

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: P270466

Luminaire Tested: **NAV-AF-03-D-UNV-T3-7027-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270466
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-03-D-UNV-T3-7027-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 70 CRI, 2700K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10372.3 lumens
Efficiency: N/A
Efficacy: 108.0 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type III - Short - Semi-Cutoff
BUG Rating: B2 - U0 - G2

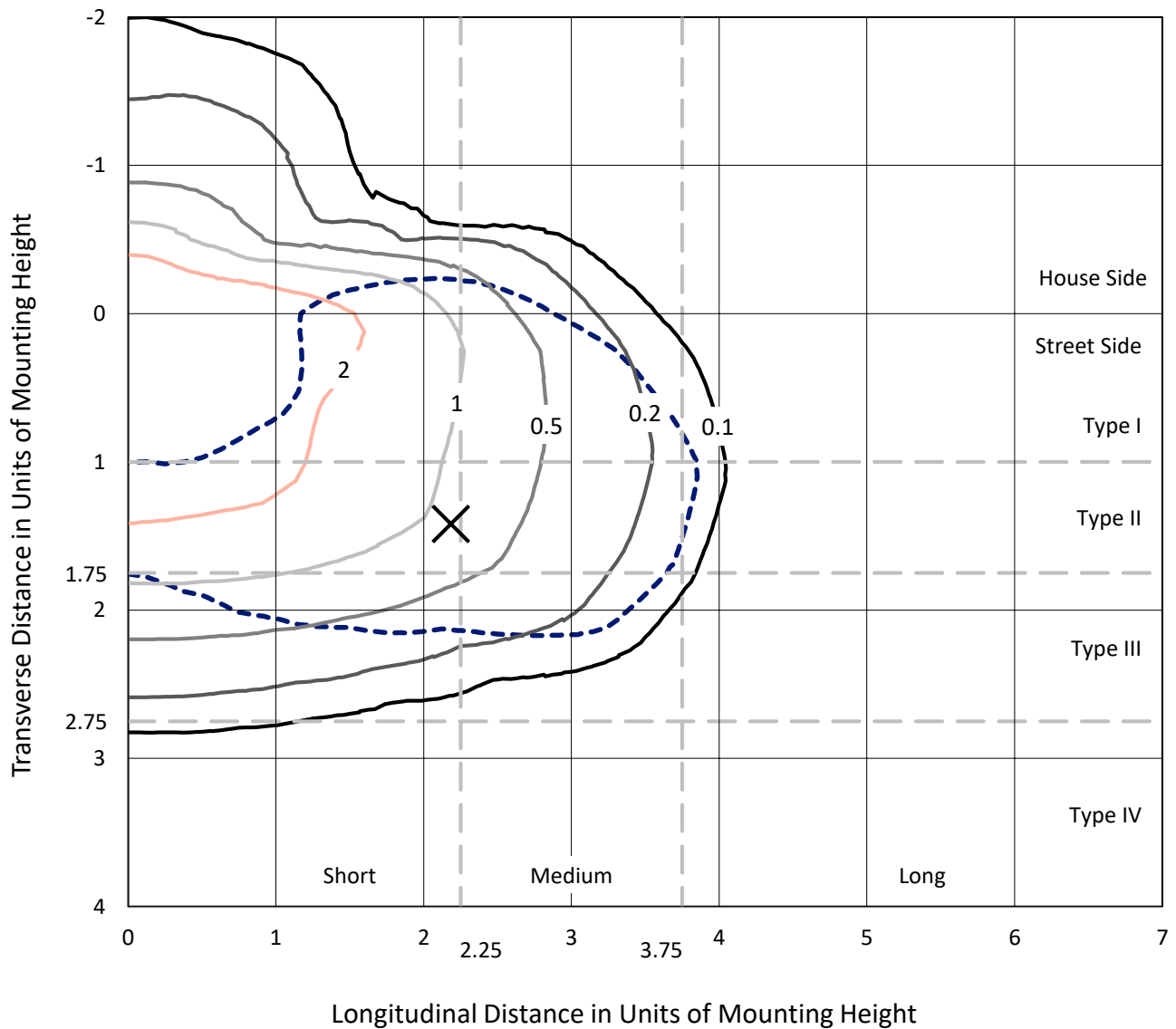
Input Watts (W): 96
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

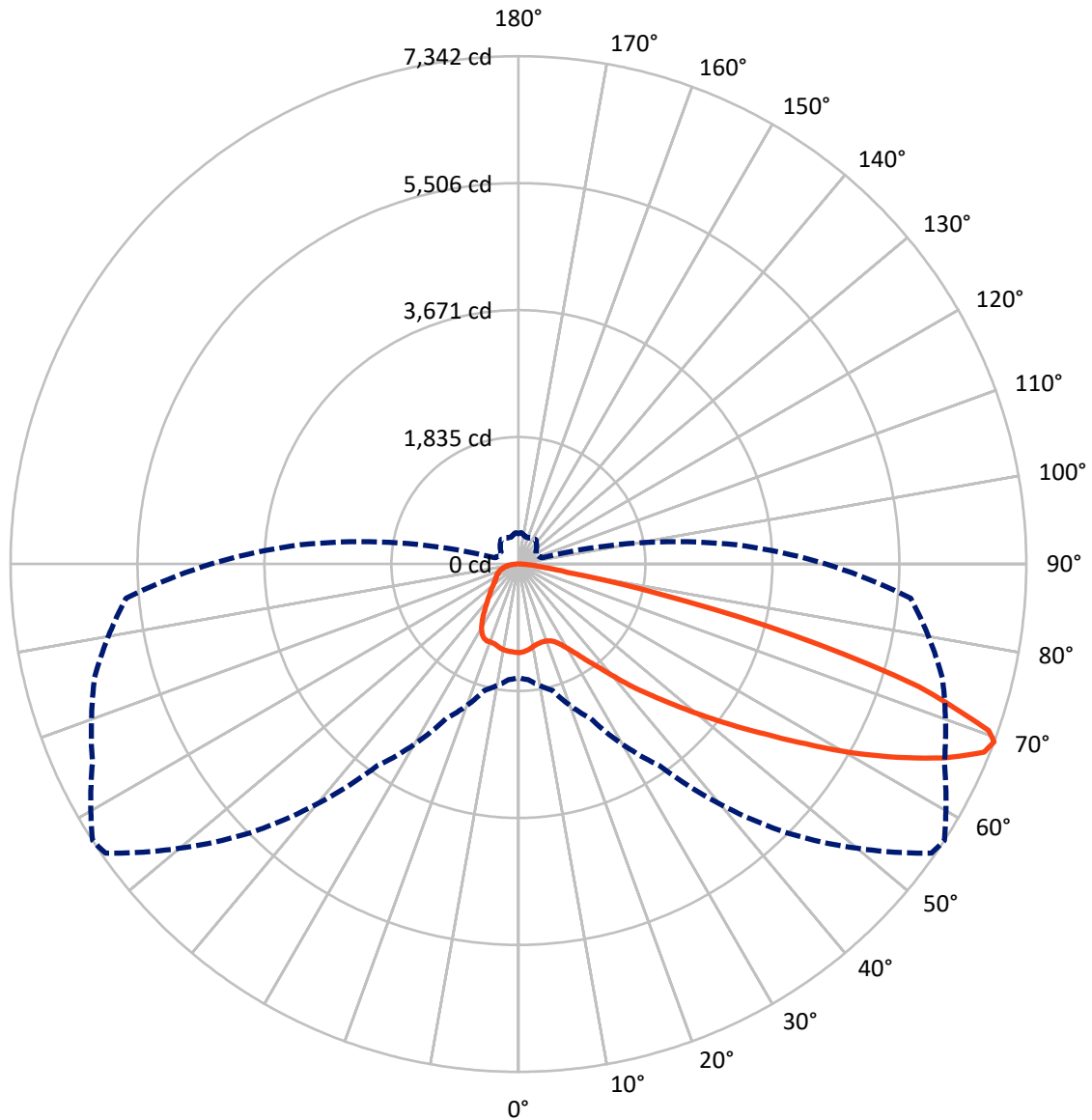
✕ Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 3.3 fc
 Type III - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



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

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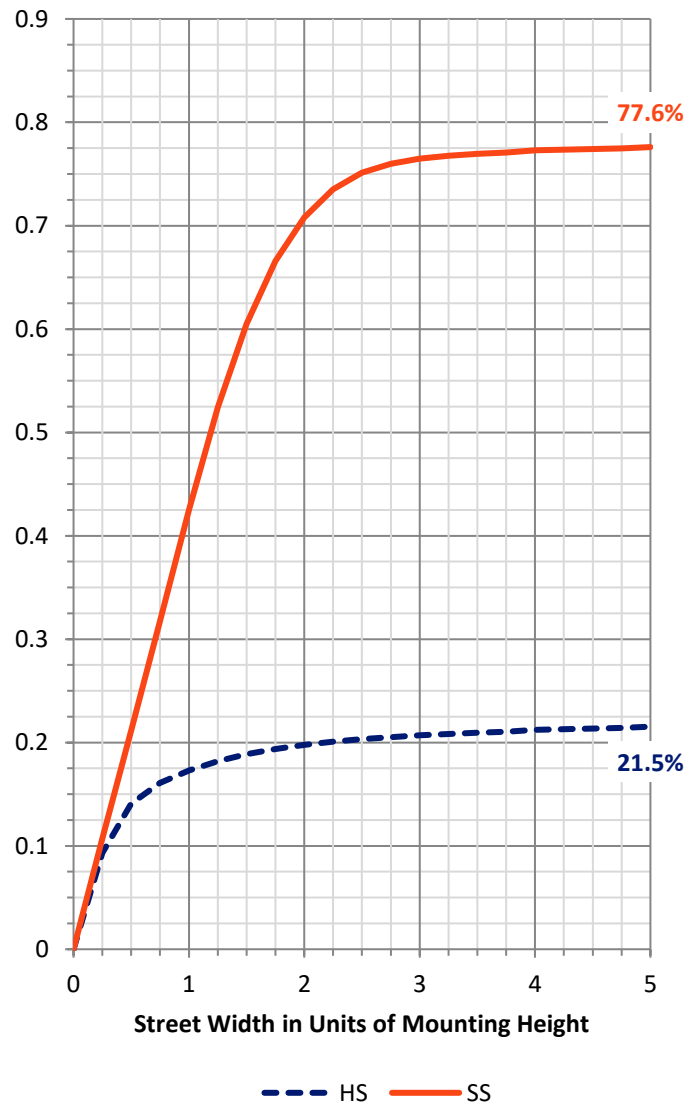
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2288.8	0.0	2288.8
	% Fixture	22.1	0.0	22.1
Street Side	Lumens	8083.5	0.0	8083.5
	% Fixture	77.9	0.0	77.9
Total	Lumens	10372.3	0.0	10372.3
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	120.0	1.2
10°-20°	341.1	3.3
20°-30°	567.5	5.5
30°-40°	926.7	8.9
40°-50°	1564.0	15.1
50°-60°	2432.9	23.5
