

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: P459866

Luminaire Tested: **NAV-SA5A-AMB-U-SL2-HSS**

Issue Date: 1/6/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P459866  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2003-697-5)  
Test Lab: INNOVATION CENTER  
Issue Date: 1/6/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-SA5A-AMB-U-SL2-HSS  
Description: NAVION AREA AND ROADWAY LUMINAIRE  
(5) NARROW BAND AMBER, 500mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II  
SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4169 lumens  
Efficiency: N/A  
Efficacy: 41.3 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type III - Medium - Non-Cutoff  
BUG Rating: B1 - U0 - G1

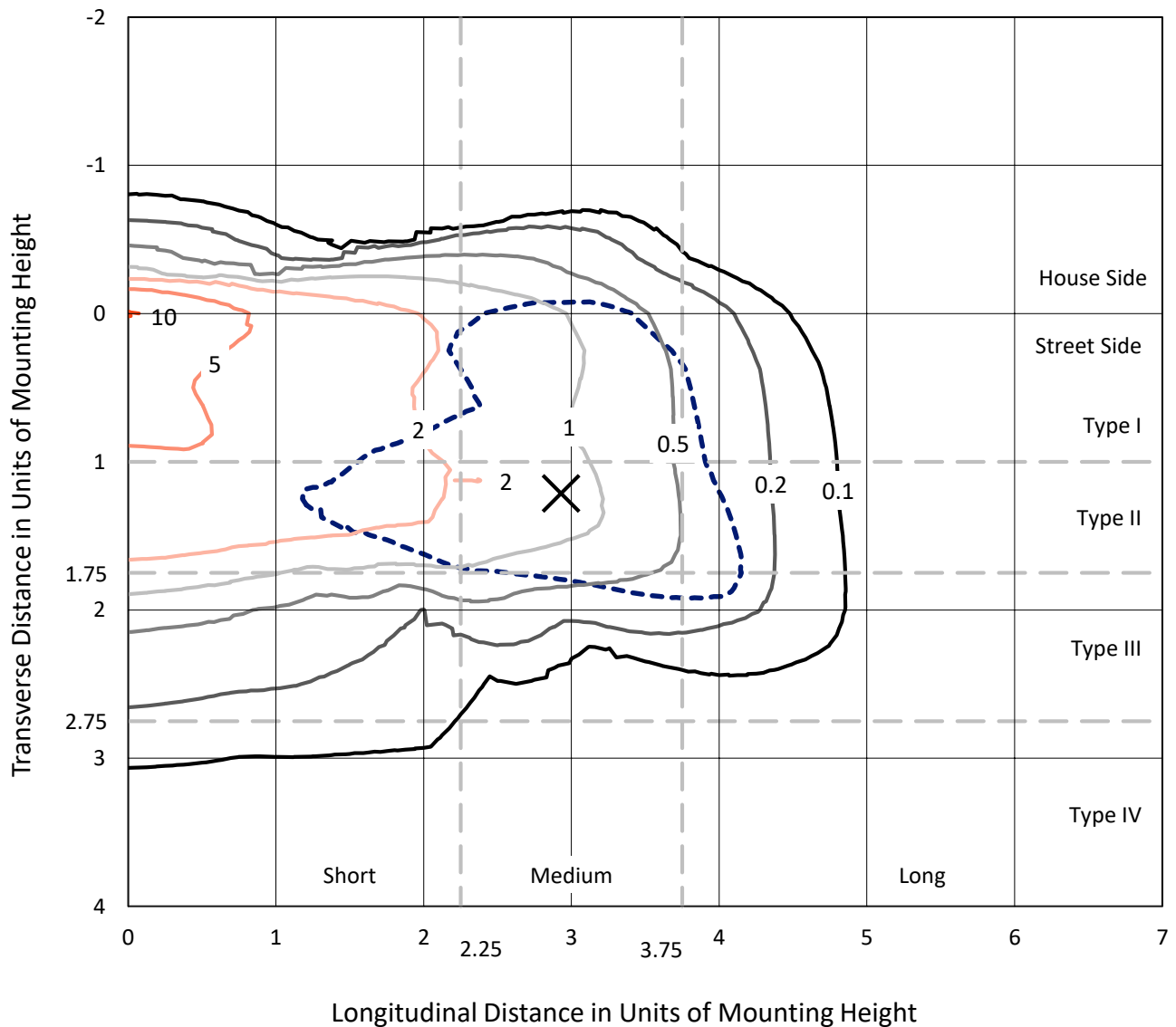
Input Watts (W): 101  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



