

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: P270271

Luminaire Tested: **NAV-AF-01-D-UNV-SL2-7027-1200-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P270271  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24258)  
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-SL2-7027-1200-HSS  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(1) 70 CRI, 2700K, 1200mA LIGHTSQUARE 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: 4749.4 lumens  
Efficiency: N/A  
Efficacy: 70.9 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type II - Medium - Semi-Cutoff  
BUG Rating: B1 - U0 - G1

Input Watts (W): 67  
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

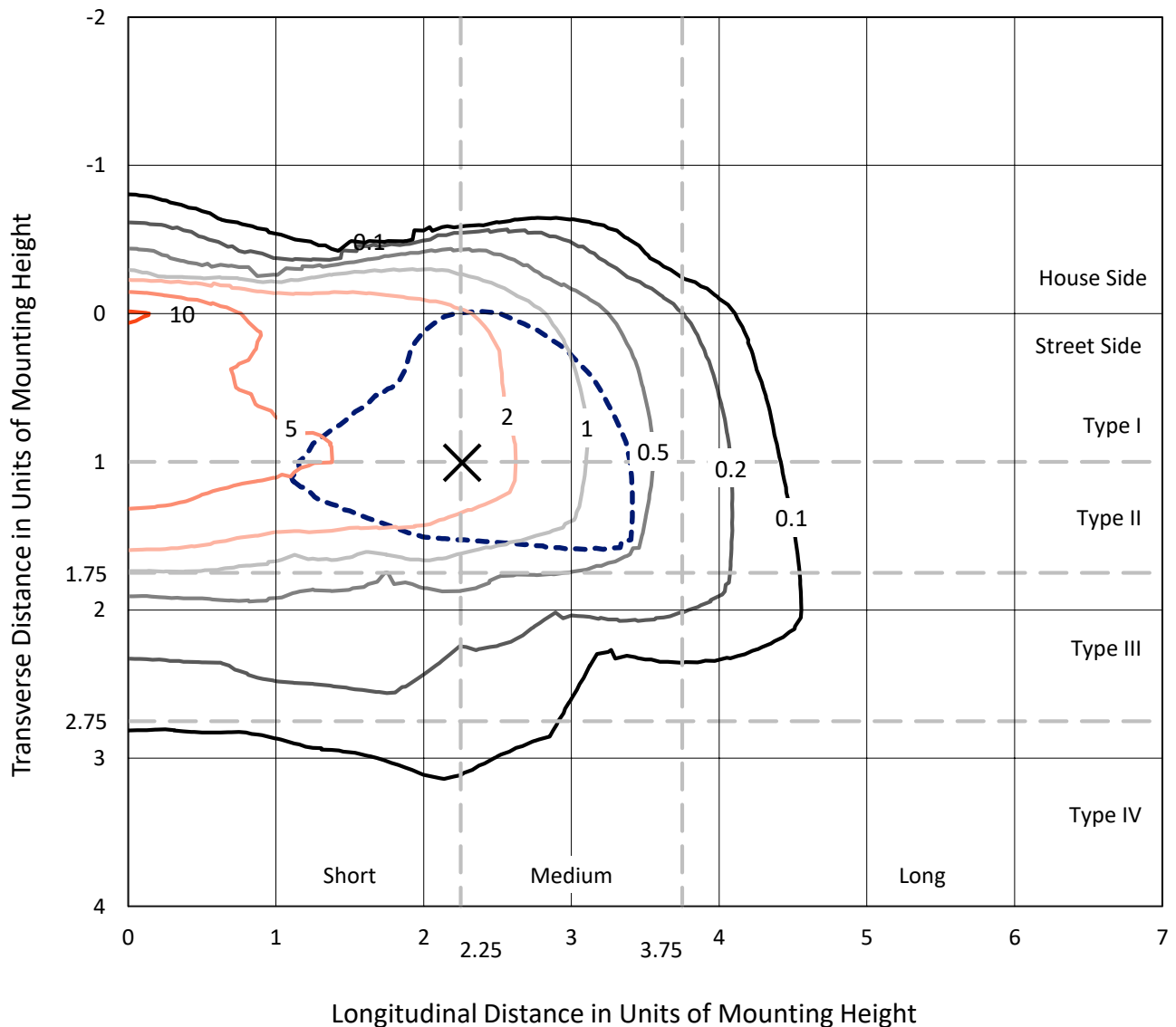


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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

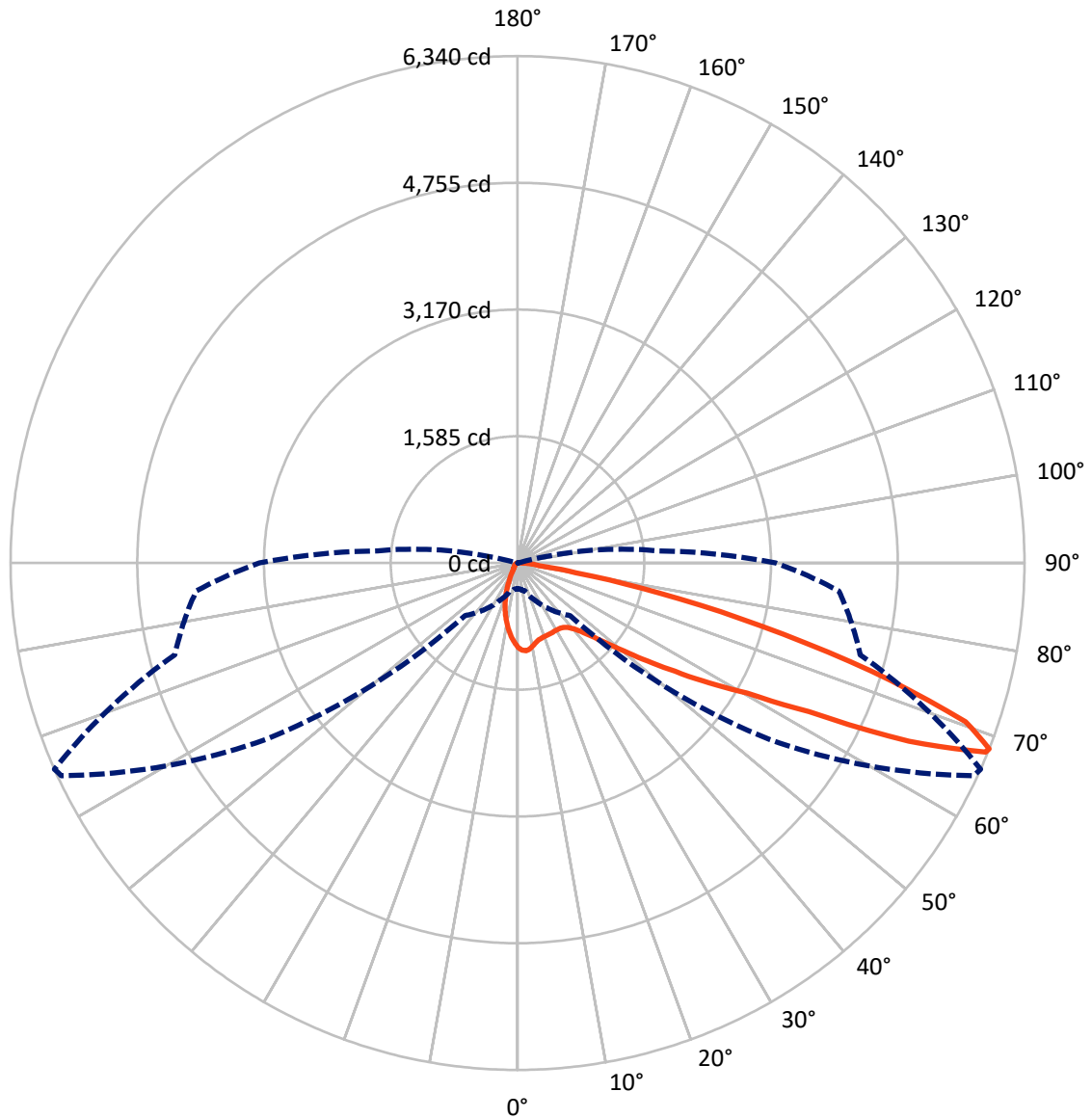


Based on 10 foot mounting height. Maximum calculated value = 10.6 fc  
 Type II - Medium - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 66-Deg Lateral      - - - Horizontal Cone Through 68-Deg Vertical

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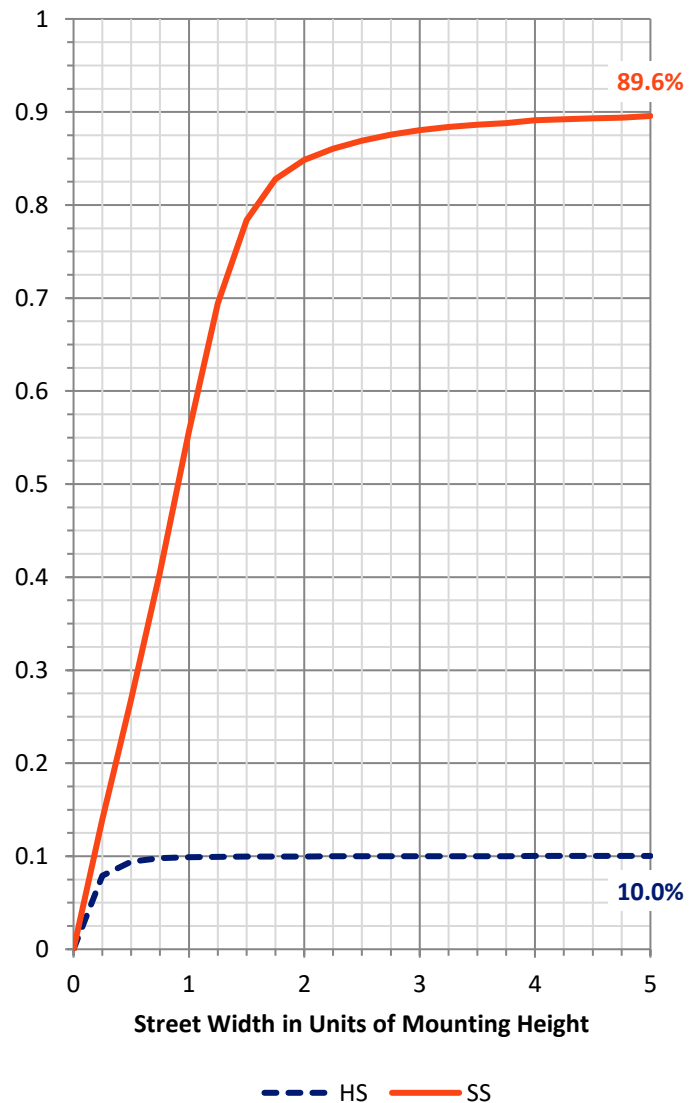
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	481.1	0.0	481.1
