

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: P196304

Luminaire Tested: **NAV-AF-02-D-UNV-T3-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196304
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (p24135)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-02-D-UNV-T3-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 4000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10069.9 lumens
Efficiency: N/A
Efficacy: 118.5 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type III - Short - Semi-Cutoff
BUG Rating: B2 - U0 - G2

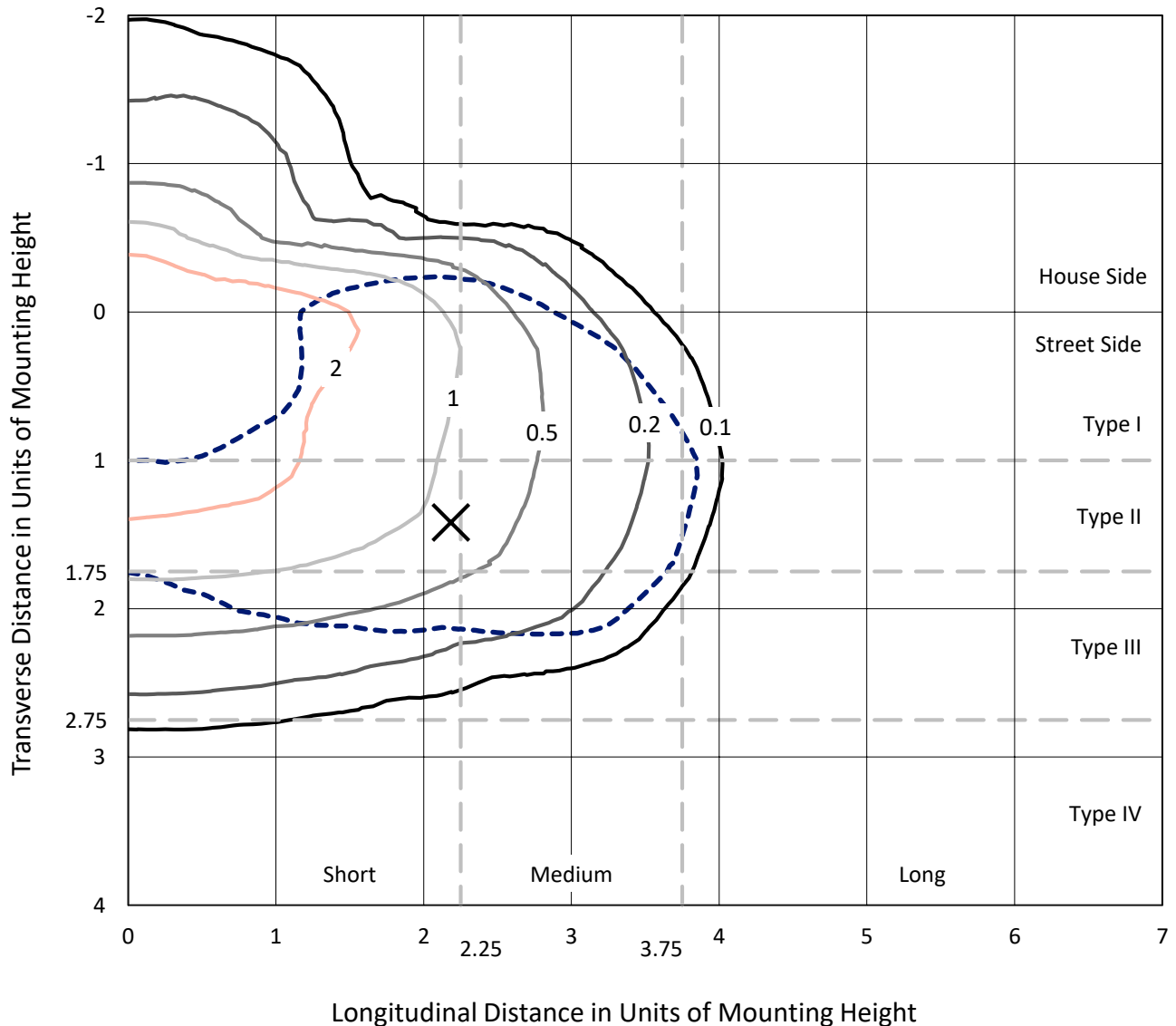
Input Watts (W): 85
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P196304
 CATALOG NUMBER: NAV-AF-02-D-UNV-T3-800