REPORT NUMBER: P459866  
 CATALOG NUMBER: NAV-SA5A-AMB-U-SL2-HSS

### Iso-Footcandle Lines of Horizontal Illumination

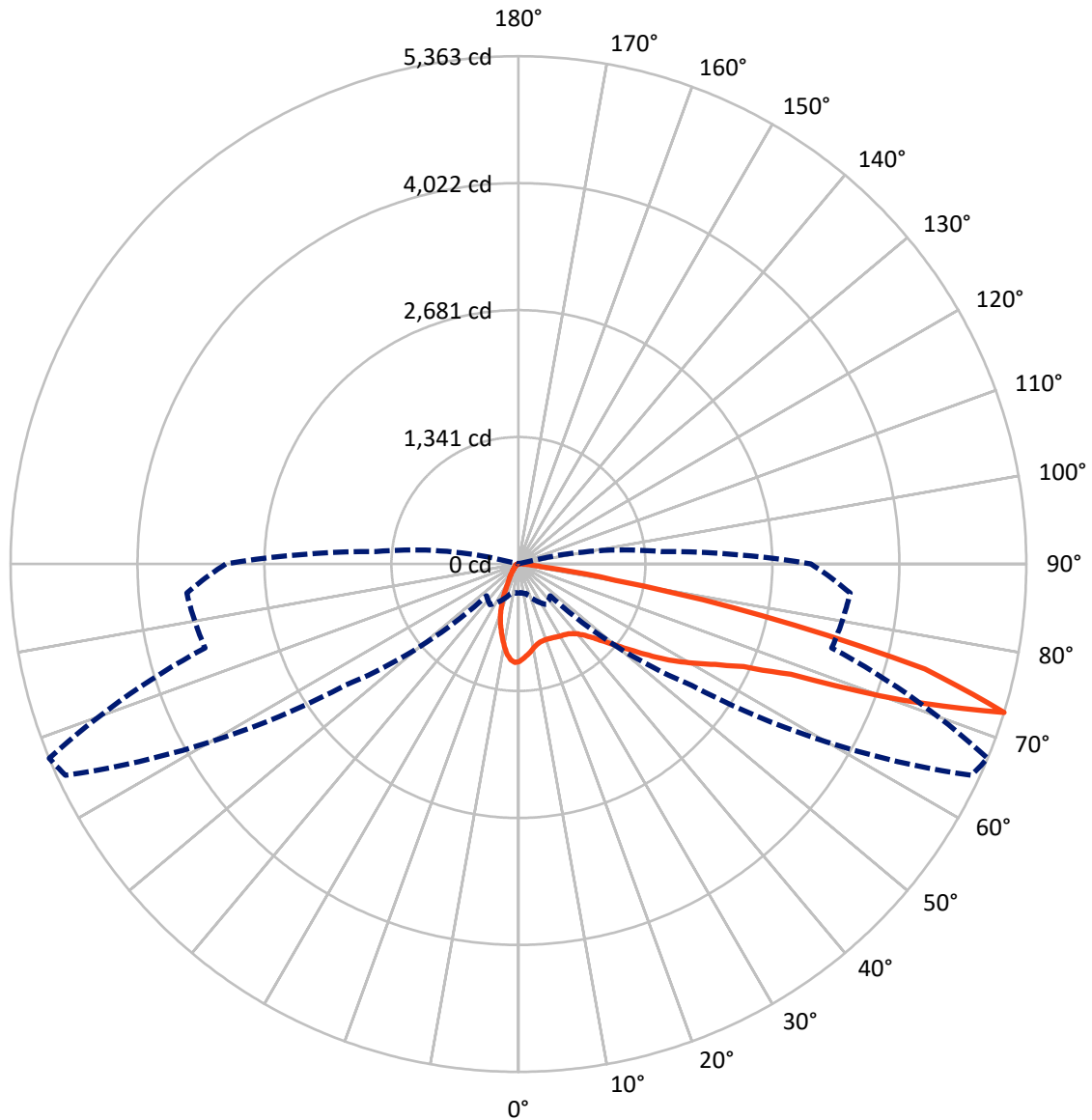
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 10.3 fc  
 Type III - Medium - Non-Cutoff