	% Fixture	10.1	0.0	10.1
<b>Street Side</b>	Lumens	4268.3	0.0	4268.3
	% Fixture	89.9	0.0	89.9
<b>Total</b>	Lumens	4749.4	0.0	4749.4
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	86.7	1.8
10°-20°	186.6	3.9
20°-30°	270.5	5.7
30°-40°	414.0	8.7
40°-50°	708.1	14.9
50°-60°	1107.7	23.3
60°-70°	1275.5	26.9
70°-80°	638.3	13.4
80°-90°	61.8	1.3
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°	4749.4	100.0
0°-180°	4749.4	100.0



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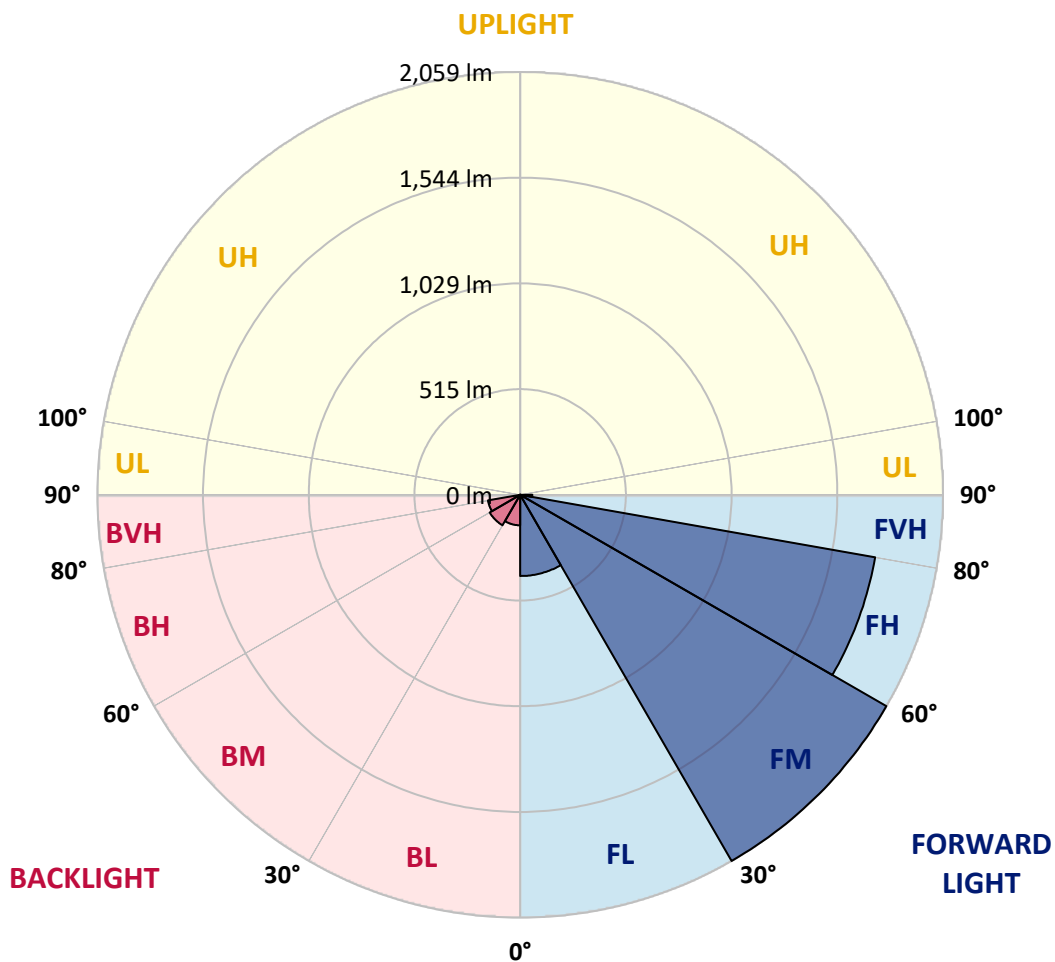
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	395.4	8.3			
FM	(30°-60°)	2058.6	43.3			
FH	(60°-80°)	1754.9	36.9			G1/1800
FVH	(80°-90°)	59.5	1.3			G1/100
BL	(0°-30°)	148.5	3.1	B1/500		
BM	(30°-60°)	171.3	3.6	B0/220		
BH	(60°-80°)	158.9	3.3	B1/500		G1/500
BVH	(80°-90°)	2.3	0.0			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 II Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	66°	75°	85°
0°	1058.2	1058.2	1058.2	1058.2	1058.2	1058.2	1058.2	1058.2	1058.2	1058.2	1058.2
2.5°	1112.9	1113.7	1113.3	1114.3	1113.7	1108.1	1102.1	1089.5	1090.5	1074.2	1055.9
5°	1034.7	1041.0	1047.3	1053.6	1069.0	1082.4	1098.4	1102.1	1102.1	1087.9	1061.1
