

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: P196045

Luminaire Tested: **NAV-AF-01-D-UNV-RW**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196045
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24161)
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-RW
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 4000K, 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND RECTANGULAR WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6386.3 lumens
Efficiency: N/A
Efficacy: 108.2 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type II - Medium - Full Cutoff
BUG Rating: B3 - U0 - G3

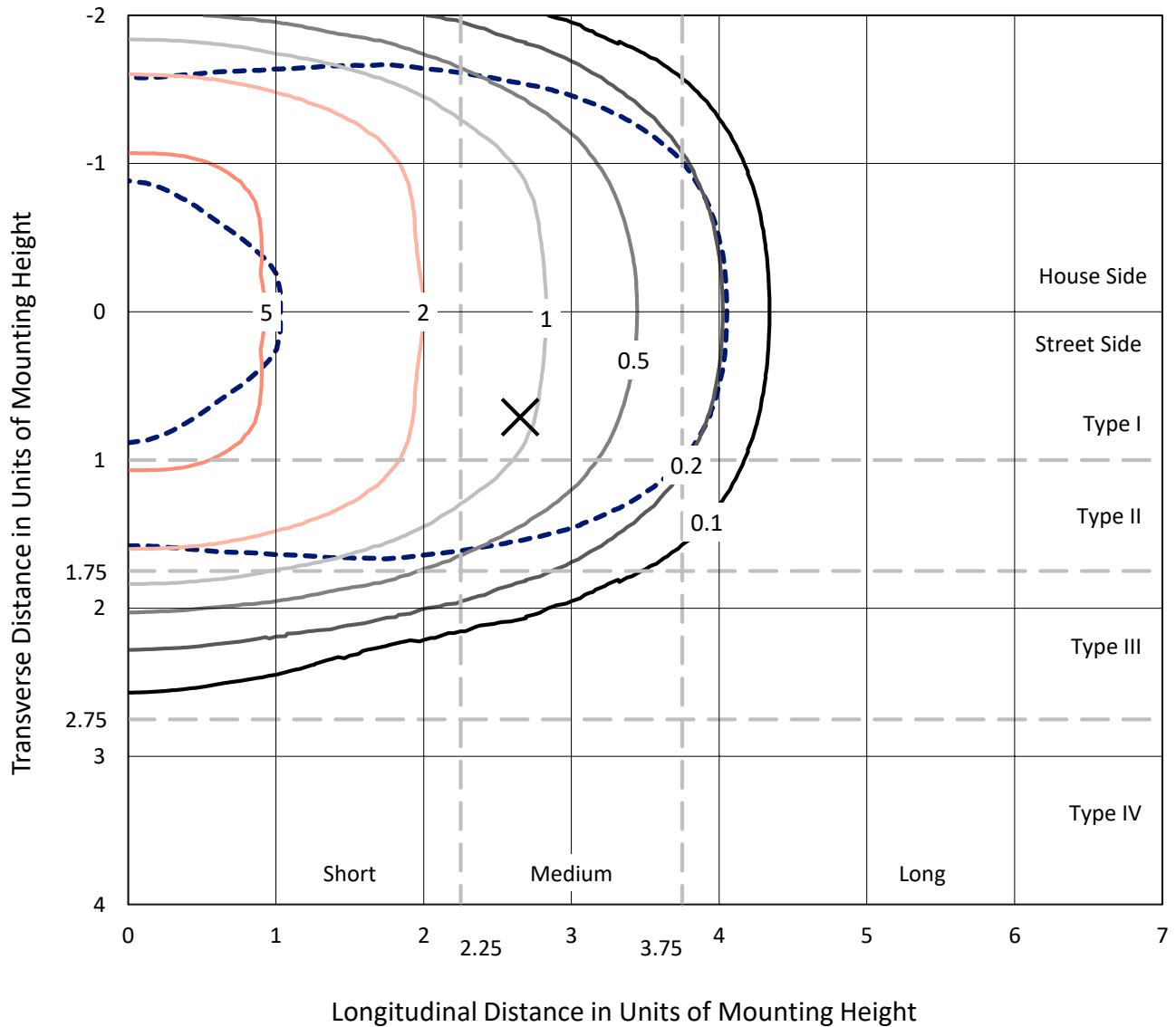
Input Watts (W): 59
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P196045
 CATALOG NUMBER: NAV-AF-01-D-UNV-RW