REPORT NUMBER: P459866  
CATALOG NUMBER: NAV-SA5A-AMB-U-SL2-HSS

### Luminous Intensity Polar Plot



— Vertical Plane Through 67.5-Deg Lateral    - - - Horizontal Cone Through 72.5-Deg Vertical



REPORT NUMBER: P459866

CATALOG NUMBER: NAV-SA5A-AMB-U-SL2-HSS

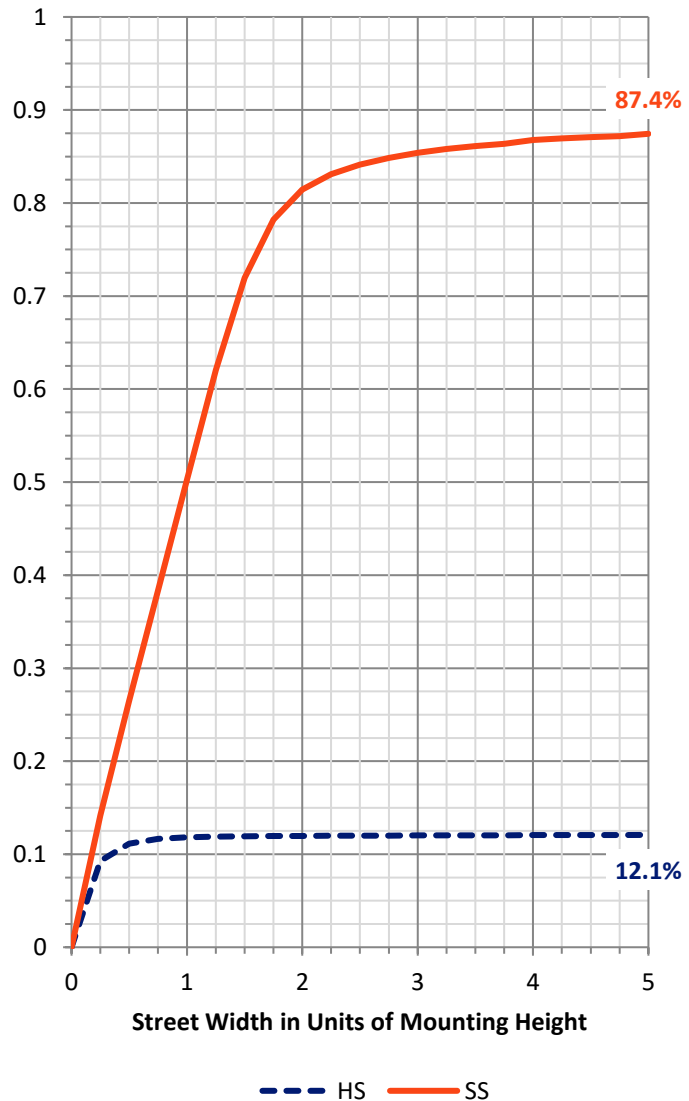
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	508.6	0.0	508.6
	% Fixture	12.2	0.0	12.2
<b>Street Side</b>	Lumens	3660.5	0.0	3660.5
	% Fixture	87.8	0.0	87.8
<b>Total</b>	Lumens	4169.0	0.0	4169.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	85.0	2.0
10°-20°	179.2	4.3
20°-30°	253.2	6.1
30°-40°	362.7	8.7
40°-50°	547.2	13.1
50°-60°	877.2	21.0
60°-70°	1037.0	24.9
70°-80°	757.5	18.2
80°-90°	70.0	1.7
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°	4169.0	100.0
0°-180°	4169.0	100.0