Iso-Footcandle Lines of Horizontal Illumination

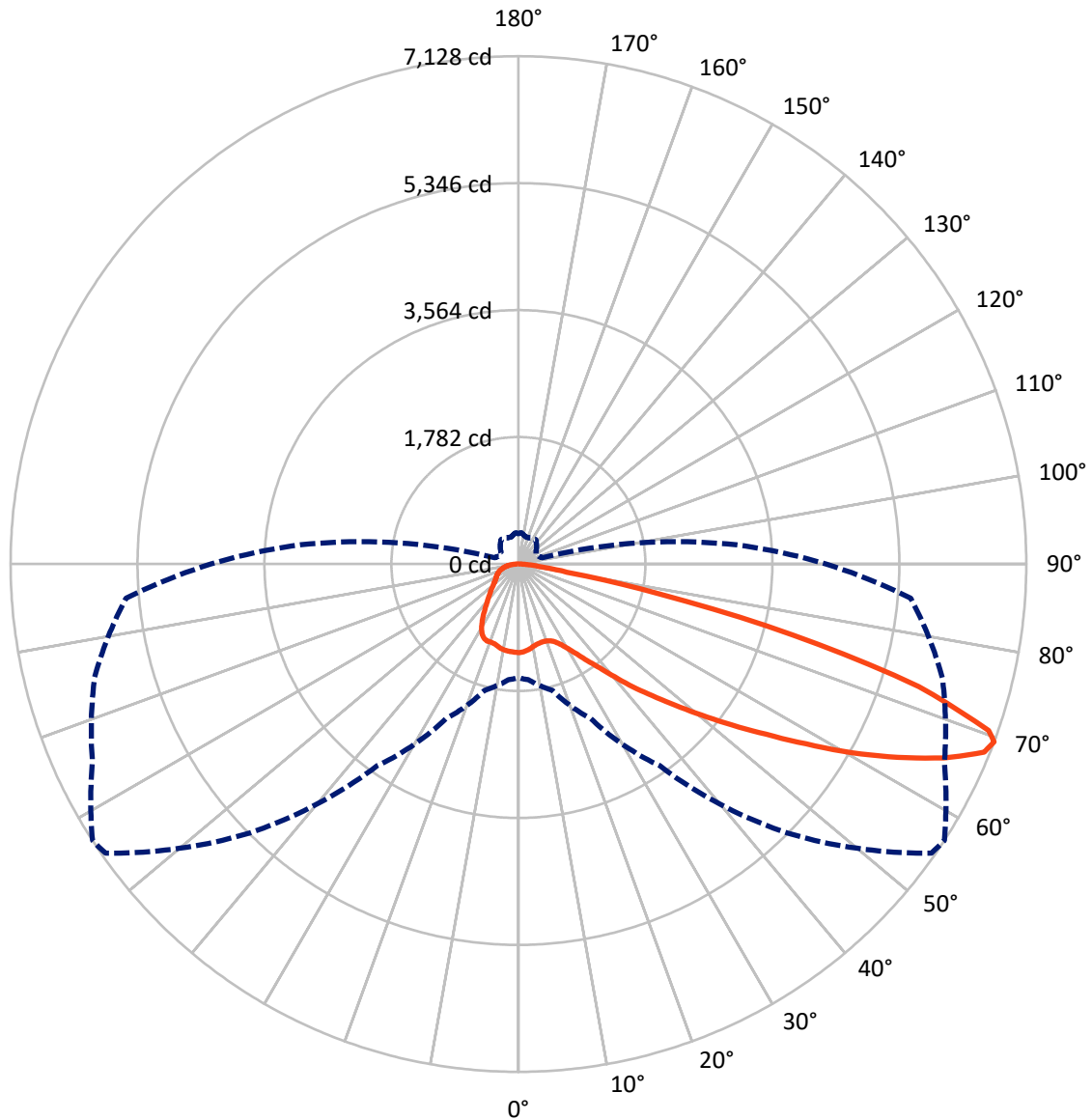
✕ Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 3.2 fc
 Type III - Short - Semi-Cutoff

REPORT NUMBER: P196304
CATALOG NUMBER: NAV-AF-02-D-UNV-T3-800

Luminous Intensity Polar Plot



— Vertical Plane Through 57-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