Iso-Footcandle Lines of Horizontal Illumination

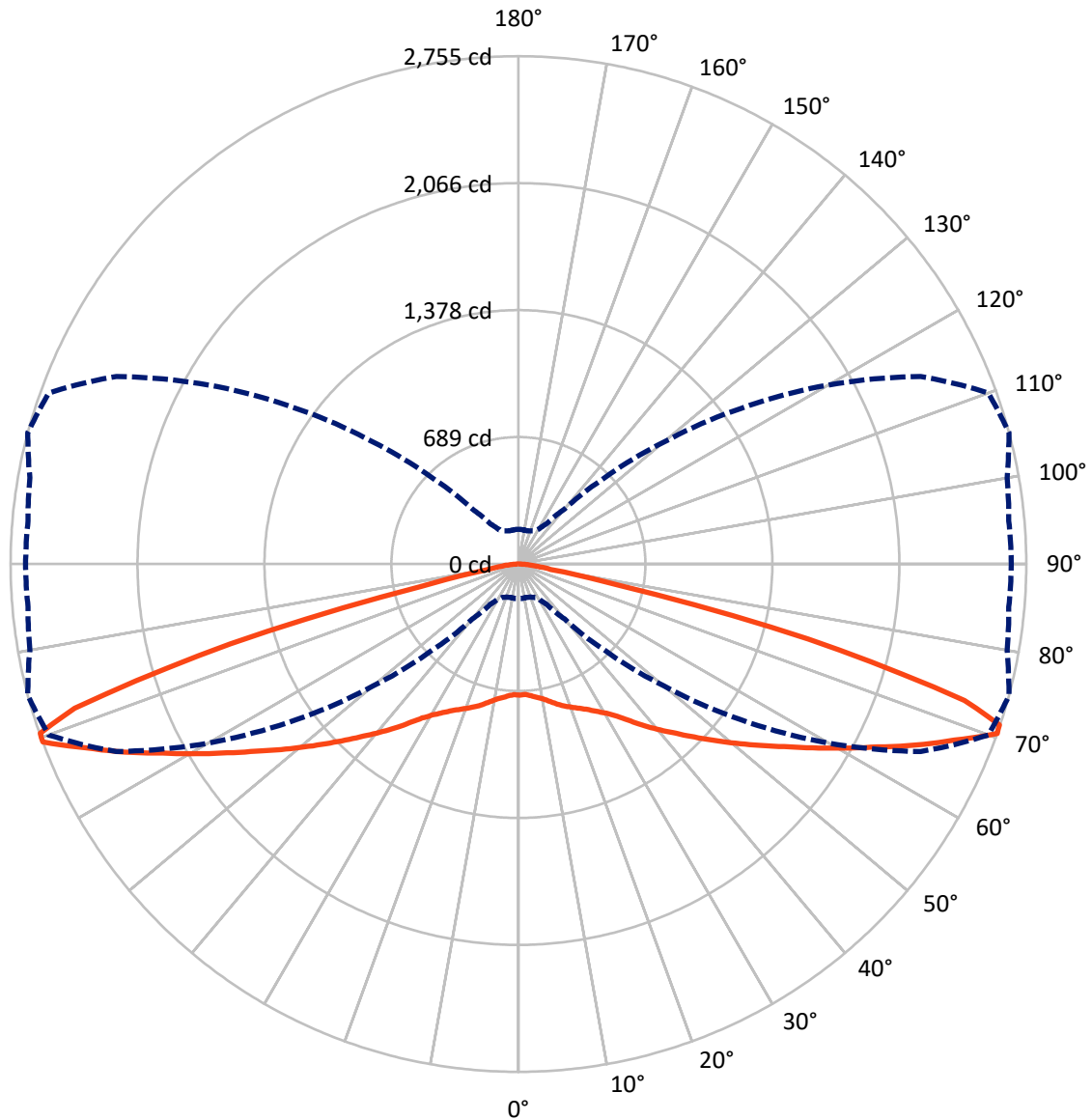
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 7.2 fc
 Type II - Medium - Full Cutoff