**Coefficient of Utilization**



REPORT NUMBER: P459866

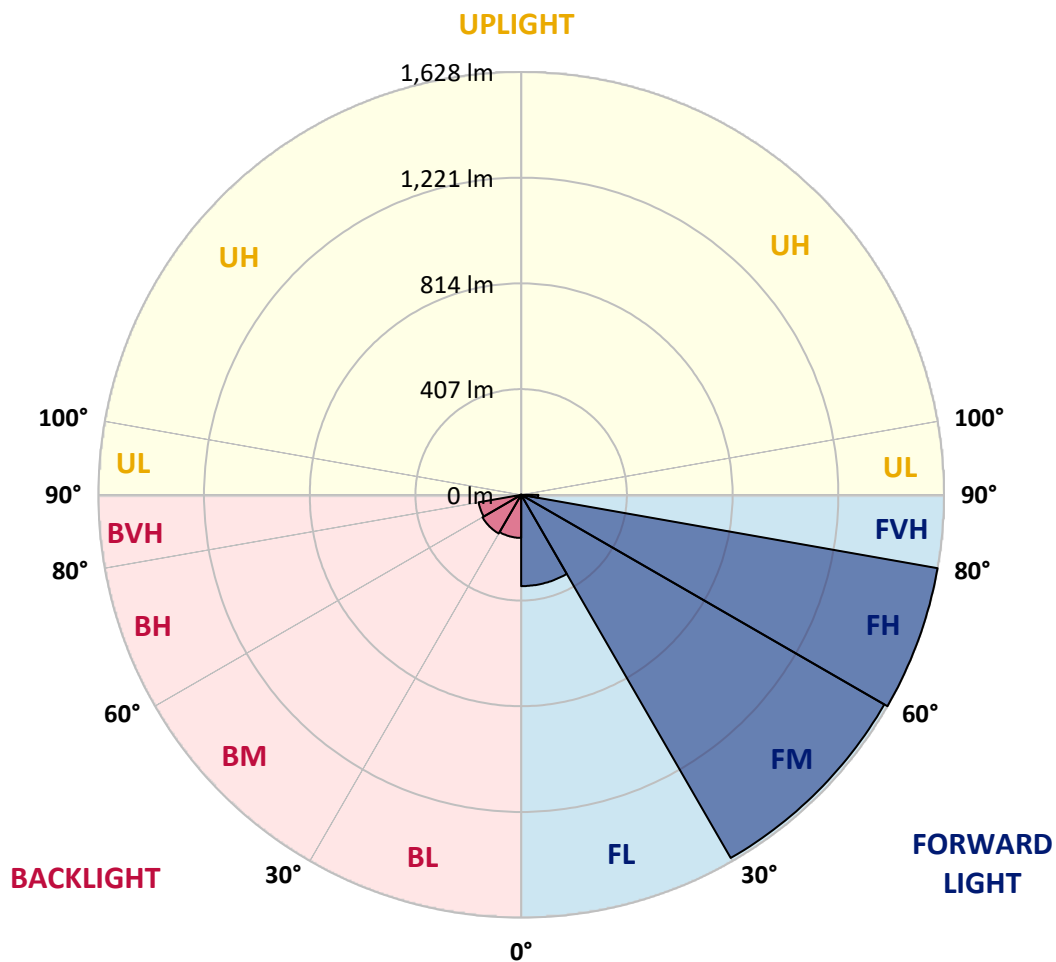
CATALOG NUMBER: NAV-SA5A-AMB-U-SL2-HSS

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

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	351.7	8.4			
FM	(30°-60°)	1614.8	38.7			
FH	(60°-80°)	1628.3	39.1			G1/1800
FVH	(80°-90°)	65.7	1.6			G1/100
BL	(0°-30°)	165.8	4.0	B1/500		
BM	(30°-60°)	172.2	4.1	B0/220		
BH	(60°-80°)	166.2	4.0	B1/500		G1/500
BVH	(80°-90°)	4.4	0.1			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G1**

