

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: P270257

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270257
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24283)
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-AFL-7027-800-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 2700K, 800mA LIGHTSQUARE WITH 16 LEDS EACH AND AUTOMOTIVE FRONTLINE OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3599.1 lumens
Efficiency: N/A
Efficacy: 81.8 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type II - Short - Full Cutoff
BUG Rating: B0 - U0 - G0

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

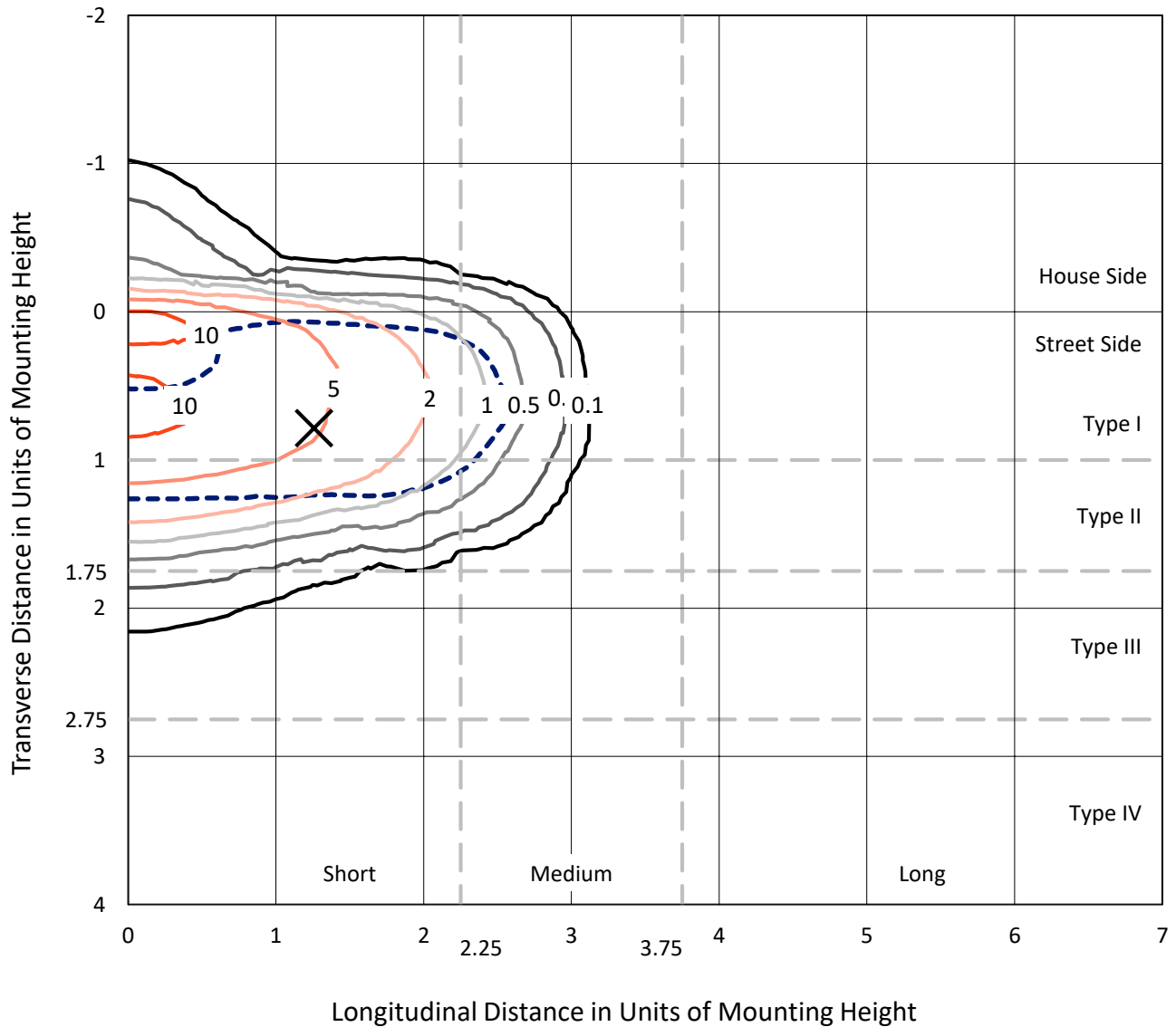


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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