REPORT NUMBER: P196304

CATALOG NUMBER: NAV-AF-02-D-UNV-T3-800

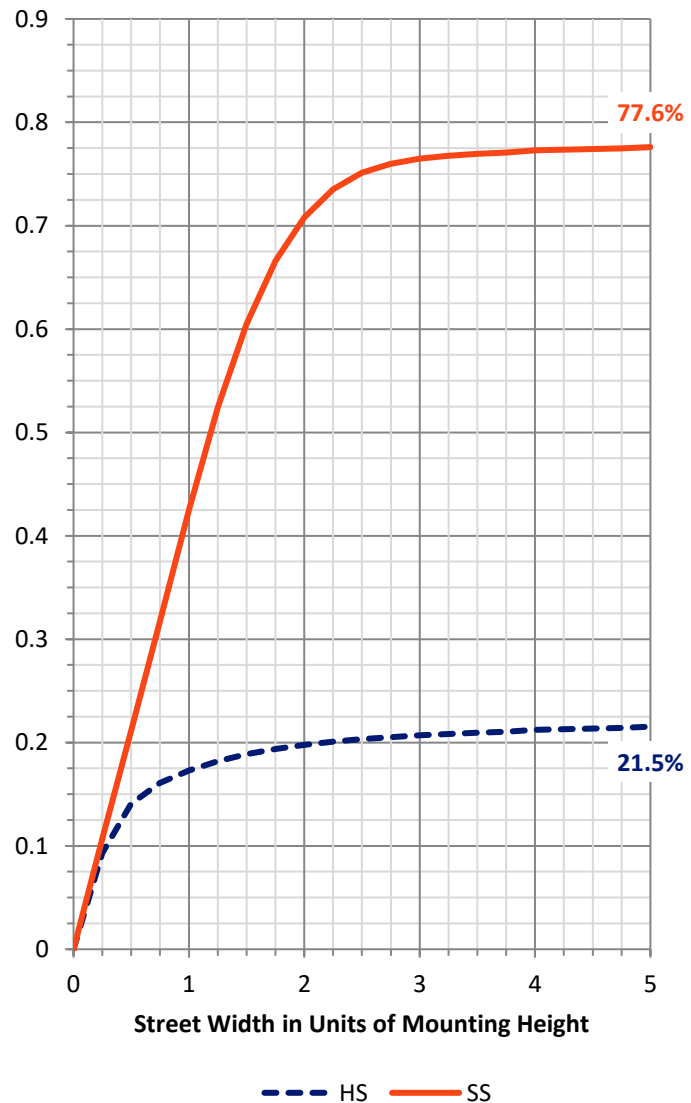
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2222.1	0.0	2222.1
	% Fixture	22.1	0.0	22.1
Street Side	Lumens	7847.9	0.0	7847.9
	% Fixture	77.9	0.0	77.9
Total	Lumens	10069.9	0.0	10069.9
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	116.5	1.2
10°-20°	331.2	3.3
20°-30°	550.9	5.5
30°-40°	899.7	8.9
40°-50°	1518.4	15.1
50°-60°	2362.0	23.5
60°-70°	2813.7	27.9
70°-80°	1310.8	13.0
80°-90°	166.7	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°	10069.9	100.0
0°-180°	10069.9	100.0