60°-70°	2898.1	27.9
70°-80°	1350.1	13.0
80°-90°	171.7	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°	10372.3	100.0
0°-180°	10372.3	100.0



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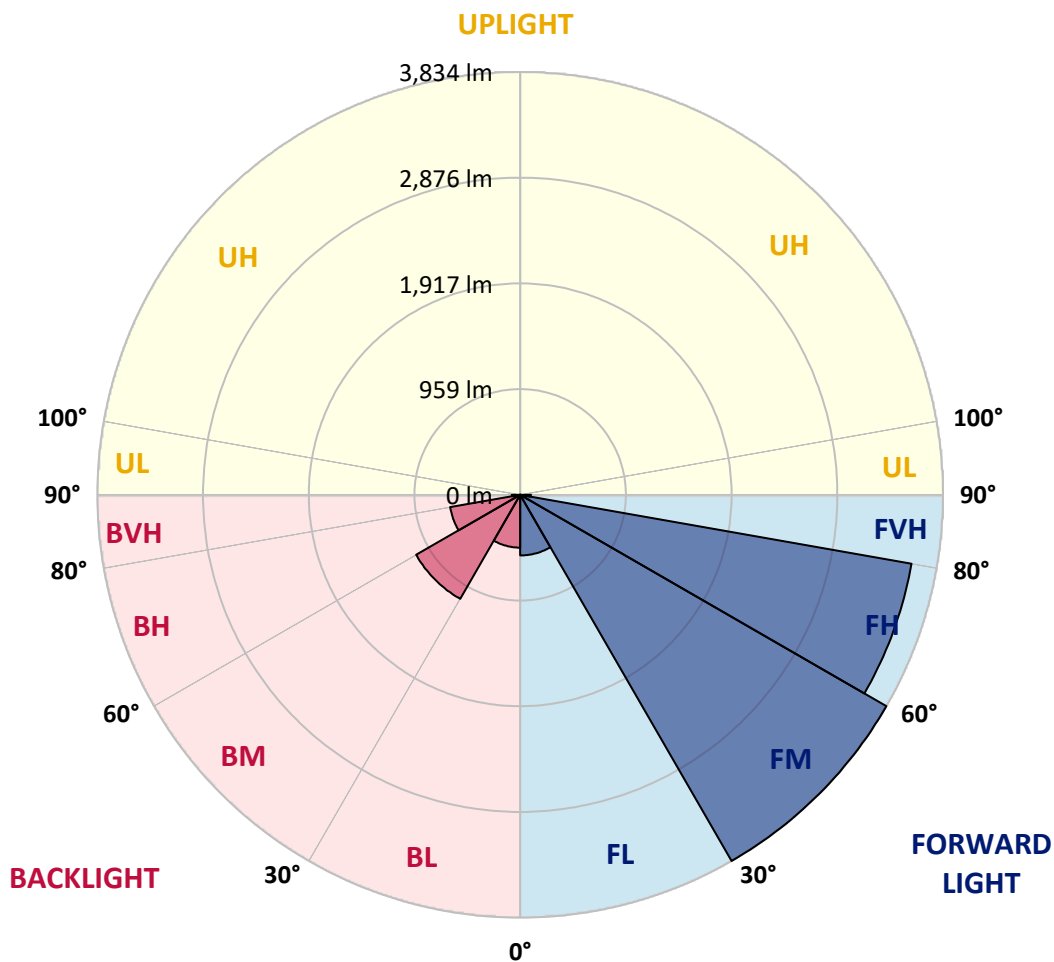
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	549.3	5.3			
FM	(30°-60°)	3834.3	37.0			
FH	(60°-80°)	3603.3	34.7			G2/5000
FVH	(80°-90°)	96.5	0.9			G1/100
BL	(0°-30°)	479.3	4.6	B1/500		
BM	(30°-60°)	1089.3	10.5	B2/2500		
BH	(60°-80°)	645.0	6.2	B2/1000		G2/1000
BVH	(80°-90°)	75.2	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





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	57°	65°	75°	85°
0°	1281.6	1281.6	1281.6	1281.6	1281.6	1281.6	1281.6	1281.6	1281.6	1281.6	1281.6
2.5°	1274.2	1274.2	1277.6	1277.6	1277.6	1276.3	1272.3	1273.6	1271.0	1268.9	1265.6
5°	1248.5	1249.7	1253.8	1255.0	1257.0	1257.6	1257.6	1257.0	1257.6	1257.6	1255.7
7.5°	1212.5	1213.9	1218.6	1221.2	1227.2	1232.5	1235.1	1235.1	1238.5	1241.1	1241.7
10°	1190.7	1190.7	1193.3	1193.3	1197.9	1200.6	1209.2	1208.6	1217.8	1226.5	1230.5
12.5°	1188.0	1188.0	1186.7	1182.0	1179.4	1178.7	1187.3	1188.6	1202.7	1217.8	1225.2
15°	1196.6	1196.6	1192.6	1183.2	1173.4	1168.8	1177.4	1180.1	1195.3	1213.3	1224.5
17.5°	1224.5	1223.9	1215.1	1196.6	1179.4	1172.0	1174.8	1177.4	1191.3	1211.9	1225.7