REPORT NUMBER: P196045
CATALOG NUMBER: NAV-AF-01-D-UNV-RW

Luminous Intensity Polar Plot



— Vertical Plane Through 75-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

REPORT NUMBER: P196045

CATALOG NUMBER: NAV-AF-01-D-UNV-RW

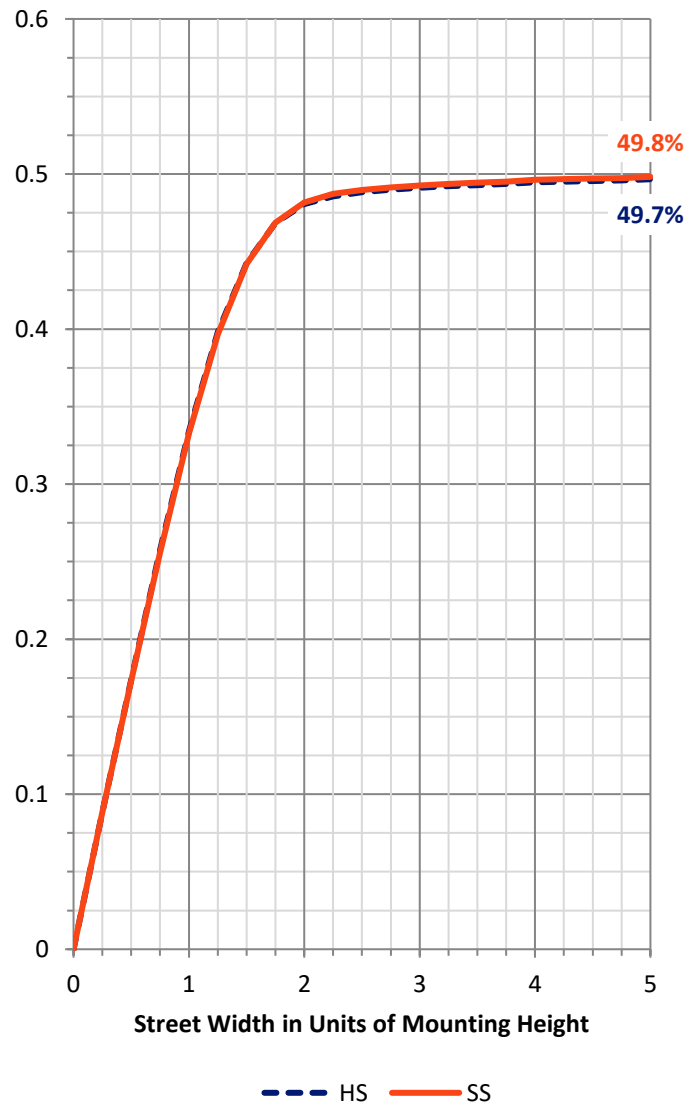
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3193.1	0.0	3193.1
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	3193.1	0.0	3193.1
	% Fixture	50.0	0.0	50.0
Total	Lumens	6386.3	0.0	6386.3
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	68.2	1.1
10°-20°	211.6	3.3
20°-30°	397.3	6.2
30°-40°	699.9	11.0
40°-50°	1160.0	18.2
50°-60°	1613.7	25.3
60°-70°	1523.4	23.9
70°-80°	650.7	10.2
80°-90°	61.5	1.0
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°	6386.3	100.0
0°-180°	6386.3	100.0