Type III Medium





REPORT NUMBER: P459866

CATALOG NUMBER: NAV-SA5A-AMB-U-SL2-HSS

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	67.5°	75°	85°
0°	1030.3	1030.3	1030.3	1030.3	1030.3	1030.3	1030.3	1030.3	1030.3	1030.3	1030.3
2.5°	966.0	970.6	970.6	977.5	979.8	982.1	995.9	1000.5	998.2	1011.9	1021.1
5°	901.8	901.8	906.4	917.9	927.0	933.9	950.0	963.7	966.0	982.1	1007.3
7.5°	849.0	853.6	853.6	860.5	874.3	885.7	906.4	929.3	933.9	954.6	984.4
10°	807.7	805.4	812.3	819.2	830.7	842.1	865.1	890.3	899.5	922.4	956.9
12.5°	768.7	771.0	773.3	784.8	798.5	810.0	833.0	862.8	872.0	901.8	943.1
15°	745.8	745.8	748.1	754.9	768.7	784.8	812.3	844.4	855.9	890.3	938.5
17.5°	738.9	738.9	736.6	738.9	750.3	766.4	798.5	837.5	849.0	885.7	945.4
20°	741.2	741.2	736.6	734.3	741.2	757.2	793.9	835.2	849.0	892.6	963.7
22.5°	754.9	752.6	748.1	741.2	741.2	757.2	796.2	839.8	853.6	901.8	979.8
25°	789.4	780.2	775.6	761.8	752.6	759.5	798.5	846.7	860.5	908.7	1002.8
27.5°	821.5	819.2	819.2	805.4	775.6	768.7	807.7	858.2	869.7	917.9	1032.6
30°	876.6	872.0	872.0	855.9	819.2	787.1	816.9	867.4	881.1	924.7	1062.4
32.5°	945.4	947.7	943.1	922.4	876.6	821.5	833.0	878.8	890.3	929.3	1092.2
35°	1021.1	1023.4	1034.9	1011.9	952.3	874.3	858.2	899.5	906.4	938.5	1115.2
37.5°	1083.1	1083.1	1112.9	1117.5	1044.1	938.5	899.5	933.9	931.6	950.0	1138.1
40°	1151.9	1151.9	1186.3	1213.9	1161.1	1025.7	952.3	975.2	970.6	975.2	1170.3
42.5°	1225.3	1229.9	1266.6	1314.8	1287.3	1138.1	1028.0	1039.5	1030.3	1016.5	1204.7
45°	1296.5	1307.9	1358.4	1422.7	1420.4	1271.2	1126.7	1129.0	1112.9	1085.4	1275.8
47.5°	1379.1	1388.3	1459.4	1539.7	1560.4	1422.7	1252.9	1243.7	1223.0	1179.4	1372.2
50°	1519.0	1523.6	1574.1	1668.2	1707.2	1590.2	1395.1	1379.1	1356.1	1301.1	1503.0
52.5°	1686.6	1684.3	1707.2	1805.9	1911.4	1785.2	1581.0	1558.1	1521.3	1450.2	1663.6
55°	1760.0	1766.9	1801.3	1920.6	2124.8	2069.8	1789.8	1757.7	1718.7	1626.9	1828.8
57.5°	1631.5	1631.5	1700.3	1888.5	2244.2	2446.1	2023.9	1973.4	1925.2	1808.2	2017.0
60°	1305.6	1303.4	1386.0	1613.1	2154.7	2774.2	2349.7	2198.3	2124.8	1968.8	2205.1
62.5°	915.6	897.2	933.9	1124.4	1764.6	2778.8	2957.8	2432.3	2333.6	2134.0	2404.8
65°	656.3	644.8	651.7	704.5	1011.9	2512.6	3630.1	2788.0	2611.3	2308.4	2645.7
67.5°	536.9	523.2	520.9	585.1	582.8	1663.6	3832.0	3490.1	3104.6	2563.1	2918.8
70°	429.1	422.2	419.9	511.7	539.2	541.5	3572.8	4990.8	4307.0	2941.7	3283.6
72.5°	305.2	305.2	323.5	424.5	523.2	475.0	2235.0	5277.7	5362.6	3425.9	3515.4
75°	183.6	181.3	227.2	337.3	504.8	458.9	690.7	4355.2	4433.2	3207.9	2719.1
77.5°	87.2	87.2	126.2	227.2	447.5	431.4	394.7	2604.4	2622.8	1948.1	1379.1
80°	34.4	34.4	55.1	140.0	339.6	426.8	367.1	1073.9	1034.9	536.9	190.5
82.5°	13.8	13.8	22.9	78.0	211.1	351.1	325.8	355.7	266.2	62.0	50.5
85°	2.3	4.6	9.2	45.9	119.3	185.9	263.9	220.3	140.0	36.7	36.7
87.5°	0.0	2.3	4.6	13.8	34.4	78.0	133.1	101.0	64.2	11.5	16.1
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: P459866