7.5°	954.9	955.2	962.4	970.9	991.4	1016.1	1053.3	1086.8	1087.6	1091.4	1061.8
10°	894.8	896.7	901.4	910.8	931.4	955.5	997.4	1049.8	1054.0	1081.6	1054.4
12.5°	848.2	850.4	855.6	866.4	885.1	910.2	954.1	1014.1	1019.8	1072.2	1052.2
15°	812.3	815.4	819.6	830.4	850.4	876.9	925.1	990.2	996.9	1068.5	1059.2
17.5°	797.5	797.5	797.2	804.6	824.7	851.6	901.9	977.5	986.2	1071.6	1071.1
20°	803.9	802.7	794.9	793.1	805.3	832.2	883.7	969.5	979.2	1077.2	1085.7
22.5°	837.4	835.2	817.6	803.1	799.4	817.3	871.4	963.8	975.4	1088.7	1105.0
25°	908.6	901.9	877.6	844.9	815.4	813.5	862.7	960.7	973.1	1102.1	1126.4
27.5°	1001.2	999.3	960.5	916.5	859.8	825.8	860.1	958.6	970.9	1111.8	1143.5
30°	1116.0	1116.7	1071.9	1014.5	928.8	860.5	868.3	957.5	970.1	1112.6	1151.0
32.5°	1234.5	1235.2	1197.9	1136.4	1023.1	920.1	891.5	962.7	974.2	1109.5	1150.5
35°	1348.5	1349.7	1327.3	1277.7	1149.1	1003.0	935.0	980.6	988.8	1111.5	1149.8
37.5°	1492.9	1497.4	1469.7	1423.5	1307.2	1124.5	1006.3	1016.7	1023.4	1126.7	1155.4
40°	1738.8	1733.0	1653.9	1575.5	1478.7	1272.4	1109.1	1079.0	1081.2	1166.2	1176.7
42.5°	2025.7	2018.2	1882.8	1747.9	1655.0	1451.1	1240.7	1174.4	1174.1	1232.7	1223.0
45°	2272.4	2268.0	2125.6	1945.5	1850.4	1648.3	1403.1	1312.1	1307.6	1347.5	1307.2