REPORT NUMBER: P196304

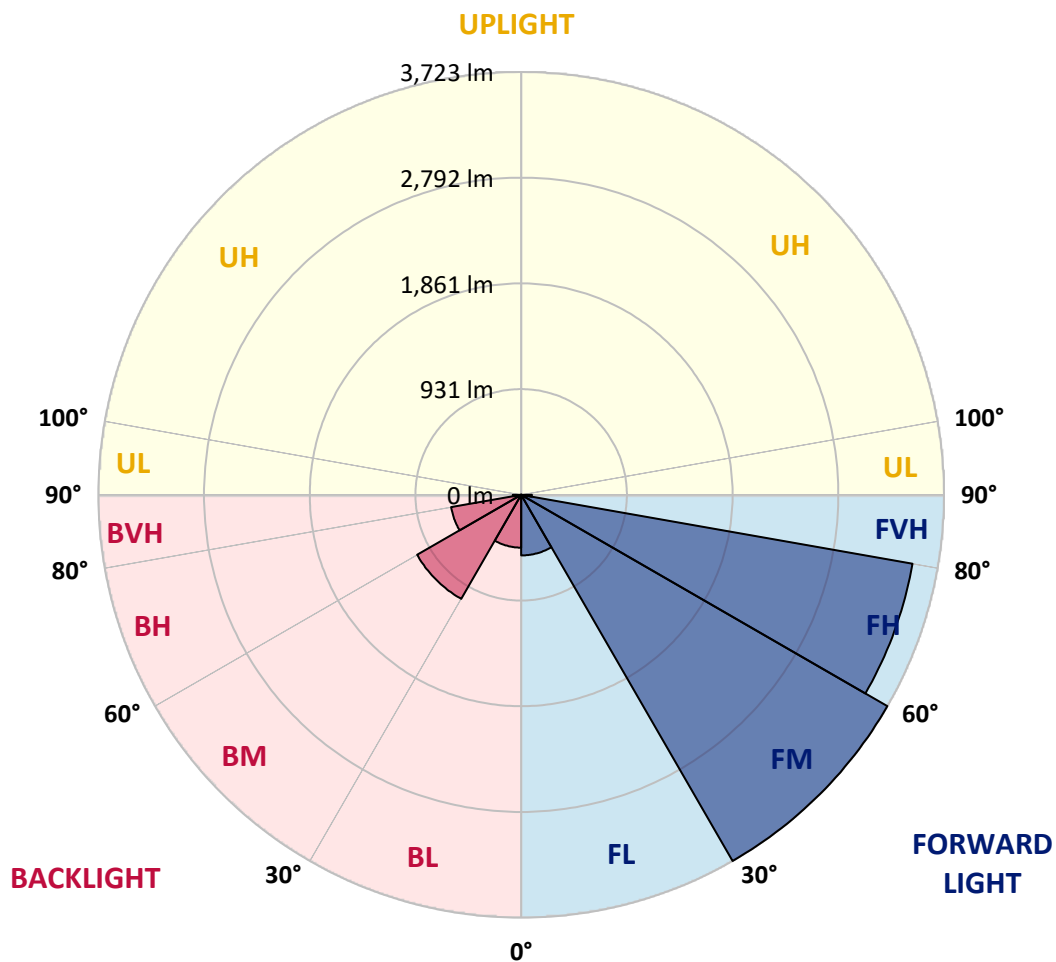
CATALOG NUMBER: NAV-AF-02-D-UNV-T3-800

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	533.3	5.3			
FM	(30°-60°)	3722.5	37.0			
FH	(60°-80°)	3498.3	34.7			G2/5000
FVH	(80°-90°)	93.7	0.9			G1/100
BL	(0°-30°)	465.3	4.6	B1/500		
BM	(30°-60°)	1057.6	10.5	B2/2500		
BH	(60°-80°)	626.2	6.2	B2/1000		G2/1000
BVH	(80°-90°)	73.0	0.7			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G2

