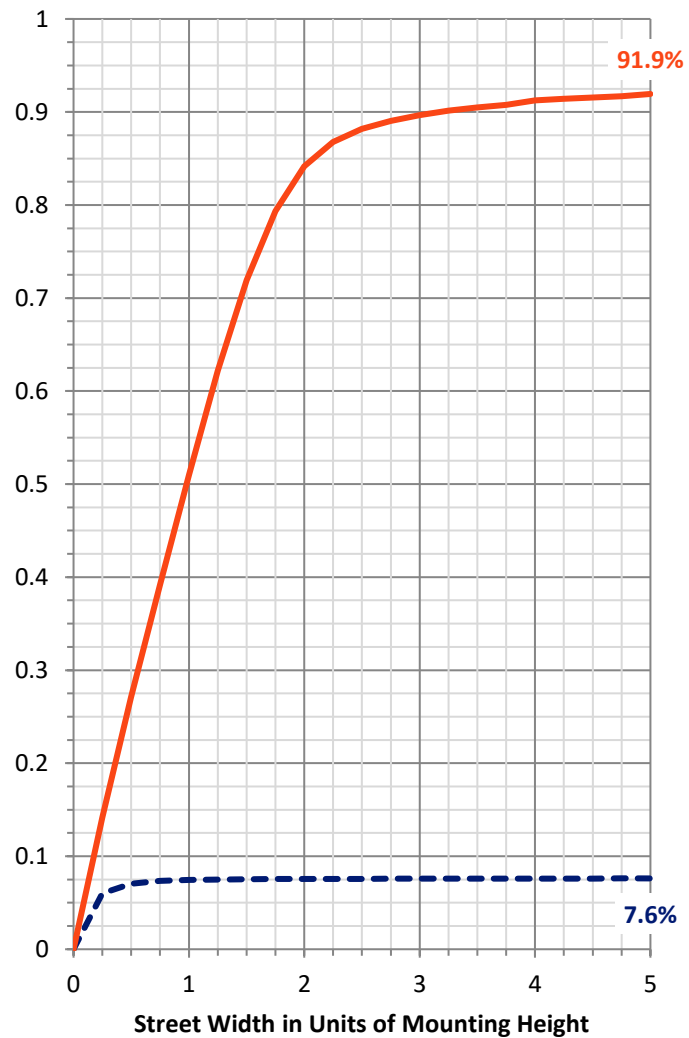
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	279.8	0.0	279.8
	% Fixture	7.7	0.0	7.7
<b>Street Side</b>	Lumens	3360.5	0.0	3360.5
	% Fixture	92.3	0.0	92.3
<b>Total</b>	Lumens	3640.3	0.0	3640.3
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	75.7	2.1
10°-20°	158.8	4.4
20°-30°	214.9	5.9
30°-40°	310.2	8.5
40°-50°	515.1	14.1
50°-60°	787.9	21.6
60°-70°	979.9	26.9
70°-80°	541.7	14.9
80°-90°	56.2	1.5
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°	3640.3	100.0
0°-180°	3640.3	100.0