REPORT NUMBER: P196045

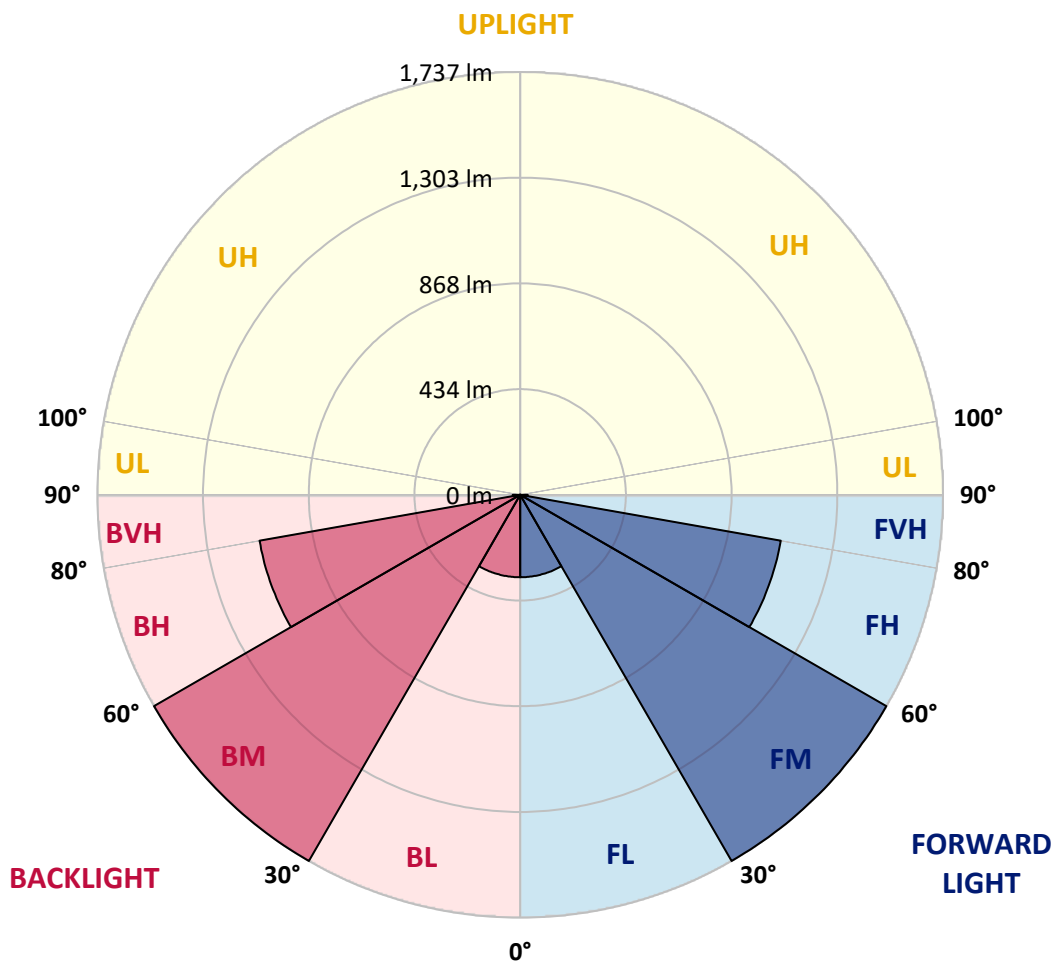
CATALOG NUMBER: NAV-AF-01-D-UNV-RW

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	338.6	5.3			
FM	(30°-60°)	1736.8	27.2			
FH	(60°-80°)	1087.0	17.0			G1/1800
FVH	(80°-90°)	30.7	0.5			G1/100
BL	(0°-30°)	338.6	5.3	B1/500		
BM	(30°-60°)	1736.8	27.2	B2/2500		
BH	(60°-80°)	1087.0	17.0	B3/2500		G3/2500
BVH	(80°-90°)	30.7	0.5			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G3