20°	1286.3	1286.3	1267.7	1233.8	1203.9	1186.7	1182.7	1184.7	1194.6	1213.9	1231.8
22.5°	1394.4	1396.4	1363.3	1307.6	1256.4	1219.9	1203.9	1206.0	1210.6	1229.2	1249.1
25°	1553.9	1548.6	1501.3	1422.3	1342.6	1280.3	1247.7	1249.7	1249.7	1267.0	1287.6
27.5°	1722.5	1723.8	1656.1	1571.1	1466.3	1373.1	1321.4	1320.8	1320.1	1336.7	1358.6
30°	1913.1	1913.7	1835.3	1737.1	1616.9	1498.1	1420.4	1419.7	1413.8	1434.4	1462.9
32.5°	2121.5	2121.0	2030.0	1919.0	1785.7	1650.8	1549.8	1549.1	1544.5	1572.5	1607.0
35°	2352.8	2352.8	2262.4	2125.6	1981.5	1831.5	1714.5	1713.8	1716.5	1754.4	1786.9
37.5°	2631.0	2637.0	2528.0	2362.1	2204.6	2044.6	1908.4	1904.4	1884.6	1948.3	2002.1
40°	2921.1	2937.6	2824.8	2631.0	2460.9	2295.6	2145.5	2142.8	2125.6	2193.3	2280.3
42.5°	3235.2	3273.1	3147.5	2949.7	2764.4	2585.9	2435.0	2427.7	2361.4	2466.9	2603.1
45°	3646.8	3671.6	3489.6	3310.3	3135.7	2931.8	2752.4	2713.3	2646.9	2782.3	2958.9
47.5°	3927.1	3915.3	3801.6	3681.4	3569.2	3374.0	3098.4	3048.6	2967.6	3146.9	3341.4
50°	4101.1	4109.7	4046.0	4039.9	4034.1	3897.9	3488.8	3429.1	3335.4	3547.9	3775.0
52.5°	4215.9	4176.8	4188.1	4323.5	4487.7	4422.5	3930.4	3864.1	3767.9	3980.3	4236.5
55°	4168.1	4116.5	4220.6	4487.7	4873.3	4887.9	4415.2	4346.8	4264.4	4439.8	4791.6
57.5°	3970.2	3996.2	4160.9	4532.0	5137.0	5305.0	4972.4	4902.6	4740.5	4918.6	5319.0