--- HS    — SS

REPORT NUMBER: P270277

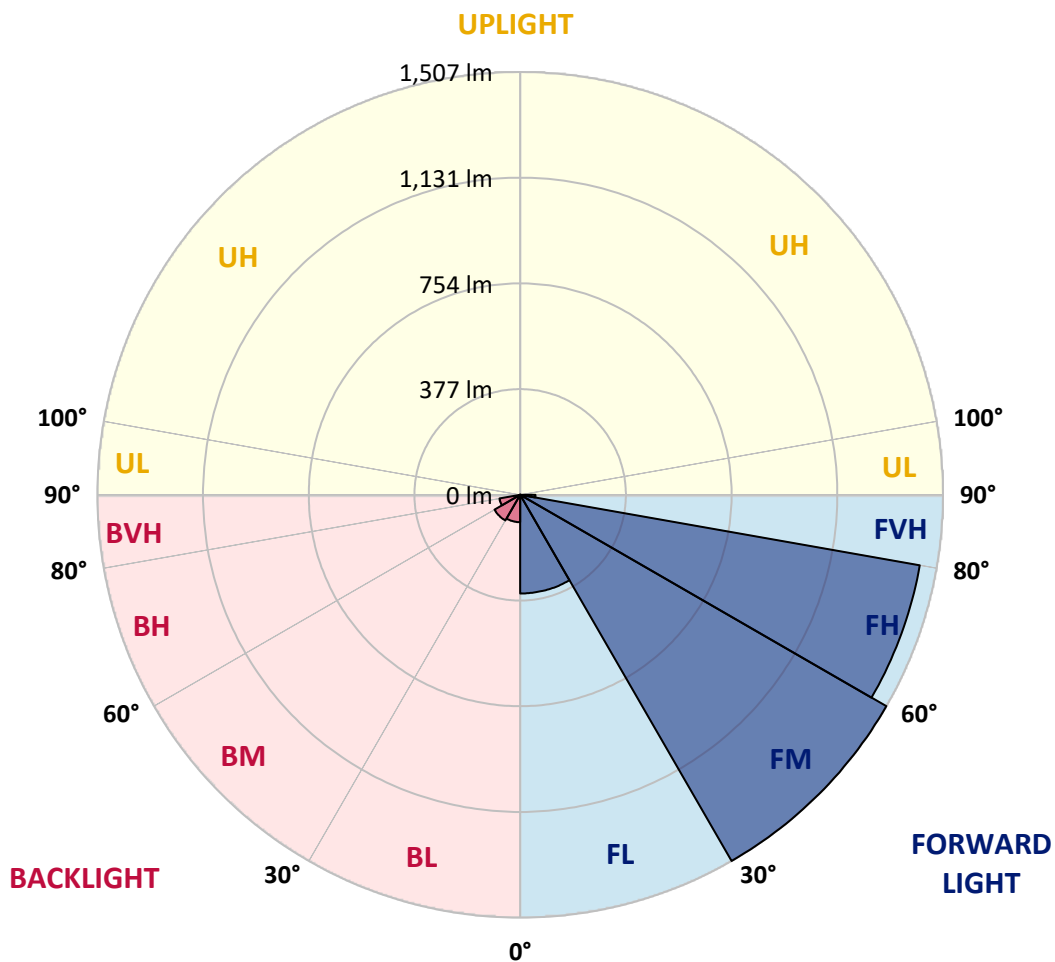
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	351.8	9.7			
FM	(30°-60°)	1507.5	41.4			
FH	(60°-80°)	1446.6	39.7			G1/1800
FVH	(80°-90°)	54.6	1.5			G1/100
BL	(0°-30°)	97.5	2.7	B0/110		
BM	(30°-60°)	105.6	2.9	B0/220		
BH	(60°-80°)	75.1	2.1	B0/110		G0/110
BVH	(80°-90°)	1.6	0.0			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B0-U0-G1**