Type III Short





REPORT NUMBER: P196304

CATALOG NUMBER: NAV-AF-02-D-UNV-T3-800

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	57°	65°	75°	85°
0°	1244.2	1244.2	1244.2	1244.2	1244.2	1244.2	1244.2	1244.2	1244.2	1244.2	1244.2
2.5°	1237.2	1237.2	1240.3	1240.3	1240.3	1239.1	1235.2	1236.5	1233.9	1231.9	1228.8
5°	1212.0	1213.3	1217.2	1218.4	1220.4	1221.0	1221.0	1220.4	1221.0	1221.0	1219.1
7.5°	1177.2	1178.4	1183.0	1185.6	1191.3	1196.5	1199.1	1199.1	1202.4	1204.9	1205.5
10°	1155.9	1155.9	1158.5	1158.5	1163.0	1165.6	1173.9	1173.3	1182.3	1190.7	1194.6
12.5°	1153.4	1153.4	1152.0	1147.5	1145.0	1144.3	1152.7	1154.0	1167.5	1182.3	1189.5
15°	1161.8	1161.8	1157.9	1148.8	1139.2	1134.7	1143.0	1145.6	1160.4	1177.8	1188.8
17.5°	1188.8	1188.2	1179.8	1161.8	1145.0	1137.8	1140.5	1143.0	1156.5	1176.5	1190.1
20°	1248.7	1248.7	1230.7	1197.8	1168.8	1152.0	1148.2	1150.1	1159.8	1178.4	1195.9
22.5°	1353.9	1355.8	1323.5	1269.4	1219.8	1184.3	1168.8	1170.8	1175.3	1193.3	1212.6
25°	1508.5	1503.4	1457.6	1380.9	1303.5	1243.0	1211.4	1213.3	1213.3	1230.1	1250.0
27.5°	1672.3	1673.5	1607.9	1525.3	1423.4	1333.2	1282.9	1282.3	1281.7	1297.7	1319.0
30°	1857.4	1858.0	1781.9	1686.5	1569.8	1454.4	1378.9	1378.3	1372.5	1392.5	1420.3
32.5°	2059.7	2059.1	1970.8	1863.1	1733.6	1602.7	1504.7	1504.0	1499.5	1526.7	1560.1
35°	2284.1	2284.1	2196.5	2063.6	1923.8	1778.0	1664.5	1663.9	1666.5	1703.2	1734.8
37.5°	2554.2	2560.0	2454.3	2293.1	2140.3	1984.9	1852.8	1849.0	1829.6	1891.5	1943.7
40°	2835.9	2852.1	2742.5	2554.2	2389.2	2228.7	2082.9	2080.4	2063.6	2129.4	2213.9
42.5°	3140.9	3177.6	3055.8	2863.6	2683.8	2510.4	2364.0	2357.0	2292.5	2395.0	2527.2
45°	3540.6	3564.5	3387.8	3213.7	3044.2	2846.3	2672.3	2634.2	2569.8	2701.2	2872.8
47.5°	3812.6	3801.1	3690.8	3574.1	3465.1	3275.6	3008.1	2959.7	2881.0	3055.1	3244.1
50°	3981.5	3989.9	3928.0	3922.3	3916.5	3784.3	3387.2	3329.1	3238.3	3444.6	3665.0
52.5°	4093.1	4055.1	4066.0	4197.6	4356.7	4293.6	3815.9	3751.4	3658.0	3864.2	4113.1
55°	4046.7	3996.4	4097.6	4356.7	4731.4	4745.5	4286.5	4220.1	4140.2	4310.3	4652.1
57.5°	3854.6	3879.7	4039.6	4399.9	4987.3	5150.4	4827.4	4759.7	4602.4	4775.1	5164.0
60°	3584.4	3635.4	3879.7	4331.6	5166.5	5465.6	5421.1	5376.0	5105.2	5227.7	5701.6
62.5°	3294.3	3344.6	3645.1	4215.0	5085.9	5744.8	6003.9	5976.2	5660.3	5663.6	6042.6
65°	2865.6	2886.3	3193.1	3896.4	4862.2	5996.8	6587.4	6562.8	6190.9	6035.5	6138.0
67.5°	2164.2	2190.0	2442.1	3075.8	4181.4	5860.2	7053.5	7049.6	6510.0	6173.5	5911.1
69°	1598.2	1629.8	1835.4	2387.9	3457.5	5339.3	7075.4	7127.6	6596.4	6159.3	5527.5
70°	1169.4	1205.5	1395.7	1895.3	2879.8	4764.2	6887.8	7000.0	6563.6	6069.7	5228.4
72.5°	497.1	509.3	602.8	855.5	1460.9	2872.8	5641.6	5877.6	5927.9	5438.5	4084.7
75°	311.4	315.3	352.0	439.1	649.9	1188.2	3653.4	3975.1	4425.8	4219.5	2734.8
77.5°	234.7	237.9	259.1	302.4	403.6	443.6	1694.8	2021.0	2534.9	2482.0	1360.9
80°	179.8	181.8	196.0	219.8	284.3	277.8	549.9	691.1	1057.9	933.5	481.6
82.5°	141.2	141.8	154.1	158.6	198.6	187.0	275.9	307.5	427.4	355.3	235.3
85°	125.1	127.1	139.2	116.0	127.1	112.8	151.5	164.4	226.9	214.0	89.0
87.5°	63.8	67.0	116.7	99.3	63.8	53.5	66.4	71.6	92.2	99.9	43.2
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: P196304