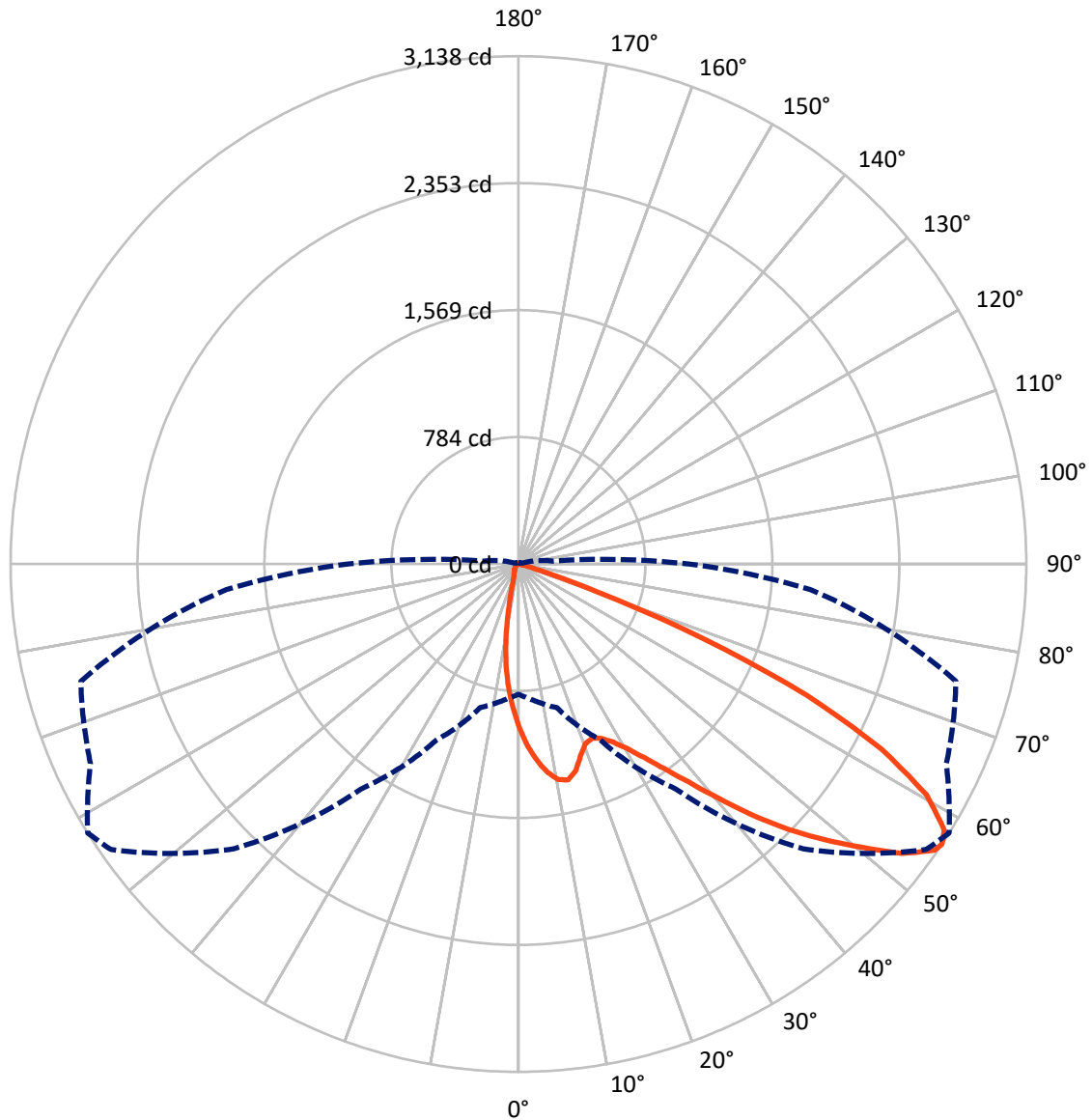


Based on 10 foot mounting height. Maximum calculated value = 12.7 fc
 Type II - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral - - - Horizontal Cone Through 56-Deg Vertical