Type III Medium





REPORT NUMBER: P270277

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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	920.6	920.6	920.6	920.6	920.6	920.6	920.6	920.6	920.6	920.6	920.6
2.5°	1040.4	1038.9	1032.1	1030.6	1022.9	1007.5	989.8	982.6	968.1	944.9	919.4
5°	1057.8	1058.7	1059.2	1056.1	1055.1	1042.5	1022.7	1014.1	994.7	956.8	910.1
7.5°	992.9	995.2	1002.1	1005.1	1018.3	1023.2	1019.0	1013.6	998.2	953.5	887.9
10°	924.6	928.8	936.2	941.2	957.4	970.4	987.2	988.7	985.4	942.5	862.8
12.5°	865.8	869.6	878.0	887.9	904.4	921.3	946.4	955.1	966.0	935.3	844.9
15°	815.3	816.4	824.4	836.7	858.4	881.7	911.4	924.4	945.7	932.6	831.2
17.5°	771.1	771.4	776.7	787.9	814.3	844.9	879.6	896.6	923.7	928.8	819.2
20°	742.0	741.7	742.0	748.1	771.4	807.9	849.9	867.9	902.6	924.0	806.8
22.5°	732.1	730.7	724.5	722.2	737.1	769.2	819.4	842.8	883.8	922.6	797.8
25°	744.2	743.3	730.0	717.2	718.6	738.6	788.4	817.0	868.9	927.6	795.5
27.5°	783.2	781.5	761.0	736.3	720.6	724.2	765.4	795.3	857.1	939.7	798.6
30°	834.3	834.5	812.5	782.7	745.9	725.6	753.0	781.3	849.1	957.9	805.2
32.5°	891.1	890.8	875.2	840.6	793.7	750.9	758.4	782.3	850.2	984.5	817.7
35°	949.9	946.9	941.7	911.2	856.3	795.0	783.5	801.1	861.7	1019.7	839.2
37.5°	1017.7	1016.6	1021.8	989.8	933.7	860.0	827.3	839.2	890.8	1071.6	873.8
40°	1125.7	1119.6	1122.1	1078.4	1021.1	947.7	889.0	891.9	937.2	1140.2	928.5
42.5°	1331.3	1306.9	1261.0	1179.1	1117.1	1044.9	969.5	964.2	1002.9	1223.4	1000.4
45°	1577.2	1549.0	1433.4	1290.4	1213.3	1149.2	1068.9	1054.8	1083.6	1322.6	1093.2
47.5°	1782.2	1752.1	1598.9	1406.6	1310.9	1256.9	1178.9	1162.4	1180.4	1437.6	1204.7
50°	1852.2	1835.4	1700.9	1503.3	1409.6	1377.7	1317.0	1289.5	1294.0	1561.8	1334.9
52.5°	1820.1	1814.3	1724.2	1569.3	1500.8	1511.2	1468.4	1439.5	1434.6	1697.3	1478.8
55°	1752.4	1749.5	1705.6	1606.2	1581.2	1633.4	1680.5	1655.7	1609.0	1841.5	1597.6
57.5°	1655.3	1665.7	1697.3	1677.0	1680.1	1762.5	1877.7	1890.8	1821.0	1956.4	1685.8
60°	1396.4	1424.4	1569.1	1753.1	1893.9	1977.2	2089.0	2113.2	2000.5	2034.9	1787.7
62.5°	1032.2	1072.3	1278.6	1616.7	2011.8	2385.5	2369.9	2359.2	2171.9	2140.0	1973.0
65°	606.4	653.2	827.7	1263.2	1834.2	2648.2	2894.3	2746.1	2433.1	2358.7	2268.3
67.5°	302.1	302.4	381.2	666.7	1355.5	2464.9	3660.1	3574.4	2988.3	2680.8	2384.7
70°	232.3	238.6	282.0	387.4	685.4	1919.8	3835.6	4187.3	3546.4	2666.4	2023.3
72.5°	196.9	201.0	250.9	337.3	512.5	1054.0	3320.3	3701.2	3384.1	2252.9	1491.5
75°	141.8	144.9	222.2	306.0	471.8	522.9	2277.7	2745.0	2539.1	1584.8	820.8
77.5°	35.2	34.9	77.4	248.2	422.1	435.6	1306.9	1760.3	1456.8	648.9	210.9
80°	15.6	15.1	17.5	52.2	392.6	411.2	574.7	889.0	558.8	105.2	64.6
82.5°	11.0	10.4	11.0	19.3	131.2	381.4	347.4	385.4	204.5	36.0	27.5
85°	3.6	3.4	6.1	16.2	36.8	219.9	338.9	287.7	152.2	15.5	18.3
87.5°	0.5	0.5	2.2	8.9	10.7	73.3	198.9	199.3	68.5	9.1	8.3
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: P270277