CATALOG NUMBER: NAV-AF-02-D-UNV-T3-800

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1244.2	1244.2	1244.2	1244.2	1244.2	1244.2	1244.2	1244.2	1244.2	1244.2	1244.2
2.5°	1229.4	1230.1	1231.9	1235.2	1240.3	1246.8	1254.5	1262.3	1266.8	1270.0	1268.8
5°	1219.1	1219.8	1223.7	1229.4	1235.8	1245.5	1258.4	1268.0	1275.2	1279.7	1279.1
7.5°	1206.2	1208.1	1215.9	1222.3	1231.3	1239.1	1249.4	1258.4	1265.5	1270.0	1269.4
10°	1196.5	1198.5	1208.1	1216.5	1224.3	1225.5	1223.7	1221.0	1220.4	1223.7	1222.3
12.5°	1192.0	1195.9	1204.9	1210.8	1207.5	1195.2	1181.1	1175.3	1173.3	1179.8	1180.4
15°	1193.3	1196.5	1204.2	1200.4	1183.0	1162.4	1154.6	1159.1	1163.0	1166.9	1167.5
17.5°	1196.5	1198.5	1200.4	1186.2	1161.8	1148.2	1145.6	1141.1	1129.4	1123.0	1122.4
20°	1202.4	1204.9	1201.7	1179.2	1157.2	1139.2	1108.2	1080.4	1054.0	1039.8	1034.1
22.5°	1222.3	1224.3	1214.5	1192.7	1159.1	1100.5	1038.0	990.2	949.6	927.7	919.3
25°	1261.6	1264.9	1251.4	1223.7	1135.9	1033.4	945.1	880.7	829.7	803.3	796.2
27.5°	1330.7	1333.8	1319.0	1246.8	1081.8	943.8	836.8	772.9	729.2	706.6	703.4
30°	1433.8	1438.3	1424.8	1246.2	999.2	829.7	731.1	693.7	668.5	653.1	652.4
32.5°	1576.9	1593.7	1538.2	1224.3	897.4	714.3	651.1	638.2	625.9	615.7	615.7
35°	1758.7	1798.0	1650.4	1178.4	785.2	635.7	606.6	594.4	578.9	567.9	566.7
37.5°	1975.9	2037.2	1730.3	1097.2	688.5	597.6	579.6	559.6	535.1	513.8	508.6
40°	2274.4	2288.6	1769.7	965.1	616.3	576.9	554.4	529.3	498.4	474.4	471.9
42.5°	2574.3	2527.8	1761.9	823.3	575.1	558.3	528.7	500.9	473.2	453.2	453.2
45°	2915.2	2736.7	1703.2	680.8	537.7	537.0	504.8	478.3	457.1	442.2	439.1
47.5°	3241.4	2924.3	1602.0	575.7	499.0	515.8	489.3	468.0	448.7	434.5	431.9
50°	3637.3	3141.6	1494.3	502.2	461.6	497.1	482.8	471.9	453.2	428.7	426.2
52.5°	4030.5	3395.6	1411.2	446.7	428.7	482.2	486.7	488.0	470.7	422.9	419.7
55°	4452.8	3667.0	1323.5	403.6	401.6	475.2	495.7	494.5	486.1	424.2	419.0
57.5°	4854.4	3939.7	1192.7	373.3	380.3	468.0	497.7	477.1	462.3	430.7	422.3
60°	5187.1	4165.3	1000.5	352.0	362.3	453.9	484.8	453.9	428.7	429.3	421.7
62.5°	5348.9	4228.5	765.3	327.5	347.5	430.7	466.1	436.5	413.3	431.9	427.4
65°	5225.8	4048.6	545.4	304.9	329.4	403.6	455.1	421.7	405.5	444.9	439.7
67.5°	4783.5	3558.6	395.9	285.0	312.0	375.8	434.5	408.1	397.7	454.5	442.9
69°	4313.6	3072.5	343.0	273.3	299.8	361.0	420.9	401.0	392.0	441.0	424.2
70°	3922.9	2698.0	316.5	266.3	289.5	352.6	410.6	396.5	386.2	424.8	404.9
72.5°	2812.7	1743.8	266.3	245.0	262.4	334.0	388.1	379.7	364.3	383.6	370.7
75°	1699.4	910.3	226.3	223.1	234.1	308.1	361.7	351.4	335.8	337.8	331.3
77.5°	780.7	420.3	189.6	197.2	204.4	275.9	329.4	317.8	303.6	298.5	299.1
80°	342.3	245.6	158.6	168.3	172.2	248.2	294.6	281.7	266.3	294.0	272.7
82.5°	185.1	142.5	123.8	130.2	141.2	215.9	255.9	239.2	224.3	261.1	210.8
85°	74.8	72.8	83.8	90.2	98.0	155.4	214.0	196.6	178.6	159.9	156.0
87.5°	32.2	34.8	41.2	43.9	52.2	96.7	143.7	125.7	126.3	108.3	106.4
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)