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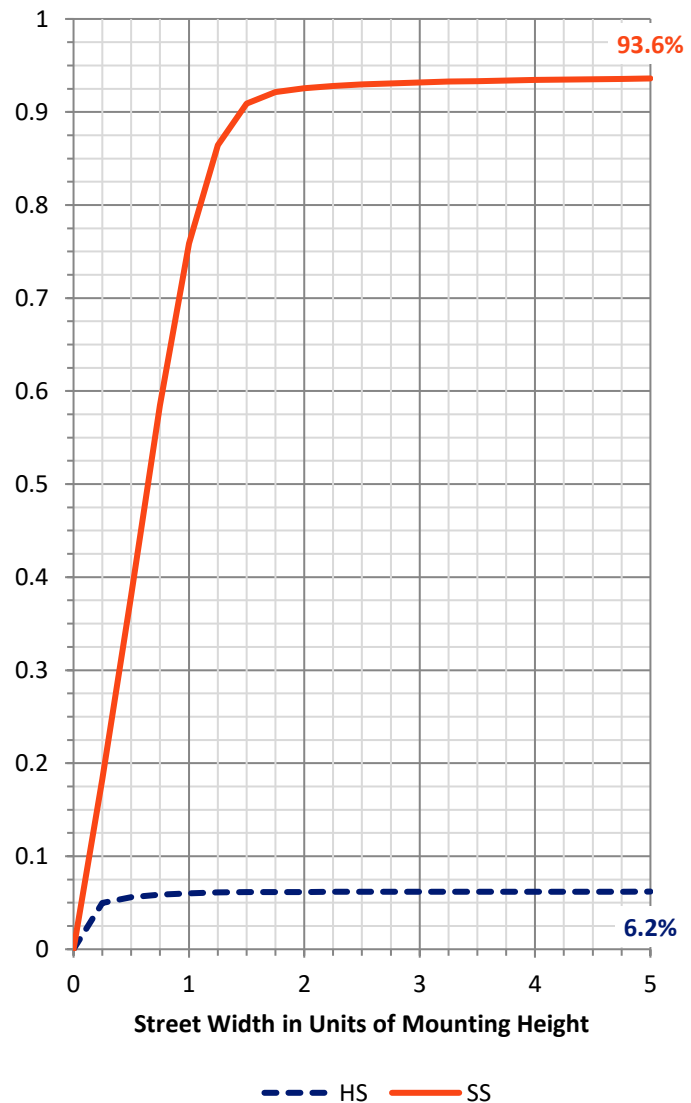
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	224.7	0.0	224.7
	% Fixture	6.2	0.0	6.2
Street Side	Lumens	3374.4	0.0	3374.4
	% Fixture	93.8	0.0	93.8
Total	Lumens	3599.1	0.0	3599.1
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	86.9	2.4
10°-20°	202.3	5.6
20°-30°	340.3	9.5
30°-40°	582.8	16.2
40°-50°	879.5	24.4
50°-60°	914.2	25.4
60°-70°	513.2	14.3
70°-80°	70.3	2.0
80°-90°	9.5	0.3
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°	3599.1	100.0
0°-180°	3599.1	100.0

