

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: P459869

Luminaire Tested: **NAV-SA5A-AMB-U-SL3**

Issue Date: 1/6/2021

Test Information

Test Method: LM-79-08
Report Number: P459869
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2003-697-6)
Test Lab: INNOVATION CENTER
Issue Date: 1/6/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SA5A-AMB-U-SL3
Description: NAVION AREA AND ROADWAY LUMINAIRE
(5) NARROW BAND AMBER, 500mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III
SPILL LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5369 lumens
Efficiency: N/A
Efficacy: 53.2 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Medium - Non-Cutoff
BUG Rating: B1 - U0 - G2

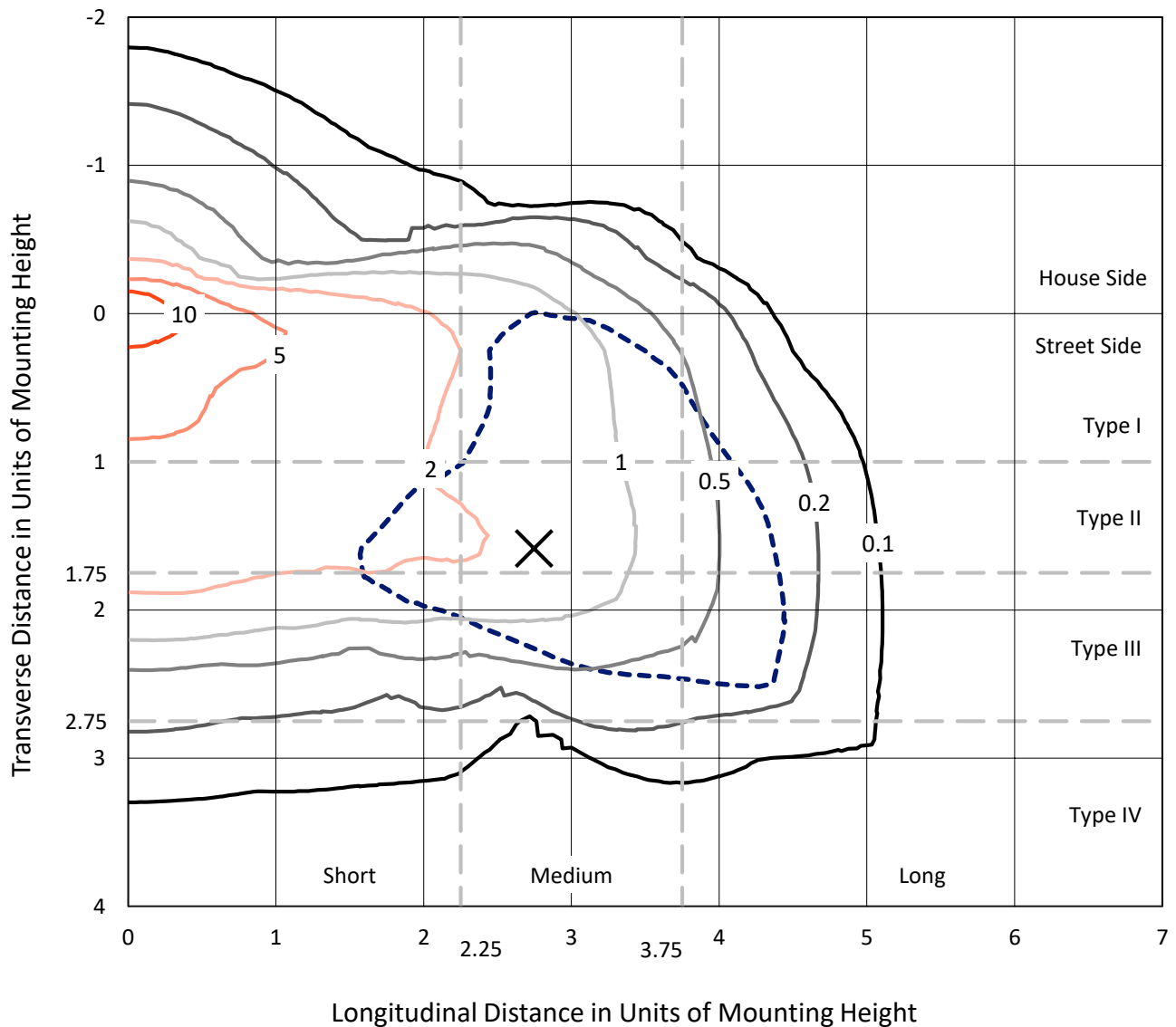
Input Watts (W): 101
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