CATALOG NUMBER: NAV-SA5A-AMB-U-SL2-HSS

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1030.3	1030.3	1030.3	1030.3	1030.3	1030.3	1030.3	1030.3	1030.3	1030.3	1030.3
2.5°	1023.4	1028.0	1037.2	1041.8	1044.1	1034.9	1034.9	1025.7	1023.4	1023.4	1023.4
5°	1011.9	1021.1	1028.0	1011.9	986.7	954.6	917.9	894.9	872.0	876.6	867.4
7.5°	998.2	1009.6	1000.5	947.7	883.4	823.8	759.5	722.8	679.2	674.6	663.2
10°	977.5	989.0	954.6	862.8	764.1	676.9	582.8	525.5	479.6	442.9	433.7
12.5°	972.9	979.8	899.5	773.3	644.8	520.9	399.3	291.4	227.2	195.0	195.0
15°	975.2	975.2	849.0	683.8	516.3	344.2	192.7	140.0	117.0	114.7	112.4
17.5°	986.7	972.9	798.5	596.6	378.6	179.0	114.7	105.6	101.0	101.0	101.0
20°	1007.3	972.9	754.9	504.8	238.6	112.4	98.7	94.1	91.8	89.5	89.5
22.5°	1028.0	963.7	699.9	399.3	137.7	94.1	87.2	84.9	80.3	78.0	78.0
25°	1050.9	954.6	647.1	286.8	96.4	82.6	75.7	71.1	66.5	64.2	64.2
27.5°	1071.6	945.4	585.1	181.3	84.9	73.4	66.5	59.7	52.8	50.5	50.5
30°	1085.4	929.3	525.5	114.7	75.7	66.5	57.4	48.2	41.3	39.0	39.0
32.5°	1087.7	908.7	452.0	84.9	68.8	57.4	45.9	39.0	34.4	32.1	32.1
35°	1080.8	883.4	371.7	75.7	62.0	50.5	39.0	32.1	27.5	27.5	27.5
37.5°	1071.6	858.2	289.1	68.8	55.1	43.6	32.1	27.5	25.2	22.9	22.9
40°	1069.3	833.0	192.7	64.2	50.5	36.7	27.5	22.9	20.7	18.4	18.4
42.5°	1076.2	814.6	135.4	59.7	43.6	32.1	25.2	20.7	16.1	16.1	13.8
45°	1110.6	810.0	98.7	55.1	39.0	27.5	20.7	16.1	13.8	11.5	11.5
47.5°	1168.0	819.2	80.3	50.5	34.4	22.9	18.4	13.8	11.5	9.2	9.2
50°	1250.6	853.6	73.4	45.9	27.5	20.7	13.8	11.5	9.2	9.2	9.2
52.5°	1379.1	908.7	68.8	41.3	22.9	16.1	11.5	9.2	6.9	6.9	6.9
55°	1516.8	972.9	66.5	36.7	20.7	13.8	9.2	6.9	6.9	4.6	4.6
57.5°	1675.1	1057.8	62.0	32.1	18.4	13.8	9.2	6.9	4.6	4.6	4.6
60°	1874.7	1172.6	55.1	27.5	16.1	11.5	6.9	4.6	4.6	4.6	4.6
62.5°	2081.2	1291.9	48.2	22.9	13.8	9.2	6.9	4.6	4.6	4.6	4.6
65°	2333.6	1429.6	41.3	18.4	11.5	9.2	6.9	4.6	4.6	2.3	2.3
67.5°	2638.8	1569.5	32.1	16.1	11.5	6.9	6.9	4.6	4.6	2.3	2.3
70°	3028.9	1748.5	27.5	13.8	9.2	6.9	6.9	4.6	4.6	2.3	2.3
72.5°	3088.6	1509.9	22.9	13.8	9.2	6.9	6.9	4.6	4.6	2.3	2.3
75°	2111.1	720.5	20.7	11.5	9.2	9.2	6.9	4.6	4.6	2.3	2.3
77.5°	920.1	169.8	18.4	11.5	9.2	9.2	9.2	6.9	4.6	2.3	2.3
80°	107.8	32.1	16.1	11.5	9.2	11.5	9.2	6.9	4.6	2.3	2.3
82.5°	43.6	20.7	16.1	13.8	11.5	9.2	9.2	6.9	4.6	2.3	2.3
85°	32.1	16.1	16.1	16.1	11.5	6.9	6.9	4.6	4.6	2.3	2.3
87.5°	16.1	6.9	4.6	4.6	4.6	4.6	4.6	2.3	2.3	2.3	2.3
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)