Coefficient of Utilization



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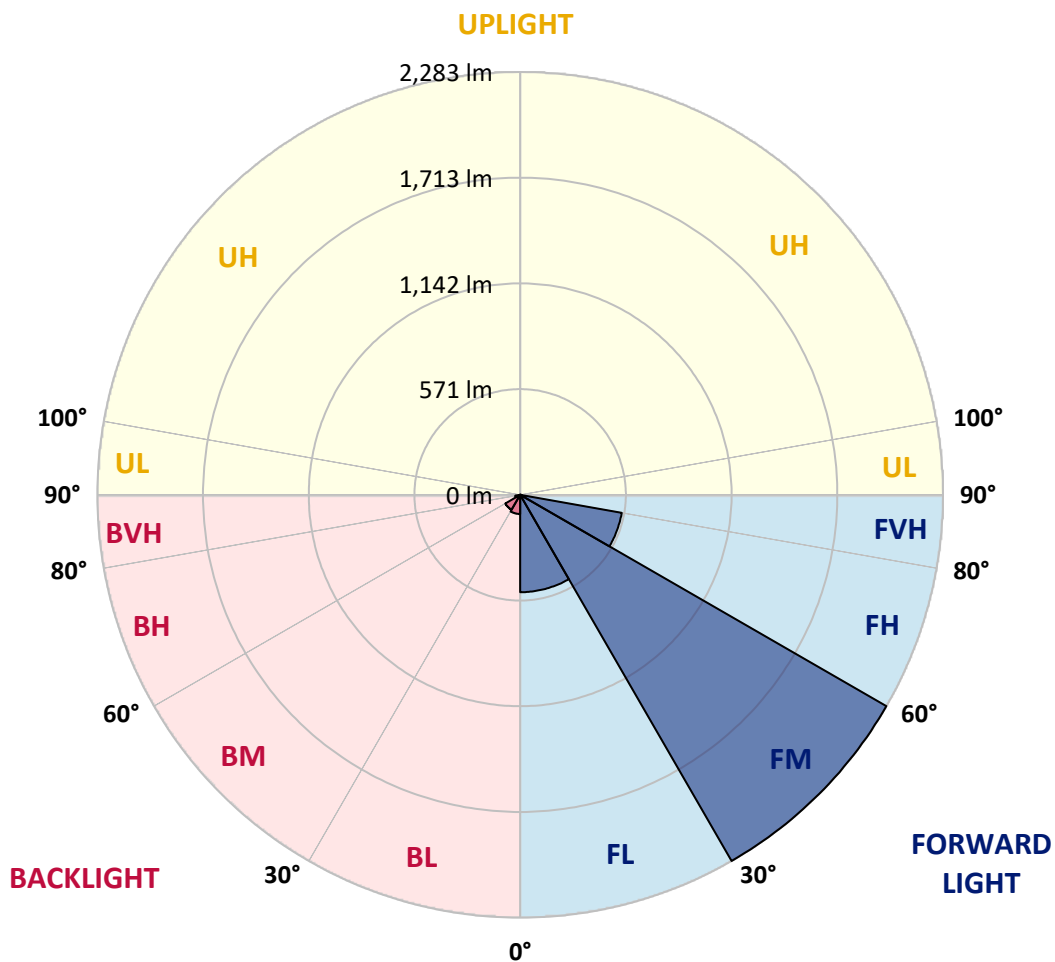
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	525.9	14.6			
FM	(30°-60°)	2283.4	63.4			
FH	(60°-80°)	556.9	15.5			G0/660
FVH	(80°-90°)	8.2	0.2			G0/10
BL	(0°-30°)	103.6	2.9	B0/110		
BM	(30°-60°)	93.1	2.6	B0/220		
BH	(60°-80°)	26.7	0.7	B0/110		G0/110
BVH	(80°-90°)	1.3	0.0			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B0-U0-G0