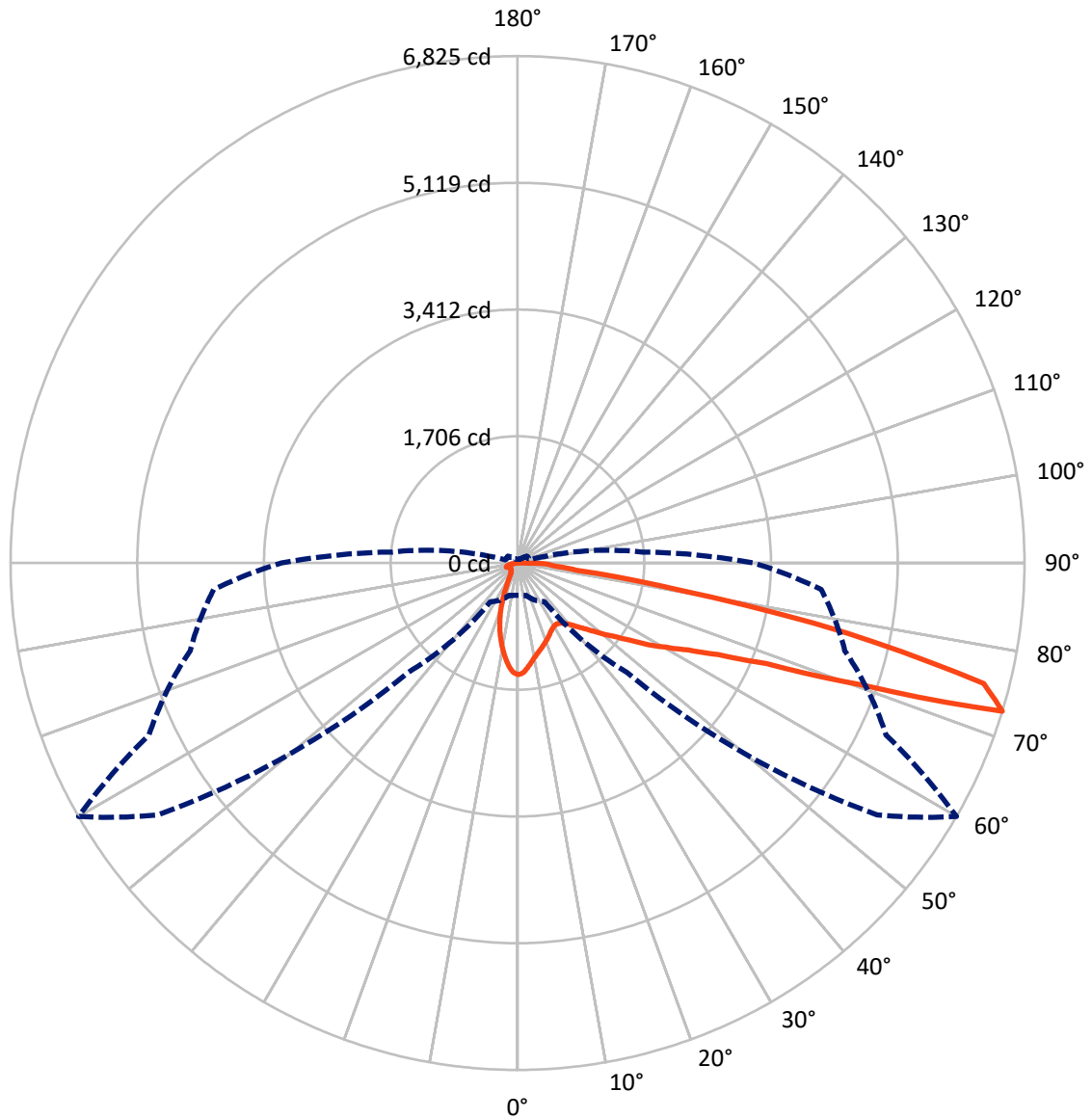


Based on 10 foot mounting height. Maximum calculated value = 15 fc
 Type III - Medium - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 60-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical

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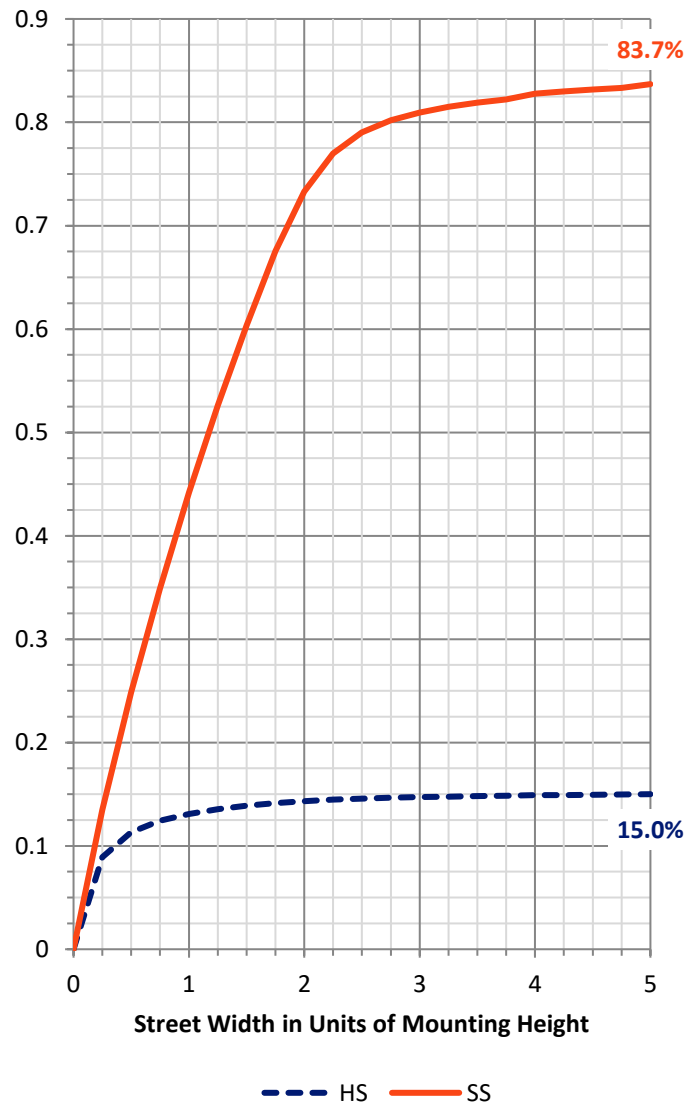
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	815.8	0.0	815.8
	% Fixture	15.2	0.0	15.2
Street Side	Lumens	4553.2	0.0	4553.2
	% Fixture	84.8	0.0	84.8
Total	Lumens	5369.0	0.0	5369.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	126.0	2.3
10°-20°	267.4	5.0
20°-30°	330.6	6.2
30°-40°	418.0	7.8
40°-50°	593.7	11.1
50°-60°	905.0	16.9
60°-70°	1365.1	25.4
70°-80°	1200.9	22.4
80°-90°	162.2	3.0
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°	5369.0	100.0
0°-180°	5369.0	100.0