60°	3692.0	3744.6	3996.2	4461.7	5321.6	5629.8	5584.0	5537.4	5258.6	5384.7	5872.8
62.5°	3393.3	3445.0	3754.5	4341.5	5238.6	5917.2	6184.2	6155.6	5830.3	5833.7	6224.0
65°	2951.7	2972.9	3289.0	4013.4	5008.2	6176.9	6785.2	6759.9	6376.8	6216.7	6322.4
67.5°	2229.1	2255.7	2515.3	3168.1	4307.0	6036.2	7265.2	7261.3	6705.5	6358.8	6088.6
69°	1646.1	1678.8	1890.6	2459.6	3561.2	5499.6	7287.9	7341.7	6794.5	6344.2	5693.5
70°	1204.5	1241.7	1437.6	1952.2	2966.3	4907.3	7094.6	7210.2	6760.6	6251.9	5385.3
72.5°	511.9	524.6	620.9	881.1	1504.8	2958.9	5811.0	6054.0	6105.9	5601.8	4207.3
75°	320.8	324.6	362.6	452.1	669.3	1223.9	3763.1	4094.5	4558.7	4346.1	2816.8
77.5°	241.7	245.1	266.9	311.4	415.6	456.9	1745.8	2081.7	2611.1	2556.5	1401.7
80°	185.3	187.2	201.8	226.5	292.8	286.2	566.4	711.8	1089.7	961.5	496.0
82.5°	145.4	146.1	158.7	163.3	204.5	192.5	284.3	316.7	440.3	365.9	242.4
85°	128.8	130.9	143.4	119.6	130.9	116.2	156.0	169.3	233.7	220.4	91.6
87.5°	65.8	69.1	120.3	102.2	65.8	55.2	68.5	73.8	95.0	102.9	44.5
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°	1281.6	1281.6	1281.6	1281.6	1281.6	1281.6	1281.6	1281.6	1281.6	1281.6	1281.6
2.5°	1266.3	1267.0	1268.9	1272.3	1277.6	1284.2	1292.2	1300.1	1304.9	1308.1	1306.9
5°	1255.7	1256.4	1260.3	1266.3	1273.0	1282.9	1296.3	1306.1	1313.5	1318.2	1317.5