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	1018.9	1018.9	1018.9	1018.9	1018.9	1018.9	1018.9	1018.9	1018.9	1018.9	1018.9
2.5°	1226.0	1218.6	1210.9	1196.7	1183.4	1163.1	1135.2	1128.4	1106.4	1070.2	1036.4
5°	1331.7	1330.4	1325.2	1313.6	1299.4	1274.7	1243.1	1222.0	1187.9	1130.7	1065.7
7.5°	1269.1	1280.8	1299.7	1326.5	1344.7	1342.2	1318.1	1299.7	1265.9	1187.9	1094.6
10°	1069.8	1071.9	1098.1	1154.6	1244.2	1327.7	1359.2	1354.3	1323.3	1237.9	1119.7
12.5°	999.5	1000.9	1006.9	1025.1	1083.3	1199.6	1342.7	1368.6	1366.1	1285.7	1146.6
15°	1005.1	1005.8	1007.4	1013.3	1029.6	1088.1	1259.2	1324.9	1393.5	1331.0	1173.0
17.5°	1048.4	1047.9	1042.7	1037.2	1042.4	1061.5	1174.2	1243.3	1387.8	1369.0	1194.7
20°	1132.9	1135.6	1118.1	1093.6	1081.1	1081.9	1132.1	1184.1	1355.5	1398.8	1210.9
22.5°	1251.9	1253.8	1225.0	1182.7	1145.6	1127.0	1140.9	1168.3	1318.1	1426.1	1224.1
25°	1393.8	1393.8	1353.4	1293.3	1236.0	1195.0	1183.0	1193.4	1303.8	1457.3	1237.3
27.5°	1547.1	1552.5	1499.8	1420.9	1345.2	1285.4	1247.4	1245.6	1314.8	1496.2	1252.1
30°	1713.7	1718.6	1656.0	1559.6	1469.8	1393.4	1335.2	1322.5	1356.8	1548.7	1273.8
32.5°	1879.6	1883.7	1814.4	1716.2	1611.6	1521.5	1445.0	1424.8	1432.3	1625.4	1305.6
35°	2090.4	2091.3	2003.7	1886.7	1775.1	1669.2	1572.4	1552.5	1544.2	1722.1	1351.5
37.5°	2258.2	2251.6	2196.1	2085.5	1957.2	1846.9	1732.9	1707.1	1687.3	1857.9	1422.6
40°	2297.8	2297.8	2289.5	2256.4	2154.4	2048.1	1937.9	1899.3	1855.7	2018.0	1518.2
42.5°	2194.7	2201.3	2255.7	2328.0	2328.9	2260.8	2152.8	2120.4	2043.6	2200.3	1622.6
45°	1964.5	1966.4	2096.7	2291.8	2424.0	2463.2	2383.5	2338.6	2232.2	2389.9	1718.1
47.5°	1881.5	1887.6	1943.0	2181.4	2431.3	2627.1	2604.7	2543.3	2406.7	2562.8	1807.4
50°	1754.1	1761.4	1829.3	2018.9	2366.9	2732.1	2816.5	2750.6	2565.7	2707.0	1851.5
52.5°	1449.2	1460.9	1556.7	1803.7	2206.3	2736.5	3010.4	2970.9	2728.6	2784.0	1846.3
55°	997.3	1005.8	1117.6	1408.2	1882.3	2602.3	3093.9	3121.0	2873.9	2801.4	1821.1
56°	804.5	836.4	918.2	1199.6	1697.7	2488.0	3074.5	3137.5	2916.9	2798.6	1810.2
57.5°	531.8	537.9	627.1	869.4	1363.4	2240.2	2987.9	3102.3	2972.4	2784.7	1802.2
60°	250.2	253.0	285.0	401.2	737.9	1632.5	2705.9	2895.9	2992.8	2755.2	1801.9
62.5°	163.1	163.6	167.5	191.3	301.8	889.1	2243.2	2516.6	2824.5	2752.0	1796.7
65°	134.2	135.6	131.1	133.9	157.9	335.2	1582.3	1962.0	2429.3	2674.6	1738.0
67.5°	118.3	118.7	112.3	108.8	115.6	147.2	797.2	1237.5	1817.0	2272.5	1431.4
70°	107.9	107.6	100.5	92.3	92.5	97.7	259.8	514.0	1005.3	1349.3	821.9
72.5°	95.8	96.4	92.3	80.8	76.8	69.2	97.7	138.7	342.2	433.3	216.6
75°	84.0	83.0	78.8	71.3	64.3	46.4	49.1	59.1	89.2	88.5	46.7
77.5°	63.7	62.6	64.5	60.9	50.2	32.3	26.9	30.7	40.3	37.5	19.0