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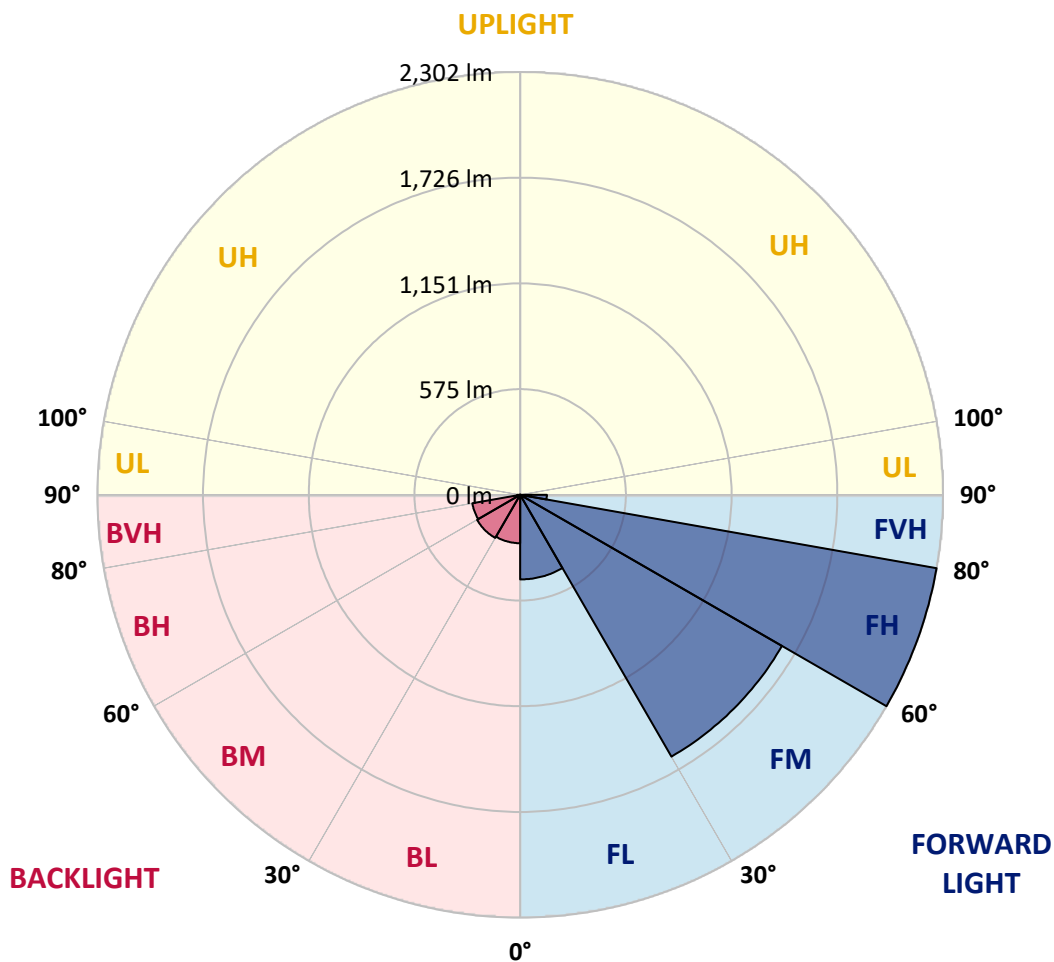
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	460.6	8.6			
FM	(30°-60°)	1645.6	30.6			
FH	(60°-80°)	2301.8	42.9			G2/5000
FVH	(80°-90°)	145.3	2.7			G2/225
BL	(0°-30°)	263.5	4.9	B1/500		
BM	(30°-60°)	271.1	5.0	B1/1000		
BH	(60°-80°)	264.2	4.9	B1/500		G1/500
BVH	(80°-90°)	16.9	0.3			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G2