7.5°	1242.4	1244.4	1252.3	1259.1	1268.2	1276.3	1286.9	1296.3	1303.5	1308.1	1307.6
10°	1232.5	1234.5	1244.4	1253.0	1261.0	1262.4	1260.3	1257.6	1257.0	1260.3	1259.1
12.5°	1227.9	1231.8	1241.1	1247.0	1243.8	1231.1	1216.6	1210.6	1208.6	1215.1	1215.9
15°	1229.2	1232.5	1240.4	1236.4	1218.6	1197.4	1189.3	1193.9	1197.9	1201.9	1202.7
17.5°	1232.5	1234.5	1236.4	1221.9	1196.6	1182.7	1180.1	1175.3	1163.5	1156.7	1156.1
20°	1238.5	1241.1	1237.8	1214.5	1192.0	1173.4	1141.4	1112.9	1085.7	1071.0	1065.1
22.5°	1259.1	1261.0	1251.1	1228.5	1193.9	1133.5	1069.2	1019.9	978.2	955.5	947.0
25°	1299.5	1302.8	1288.9	1260.3	1170.0	1064.4	973.6	907.1	854.6	827.3	820.2
27.5°	1370.5	1373.9	1358.6	1284.2	1114.3	972.1	862.0	796.2	751.1	727.7	724.5
30°	1476.9	1481.5	1467.6	1283.6	1029.3	854.6	753.0	714.5	688.6	672.7	672.0
32.5°	1624.2	1641.6	1584.4	1261.0	924.4	735.7	670.7	657.4	644.8	634.2	634.2
35°	1811.5	1852.0	1700.0	1213.9	808.8	654.8	625.0	612.3	596.4	585.1	583.7
37.5°	2035.3	2098.4	1782.2	1130.2	709.2	615.6	597.0	576.4	551.2	529.2	523.9
40°	2342.7	2357.3	1822.8	994.1	634.8	594.3	571.1	545.2	513.3	488.8	486.1
42.5°	2651.4	2603.6	1814.8	848.0	592.3	575.0	544.6	515.9	487.4	466.8	466.8
45°	3002.8	2818.8	1754.4	701.2	553.9	553.1	519.9	492.7	470.8	455.5	452.1
47.5°	3338.8	3012.0	1650.1	593.1	514.0	531.3	503.9	482.1	462.2	447.5	444.9