47.5°	2447.7	2444.0	2336.2	2155.8	2076.3	1865.3	1605.5	1499.6	1490.3	1497.7	1444.0
50°	2464.8	2460.7	2423.1	2307.1	2340.4	2183.7	1855.5	1745.2	1733.3	1721.8	1650.9
52.5°	2304.5	2304.2	2323.9	2316.5	2525.2	2593.4	2162.5	2049.2	2035.0	2005.5	1934.9
55°	1976.8	1975.0	2049.8	2158.7	2521.2	3016.2	2630.3	2410.8	2392.1	2333.3	2240.7
57.5°	1444.4	1434.8	1591.3	1822.0	2344.0	3201.2	3373.4	2860.1	2829.1	2642.4	2500.0
60°	797.5	801.3	1002.6	1275.9	1924.6	3164.6	4057.3	3383.8	3302.6	2908.9	2765.3
62.5°	447.0	456.3	606.3	829.1	1227.1	2868.3	4424.2	4285.5	4089.7	3219.9	3100.9
65°	338.1	343.7	419.1	639.9	773.6	2004.4	4482.6	5546.0	5377.1	3691.1	3635.3
67.5°	318.4	322.9	359.9	530.5	704.7	1039.5	4042.0	6291.6	6312.8	4334.0	4049.0
68°	320.6	326.3	363.2	510.3	703.6	929.8	3854.1	6295.4	6340.4	4437.5	4034.8
70°	294.6	296.0	384.0	500.7	682.0	732.7	2788.1	5864.0	5945.0	4561.0	3662.7
72.5°	112.6	112.9	172.2	433.6	714.3	736.7	1404.5	4634.7	4638.8	3969.3	2855.6
75°	58.5	49.1	54.1	135.7	682.4	718.0	704.7	3164.6	3144.8	2684.4	1749.8
77.5°	40.2	34.2	36.1	47.0	283.8	717.7	508.9	1819.8	1815.7	1142.0	499.3
80°	22.7	19.8	21.6	39.5	99.5	673.6	474.2	782.2	737.1	200.6	80.8
82.5°	11.6	9.7	11.6	33.1	62.0	423.9	461.2	306.9	273.3	47.7	52.6
85°	3.0	3.0	5.6	23.1	38.4	139.1	413.5	221.4	199.2	20.9	37.3