80°	48.6	48.1	43.9	52.2	45.9	24.4	18.3	19.0	22.0	20.0	9.3
82.5°	35.2	34.9	33.2	32.1	29.1	17.8	14.1	14.8	16.4	14.1	6.8
85°	13.5	13.5	26.1	22.0	20.0	12.0	9.9	10.7	12.7	10.2	4.8
87.5°	2.2	2.2	17.5	14.6	9.1	6.1	6.3	6.8	7.5	6.1	3.6
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°	1018.9	1018.9	1018.9	1018.9	1018.9	1018.9	1018.9	1018.9	1018.9	1018.9	1018.9
2.5°	1016.3	997.8	957.6	918.4	884.4	847.1	828.1	806.1	798.0	781.4	783.1
5°	1026.8	988.2	907.3	821.9	743.5	663.9	607.4	554.2	524.5	495.1	495.1
7.5°	1037.5	978.7	853.4	716.9	585.2	448.7	352.0	274.6	231.5	202.7	201.8
10°	1044.8	966.2	792.1	595.2	401.0	231.3	139.4	109.9	99.2	94.4	94.2
12.5°	1054.4	953.9	722.4	451.9	222.7	109.9	87.0	82.4	80.5	79.4	79.4
15°	1062.7	936.4	637.8	303.9	117.0	82.4	75.0	73.3	73.0	72.8	73.0
17.5°	1064.6	911.4	536.6	178.0	84.8	72.0	68.6	67.3	67.3	67.1	67.1
20°	1060.2	878.5	424.4	109.9	73.3	66.1	62.6	60.9	60.6	60.6	60.6
22.5°	1051.1	836.4	313.9	83.3	66.7	60.9	56.4	54.6	54.6	54.9	55.2
25°	1039.9	786.7	215.6	71.7	61.8	55.4	50.8	49.1	49.6	50.2	50.6
27.5°	1025.7	727.4	141.2	62.1	55.2	49.9	45.9	44.7	45.9	46.9	47.5
30°	1011.3	662.3	95.6	53.8	47.8	43.9	41.4	41.2	42.8	45.4	45.5
32.5°	1002.0	595.5	72.3	48.2	42.0	38.6	37.5	38.2	40.7	43.4	43.9
35°	1001.3	530.4	61.5	43.9	38.2	35.2	34.7	36.2	38.9	41.2	41.7
37.5°	1014.0	469.5	55.8	40.7	35.2	32.1	31.4	34.3	36.8	38.9	39.5
40°	1040.1	414.8	51.9	37.5	32.7	29.1	28.6	31.0	33.4	36.0	36.8
42.5°	1072.8	363.9	47.5	34.7	30.0	25.8	25.2	27.2	29.6	33.2	33.7
45°	1101.1	316.4	42.8	31.4	26.9	22.3	22.0	24.2	26.1	29.4	30.0
47.5°	1124.9	276.8	38.4	27.8	23.0	19.8	19.6	20.7	21.6	24.8	25.2
50°	1112.5	243.4	34.0	22.7	18.7	17.0	16.8	16.8	18.1	21.1	21.6
52.5°	1081.3	222.4	30.0	19.0	15.5	14.6	13.7	14.1	15.5	16.8	17.0
55°	1056.3	212.4	26.4	16.8	12.8	12.0	11.3	11.0	11.3	10.7	10.2
56°	1050.3	211.5	25.5	16.2	12.3	11.3	10.2	9.6	9.3	8.3	7.9
57.5°	1047.6	211.5	24.2	15.1	11.6	10.2	8.9	7.6	6.6	5.7	5.7
60°	1045.4	212.8	22.5	13.1	9.9	8.3	6.3	4.8	3.9	3.9	3.9
62.5°	1040.6	212.3	20.7	11.0	8.5	6.3	3.9	3.1	2.8	3.1	3.4
65°	988.2	197.2	18.1	8.9	6.6	4.4	2.2	2.2	2.4	3.1	3.4
67.5°	796.3	149.4	14.8	6.8	4.8	3.4	1.9	1.9	2.4	3.1	3.4
70°	437.5	78.8	12.7	4.9	3.6	2.8	1.9	1.6	2.4	3.1	3.4
72.5°	106.8	33.0	11.6	3.9	3.4	2.4	1.6	1.6	2.4	3.1	3.4
75°	26.4	24.8	9.3	3.1	2.8	2.2	1.6	1.6	2.4	3.1	3.4
77.5°	12.3	32.7	6.3	2.8	2.4	1.9	1.6	1.6	2.4	3.1	3.1
80°	7.5	24.8	3.9	2.4	2.2	1.9	1.6	1.6	2.4	3.1	3.4
82.5°	4.4	7.1	2.8	2.4	2.2	1.6	1.6	1.6	2.4	3.1	3.4
85°	3.9	3.6	2.8	2.4	2.2	1.9	1.6	1.6	2.8	3.4	3.4
87.5°	3.1	2.8	2.4	2.2	2.2	1.9	1.6	1.6	2.4	3.1	3.4
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)