Type III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	60°	65°	75°	85°
0°	1500.8	1500.8	1500.8	1500.8	1500.8	1500.8	1500.8	1500.8	1500.8	1500.8	1500.8
2.5°	1459.5	1459.5	1459.5	1468.7	1471.0	1471.0	1480.2	1480.2	1477.9	1487.1	1484.8
5°	1370.0	1374.6	1374.6	1379.2	1393.0	1399.9	1413.6	1415.9	1422.8	1436.6	1445.8
7.5°	1259.9	1266.8	1278.2	1296.6	1310.4	1321.8	1347.1	1347.1	1358.6	1379.2	1395.3
10°	1156.6	1158.9	1168.1	1188.7	1216.3	1246.1	1275.9	1285.1	1298.9	1324.1	1349.4
12.5°	1085.5	1090.1	1094.6	1113.0	1142.8	1172.7	1218.6	1236.9	1253.0	1282.8	1317.3
15°	1009.7	1012.0	1023.5	1046.5	1083.2	1115.3	1168.1	1193.3	1218.6	1257.6	1294.3
17.5°	959.3	957.0	966.1	982.2	1021.2	1064.8	1122.2	1152.0	1181.9	1234.6	1273.6
20°	931.7	934.0	934.0	938.6	963.8	1007.4	1074.0	1113.0	1152.0	1220.9	1262.2
22.5°	924.8	924.8	917.9	915.7	927.1	963.8	1030.4	1074.0	1119.9	1218.6	1255.3
25°	924.8	924.8	917.9	908.8	908.8	929.4	989.1	1030.4	1085.5	1220.9	1246.1
27.5°	940.9	940.9	931.7	917.9	906.5	911.1	957.0	1000.6	1062.5	1225.5	1239.2
30°	966.1	963.8	957.0	945.5	922.5	906.5	940.9	979.9	1039.6	1236.9	1234.6
32.5°	991.4	993.7	989.1	979.9	954.7	920.2	938.6	975.3	1035.0	1253.0	1234.6
35°	1030.4	1032.7	1032.7	1023.5	1002.9	954.7	961.5	993.7	1048.8	1278.2	1243.8
37.5°	1074.0	1074.0	1080.9	1080.9	1055.6	1002.9	1005.1	1030.4	1076.3	1312.7	1266.8
40°	1117.6	1117.6	1129.1	1145.1	1124.5	1069.4	1071.7	1090.1	1131.4	1360.9	1312.7
42.5°	1172.7	1168.1	1193.3	1214.0	1204.8	1154.3	1142.8	1165.8	1195.6	1427.4	1381.5
45°	1211.7	1211.7	1250.7	1275.9	1296.6	1246.1	1239.2	1257.6	1287.4	1500.8	1477.9
47.5°	1257.6	1259.9	1301.2	1354.0	1386.1	1356.3	1347.1	1372.3	1393.0	1597.2	1599.5
50°	1296.6	1303.5	1358.6	1434.3	1487.1	1489.4	1473.3	1505.4	1505.4	1705.1	1741.8
52.5°	1349.4	1360.9	1432.0	1514.6	1601.8	1631.6	1636.2	1645.4	1647.7	1838.2	1900.1
55°	1482.5	1496.3	1555.9	1624.8	1728.0	1796.9	1845.1	1829.0	1810.6	1982.8	2065.4
57.5°	1718.9	1707.4	1730.3	1746.4	1847.4	1959.8	2079.1	2072.3	2017.2	2150.3	2242.1
60°	1923.1	1927.7	1957.5	1918.5	1985.1	2161.8	2301.7	2304.0	2210.0	2329.3	2405.0
62.5°	1941.5	1971.3	2097.5	2184.7	2285.7	2395.8	2609.3	2579.4	2457.8	2503.7	2595.5
65°	1581.2	1620.2	1826.7	2111.3	2632.2	3100.4	2985.6	2971.8	2760.7	2747.0	2864.0
67.5°	814.7	844.5	954.7	1480.2	2368.3	3827.8	3903.6	3607.5	3178.4	3118.7	3261.0
70°	557.7	559.9	559.9	674.7	1156.6	3508.8	5553.6	4927.1	4009.1	3738.3	3917.3
72.5°	436.0	436.0	452.1	550.8	635.7	2081.4	5911.6	6824.9	5475.5	4562.2	4105.5
75°	325.9	328.2	358.0	459.0	619.6	621.9	4945.4	6483.0	6184.7	4500.2	3189.9
77.5°	247.8	243.3	282.3	378.7	603.5	566.8	2668.9	4530.1	4378.6	3059.1	1156.6
80°	156.1	162.9	190.5	316.7	578.3	566.8	934.0	2210.0	1769.3	732.1	195.1