Type II Medium





REPORT NUMBER: P196045

CATALOG NUMBER: NAV-AF-01-D-UNV-RW

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	711.2	711.2	711.2	711.2	711.2	711.2	711.2	711.2	711.2	711.2	711.2
2.5°	715.6	715.1	715.6	714.3	714.7	714.3	714.3	712.8	712.8	712.0	710.7
5°	707.6	708.4	708.4	708.4	709.6	709.6	711.2	711.6	712.8	714.0	714.7
7.5°	694.4	694.8	696.0	696.7	699.2	702.4	705.5	709.2	712.4	716.4	720.8
10°	683.1	683.9	686.0	687.9	692.3	696.3	701.9	707.6	713.2	720.0	726.8
12.5°	677.2	678.3	681.6	684.8	691.5	696.7	704.4	713.2	720.8	727.2	734.8
15°	677.9	678.3	682.7	687.1	696.7	704.0	714.7	725.2	734.4	741.6	750.4
17.5°	689.6	690.4	694.8	701.1	710.3	719.5	731.2	741.9	754.4	762.8	773.2
20°	712.4	713.6	718.4	725.2	735.2	744.8	756.8	768.0	780.8	790.8	801.2
22.5°	741.9	744.0	749.2	757.6	767.6	779.2	791.7	803.2	815.2	825.2	834.0
25°	781.6	784.0	789.6	798.0	808.0	820.4	833.2	845.3	857.6	865.2	872.5
27.5°	834.8	838.8	844.9	851.6	860.4	873.7	885.7	895.7	907.7	916.1	920.9
30°	906.4	912.1	916.9	924.1	930.5	944.5	954.1	962.1	971.3	976.1	977.3
32.5°	994.1	999.3	1004.1	1009.3	1018.1	1030.9	1040.1	1044.5	1049.3	1048.5	1044.1
35°	1093.0	1097.0	1099.8	1109.0	1123.4	1131.8	1138.6	1140.2	1141.0	1132.6	1124.2
37.5°	1197.1	1201.9	1204.2	1218.6	1232.2	1241.9	1245.0	1248.6	1246.3	1232.2	1217.0
40°	1309.5	1314.7	1321.9	1334.3	1350.3	1359.5	1363.5	1363.1	1361.1	1344.7	1319.9
42.5°	1420.0	1426.4	1432.3	1453.9	1467.2	1482.8	1484.8	1484.4	1480.0	1461.2	1432.3
45°	1513.6	1521.2	1533.6	1557.6	1578.8	1597.6	1605.2	1608.1	1603.7	1583.6	1550.8
47.5°	1590.8	1596.0	1611.7	1640.9	1668.1	1695.6	1710.9	1721.7	1721.3	1706.9	1672.1
50°	1643.7	1649.7	1668.8	1701.7	1735.7	1768.2	1798.1	1822.6	1834.2	1823.7	1791.4
52.5°	1658.9	1666.5	1691.7	1730.9	1770.5	1814.2	1859.0	1902.2	1928.3	1934.6	1909.4
55°	1594.9	1603.3	1640.1	1694.5	1759.7	1824.1	1892.2	1953.8	2007.4	2032.3	2022.3
57.5°	1408.3	1414.3	1461.2	1531.6	1624.9	1738.1	1852.6	1965.4	2057.5	2121.9	2133.2
60°	1113.8	1121.4	1172.6	1247.1	1353.2	1496.4	1656.5	1841.4	2021.9	2169.6	2242.8
62.5°	751.6	756.8	806.0	874.1	990.1	1128.2	1306.7	1540.8	1798.1	2061.9	2268.4
65°	394.7	394.7	427.8	475.5	567.9	691.5	874.4	1114.6	1420.8	1750.2	2095.5
67.5°	228.9	228.5	236.1	246.9	276.1	326.2	427.0	603.5	893.2	1276.6	1669.7
70°	188.9	187.7	186.5	186.5	190.9	198.6	217.7	266.2	389.4	658.4	1027.3
71°	180.4	179.7	176.5	175.3	177.3	181.3	189.7	212.2	276.5	449.1	767.2
72.5°	170.5	168.5	163.7	161.7	162.0	163.7	166.1	174.9	194.5	255.3	437.4
75°	155.3	150.5	144.4	141.7	140.5	140.0	140.0	142.5	146.9	154.1	179.3
77.5°	137.7	130.8	124.5	121.6	119.7	118.5	117.6	116.1	115.3	118.5	127.7
80°	116.4	109.3	104.0	102.5	101.3	98.8	95.6	92.5	90.4	92.1	97.7
82.5°	90.0	82.9	83.7	84.1	82.0	78.1	74.9	71.2	67.6	66.8	69.7
85°	71.6	68.0	65.7	70.8	66.4	61.6	57.2	51.2	42.9	35.2	38.5
87.5°	30.8	31.2	44.8	67.6	59.2	47.7	39.6	32.0	20.5	15.2	15.7
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: P196045