87.5°	0.8	0.4	2.2	8.5	13.8	30.3	229.2	123.3	106.3	10.8	21.6
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°	1058.2	1058.2	1058.2	1058.2	1058.2	1058.2	1058.2	1058.2	1058.2	1058.2	1058.2
2.5°	1048.4	1038.0	1017.5	994.3	978.0	960.1	949.6	936.9	927.2	918.6	925.1
5°	1044.6	1024.5	979.2	927.9	885.1	844.0	813.5	784.5	762.4	748.6	754.2
7.5°	1034.9	1005.2	931.4	851.6	781.4	715.5	661.8	613.7	576.4	556.3	562.6
10°	1018.6	976.5	877.3	766.6	668.5	575.3	495.5	423.9	369.8	344.5	350.5
12.5°	1006.7	951.1	821.4	684.5	555.5	423.2	317.3	235.3	193.1	167.8	170.0
15°	1001.4	931.4	769.2	598.0	432.2	271.7	171.4	124.1	109.7	104.5	104.7
17.5°	1002.1	915.7	719.6	508.3	307.6	156.2	105.1	94.7	92.4	91.4	91.4
20°	1004.0	900.0	668.1	414.6	196.9	100.7	87.7	84.4	83.2	81.7	82.0
22.5°	1009.7	888.2	616.2	320.6	121.2	82.0	77.6	74.6	72.8	70.4	70.8
25°	1018.1	879.1	565.3	230.8	85.3	71.5	67.6	63.4	60.0	57.4	57.9
27.5°	1023.4	866.4	510.7	157.4	70.8	62.6	57.0	51.5	47.7	45.5	45.2
30°	1019.8	845.9	449.0	103.2	62.6	54.1	47.3	41.1	37.3	35.5	35.5
32.5°	1009.7	819.6	380.7	75.3	55.5	46.6	38.4	32.8	30.3	29.0	29.5
35°	998.0	791.9	307.9	63.8	49.9	39.5	31.4	26.9	25.7	25.3	25.3
37.5°	991.8	768.1	238.2	57.9	44.7	32.8	25.7	23.1	22.0	22.0	22.0