CATALOG NUMBER: NAV-AF-01-D-UNV-SL3-7027-800-HSS

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	920.6	920.6	920.6	920.6	920.6	920.6	920.6	920.6	920.6	920.6	920.6
2.5°	906.5	890.3	867.6	844.6	824.1	802.9	785.9	778.0	774.3	769.5	758.8
5°	885.5	856.3	806.3	757.1	711.3	667.4	629.7	608.2	585.2	584.1	572.8
7.5°	852.1	810.5	731.6	655.3	585.2	518.2	460.6	423.2	397.6	381.7	370.7
10°	814.9	761.3	656.9	549.6	454.3	364.7	290.5	242.3	212.8	197.9	189.5
12.5°	785.1	717.8	583.3	448.2	328.7	226.1	157.1	121.9	106.3	100.3	97.5
15°	759.5	678.0	514.4	357.5	219.5	129.8	90.9	79.4	76.8	76.8	76.6
17.5°	733.7	639.6	447.4	268.6	138.1	85.1	71.7	70.0	70.2	71.1	71.1
20°	709.3	603.0	382.8	191.3	90.5	68.1	65.0	64.6	65.3	66.5	66.1
22.5°	689.5	571.0	322.4	131.5	69.8	61.9	59.8	59.1	59.6	60.5	60.1
25°	675.5	543.5	266.9	91.7	60.6	56.4	54.1	53.0	52.5	53.0	52.7
27.5°	667.0	520.4	214.8	68.9	54.3	50.8	48.1	45.9	44.5	44.5	43.9
30°	661.5	498.6	168.3	57.1	49.1	45.4	41.4	38.4	36.2	35.8	35.5
32.5°	661.2	480.1	125.8	50.6	44.1	39.9	35.2	31.4	28.8	28.2	27.9
35°	668.1	465.0	92.5	45.5	39.9	34.7	29.4	25.2	23.0	23.0	22.7
37.5°	685.9	456.1	70.0	41.7	36.2	30.3	24.8	20.9	19.0	19.6	19.6
40°	719.3	454.5	57.1	38.7	33.2	26.4	20.0	17.0	16.2	17.0	17.0
42.5°	769.9	463.3	50.8	36.6	30.5	22.5	16.8	14.6	14.3	15.1	15.1
45°	836.2	480.6	47.3	34.7	27.5	18.7	14.1	12.7	12.3	13.5	13.5
47.5°	916.5	503.9	43.9	32.3	24.4	15.5	11.8	10.7	10.7	11.8	12.0
50°	1011.4	535.5	40.7	30.3	22.0	12.9	9.9	9.1	9.3	10.4	10.7
52.5°	1120.6	574.2	37.5	28.2	19.3	10.4	8.3	7.6	7.9	9.1	9.3
55°	1214.9	608.1	34.0	26.4	15.6	8.5	6.8	6.6	6.8	8.3	8.3
57.5°	1297.1	640.4	30.7	23.4	12.3	6.8	5.5	5.5	6.1	7.5	7.6
60°	1406.0	691.4	27.9	19.8	9.3	5.2	4.4	4.8	5.5	6.6	6.8
62.5°	1599.1	778.2	24.4	16.4	6.8	4.1	3.6	3.9	4.9	6.3	6.6
65°	1840.7	860.3	20.3	13.7	5.2	3.1	2.8	3.6	4.9	6.3	6.6
67.5°	1816.1	748.3	15.9	11.0	3.9	2.4	2.2	3.4	4.8	6.3	6.6
70°	1472.7	524.5	11.8	7.5	3.1	2.2	2.2	3.4	4.8	6.1	6.3
72.5°	1021.6	291.9	9.1	4.9	2.8	2.2	1.9	3.1	4.4	6.1	6.3
75°	486.1	89.6	7.1	3.6	2.4	1.9	1.6	3.1	4.4	6.1	6.3
77.5°	93.3	22.7	5.7	3.1	2.2	1.9	1.6	2.8	4.4	5.7	6.1
80°	31.6	10.2	4.8	2.8	2.2	1.9	1.6	2.8	4.1	5.5	5.7
82.5°	17.2	5.7	4.1	2.4	2.2	1.6	1.3	2.4	3.9	5.5	5.7
85°	13.5	4.1	3.4	2.4	2.2	1.6	1.3	2.4	3.9	5.2	5.5
87.5°	6.8	3.1	2.8	2.4	2.2	1.6	1.3	2.2	3.6	4.9	5.5
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)