CATALOG NUMBER: NAV-AF-01-D-UNV-RW

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	711.2	711.2	711.2	711.2	711.2	711.2	711.2	711.2
2.5°	710.3	710.3	709.2	708.4	708.4	708.4	707.6	708.0
5°	715.1	716.0	716.8	716.4	717.6	718.8	718.4	718.0
7.5°	723.2	725.6	728.0	729.2	730.8	732.4	732.7	731.6
10°	731.2	736.0	739.6	742.8	744.8	746.3	747.6	747.2
12.5°	741.2	748.0	754.4	760.8	765.2	767.6	770.0	769.2
15°	757.6	765.2	773.2	781.6	788.4	792.0	795.7	794.8
17.5°	780.0	786.9	793.2	801.6	810.1	814.1	818.1	817.6
20°	808.0	813.2	816.8	821.6	829.6	834.0	837.6	836.5
22.5°	840.0	841.7	842.1	843.6	850.1	855.3	860.1	861.2
25°	874.8	873.7	871.2	870.0	874.4	880.0	886.1	887.7
27.5°	918.1	914.1	908.1	903.3	904.5	911.7	918.5	920.0
30°	972.5	963.3	950.5	941.3	939.7	947.3	954.5	956.9
32.5°	1034.5	1022.1	1004.5	990.5	984.5	991.3	997.7	1001.4
35°	1108.2	1094.6	1073.4	1055.4	1045.8	1050.2	1061.3	1065.4
37.5°	1195.4	1176.6	1153.0	1130.2	1114.2	1115.0	1127.0	1131.8
40°	1291.9	1264.7	1234.7	1206.3	1183.0	1181.4	1192.2	1195.8
42.5°	1392.3	1357.6	1322.3	1285.0	1256.3	1251.1	1265.1	1265.5
45°	1500.4	1455.6	1412.0	1368.7	1338.7	1329.5	1343.1	1344.7
47.5°	1615.6	1559.6	1508.0	1461.2	1428.8	1414.3	1427.5	1430.0
50°	1735.7	1677.6	1617.7	1565.6	1527.6	1510.0	1525.6	1527.2
52.5°	1854.6	1799.8	1740.1	1680.5	1634.5	1614.4	1632.8	1638.5
55°	1974.2	1921.4	1865.4	1805.7	1747.7	1730.1	1750.2	1756.1
57.5°	2098.7	2047.8	1997.0	1937.1	1880.6	1853.8	1875.4	1883.8
60°	2236.0	2191.2	2143.1	2082.7	2027.1	1995.9	2014.3	2023.9
62.5°	2370.9	2361.7	2318.0	2255.2	2184.7	2153.5	2169.2	2175.9
65°	2382.0	2531.3	2529.3	2466.9	2368.4	2316.1	2320.5	2323.6
67.5°	2079.0	2421.6	2640.5	2660.2	2550.5	2468.5	2458.9	2460.9
70°	1472.0	1942.2	2406.9	2711.8	2755.0	2691.4	2670.6	2673.8
71°	1179.5	1666.5	2178.0	2588.2	2751.8	2733.4	2721.9	2730.3
72.5°	752.8	1227.8	1725.7	2216.3	2530.6	2620.6	2633.8	2639.0
75°	273.3	528.3	894.1	1281.0	1623.6	1859.4	1989.0	1999.5
77.5°	146.9	189.3	292.6	437.0	549.1	609.2	616.3	619.1
80°	108.0	125.3	143.3	163.7	176.5	178.9	174.5	165.3
82.5°	76.4	86.4	93.6	100.9	106.1	101.7	84.4	64.4
85°	44.4	48.8	52.8	56.5	57.2	54.0	35.6	29.3
87.5°	17.6	19.2	18.8	21.2	20.5	18.8	14.0	12.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)