40°	998.8	749.7	176.3	53.3	39.5	27.2	21.6	19.8	19.5	19.5	19.5
42.5°	1029.1	743.4	128.9	49.5	34.2	22.7	18.7	17.2	16.8	17.2	17.2
45°	1087.9	757.2	97.6	45.9	29.5	18.7	16.0	14.9	14.9	15.4	15.4
47.5°	1187.9	792.7	80.2	42.1	24.7	15.7	13.8	13.0	13.0	13.5	13.5
50°	1343.0	858.3	72.0	38.0	20.5	13.5	11.6	11.1	11.1	11.6	11.9
52.5°	1578.6	983.1	67.8	34.0	16.8	11.1	9.7	9.3	9.7	10.2	10.2
55°	1840.6	1143.2	63.1	29.9	14.2	9.3	7.8	7.8	8.3	9.0	9.0
57.5°	2085.0	1297.5	58.5	24.7	12.2	7.5	6.4	6.4	7.0	7.8	7.8
60°	2342.9	1448.8	52.6	19.8	10.4	6.0	5.2	5.2	6.4	7.0	7.5
62.5°	2661.7	1624.9	44.7	15.7	8.3	4.5	3.8	4.9	6.0	7.0	7.0
65°	3122.5	1843.7	35.0	12.2	6.4	3.4	3.0	4.5	5.6	6.6	7.0
67.5°	3290.0	1815.7	26.5	10.2	4.9	2.6	2.6	4.1	5.6	6.6	6.6
68°	3228.8	1754.6	25.3	9.7	4.5	2.6	2.6	4.1	5.6	6.6	6.6
70°	2813.4	1434.4	20.9	7.5	3.8	2.2	2.2	3.8	5.6	6.4	6.6
72.5°	2106.5	953.0	17.8	4.9	3.4	2.2	1.8	3.8	5.2	6.4	6.4
75°	1208.4	395.6	15.4	3.8	3.0	1.8	1.8	3.4	5.2	6.4	6.4
77.5°	341.5	92.4	12.2	3.0	2.6	1.8	1.4	3.4	4.9	6.0	6.0
80°	62.6	27.6	9.7	2.6	2.2	1.8	1.4	3.4	4.9	6.0	6.0
82.5°	41.4	13.0	7.0	2.6	2.2	1.8	1.4	3.0	4.5	5.6	5.6
85°	30.9	9.3	4.5	2.6	2.2	1.8	1.4	3.0	4.5	5.6	5.6
87.5°	17.2	4.1	3.4	3.0	2.6	1.8	1.4	2.6	4.1	5.2	5.2
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)