50°	3746.6	3235.9	1539.2	517.2	475.5	511.9	497.4	486.1	466.8	441.5	438.9
52.5°	4151.5	3497.6	1453.5	460.2	441.5	496.8	501.3	502.7	484.7	435.6	432.3
55°	4586.6	3777.1	1363.3	415.6	413.7	489.3	510.6	509.2	500.6	436.9	431.6
57.5°	5000.2	4058.0	1228.5	384.5	391.8	482.1	512.7	491.5	476.1	443.6	435.0
60°	5342.8	4290.3	1030.5	362.6	373.2	467.5	499.4	467.5	441.5	442.2	434.3
62.5°	5509.6	4355.4	788.3	337.4	358.0	443.6	480.1	449.5	425.6	444.9	440.3
65°	5382.7	4170.2	561.8	314.0	339.3	415.6	468.8	434.3	417.7	458.1	452.8
67.5°	4927.2	3665.5	407.7	293.4	321.5	387.1	447.5	420.3	409.6	468.1	456.2
69°	4443.0	3164.8	353.3	281.6	308.7	371.9	433.6	413.0	403.8	454.3	436.9
70°	4040.7	2778.9	326.1	274.3	298.1	363.3	423.0	408.4	397.8	437.7	417.1
72.5°	2897.3	1796.3	274.3	252.3	270.3	344.1	399.7	391.1	375.2	395.2	381.8
75°	1750.3	937.7	233.1	229.7	241.0	317.5	372.5	361.8	345.9	348.0	341.4
77.5°	804.2	433.0	195.2	203.1	210.6	284.3	339.3	327.3	312.8	307.5	308.1
80°	352.7	253.1	163.3	173.4	177.2	255.7	303.4	290.2	274.3	302.8	280.9
82.5°	190.6	146.8	127.5	134.1	145.4	222.5	263.7	246.3	231.0	269.0	217.1
85°	77.1	75.1	86.3	93.0	100.9	160.1	220.4	202.6	184.0	164.7	160.6
87.5°	33.1	35.8	42.5	45.2	53.8	99.6	148.1	129.4	130.2	111.6	109.6
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)