82.5°	89.5	94.1	119.3	197.4	518.6	564.5	582.9	800.9	438.3	181.3	91.8
85°	52.8	52.8	75.7	123.9	376.4	557.7	566.8	481.9	243.3	94.1	48.2
87.5°	22.9	27.5	43.6	59.7	169.8	470.4	514.0	408.5	176.7	52.8	25.2
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°	1500.8	1500.8	1500.8	1500.8	1500.8	1500.8	1500.8	1500.8	1500.8	1500.8	1500.8
2.5°	1482.5	1482.5	1477.9	1477.9	1480.2	1468.7	1466.4	1459.5	1464.1	1461.8	1452.6
5°	1443.5	1441.2	1436.6	1411.3	1397.6	1363.1	1363.1	1342.5	1335.6	1335.6	1321.8
7.5°	1395.3	1388.4	1358.6	1317.3	1278.2	1241.5	1207.1	1181.9	1163.5	1147.4	1149.7
10°	1349.4	1335.6	1287.4	1216.3	1154.3	1085.5	1032.7	973.0	940.9	895.0	913.4
12.5°	1312.7	1292.0	1214.0	1113.0	1021.2	920.2	814.7	725.2	651.7	605.8	578.3
15°	1282.8	1248.4	1133.7	1007.4	883.5	736.7	594.4	472.7	380.9	353.4	355.7
17.5°	1255.3	1207.1	1062.5	899.6	732.1	553.1	390.1	309.8	280.0	266.2	266.2
20°	1230.0	1158.9	970.7	780.3	564.5	371.8	280.0	252.4	241.0	234.1	231.8
22.5°	1197.9	1115.3	881.2	656.3	403.9	268.5	231.8	218.0	215.7	215.7	215.7
25°	1172.7	1062.5	787.1	502.6	280.0	218.0	199.7	197.4	199.7	201.9	201.9
27.5°	1142.8	1009.7	693.0	353.4	213.4	183.6	176.7	181.3	185.9	190.5	190.5
30°	1115.3	959.3	592.1	247.8	176.7	160.6	160.6	165.2	172.1	176.7	176.7
32.5°	1096.9	922.5	472.7	195.1	156.1	146.9	149.2	151.5	158.3	160.6	160.6
35°	1083.2	885.8	355.7	165.2	142.3	137.7	140.0	142.3	144.6	146.9	146.9
37.5°	1085.5	865.2	254.7	146.9	133.1	130.8	133.1	133.1	133.1	135.4	135.4
40°	1113.0	856.0	201.9	135.4	128.5	126.2	126.2	123.9	123.9	126.2	126.2
42.5°	1154.3	858.3	179.0	130.8	123.9	121.6	119.3	117.0	117.0	117.0	117.0
45°	1220.9	881.2	165.2	126.2	121.6	117.0	112.4	110.2	110.2	114.7	114.7
47.5°	1319.5	915.7	151.5	123.9	117.0	110.2	107.9	105.6	107.9	110.2	112.4
50°	1434.3	945.5	144.6	121.6	117.0	105.6	103.3	101.0	103.3	110.2	110.2
52.5°	1567.4	989.1	142.3	121.6	114.7	103.3	98.7	98.7	101.0	107.9	107.9
55°	1716.6	1055.6	144.6	121.6	112.4	101.0	96.4	94.1	98.7	103.3	103.3
57.5°	1872.6	1145.1	149.2	121.6	107.9	101.0	94.1	89.5	91.8	96.4	96.4
60°	2028.7	1266.8	156.1	119.3	105.6	98.7	91.8	84.9	84.9	89.5	89.5
62.5°	2214.5	1418.2	179.0	123.9	105.6	94.1	84.9	78.0	78.0	80.3	80.3
65°	2457.8	1638.5	213.4	140.0	114.7	89.5	78.0	71.1	71.1	71.1	71.1
67.5°	2859.4	1989.6	227.2	156.1	130.8	89.5	73.4	66.6	64.3	64.3	62.0
70°	3382.6	2219.1	201.9	162.9	156.1	91.8	68.8	59.7	57.4	57.4	55.1
72.5°	3176.1	1691.3	172.1	158.3	158.3	94.1	66.6	57.4	52.8	50.5	50.5
75°	2182.4	784.8	151.5	146.9	137.7	80.3	62.0	52.8	48.2	43.6	43.6
77.5°	642.6	211.1	126.2	128.5	105.6	66.6	57.4	48.2	43.6	39.0	39.0
80°	151.5	121.6	91.8	94.1	71.1	50.5	45.9	43.6	39.0	34.4	34.4
82.5°	87.2	78.0	64.3	59.7	43.6	34.4	36.7	36.7	34.4	29.8	27.5
85°	43.6	45.9	39.0	34.4	27.5	22.9	22.9	25.2	22.9	18.4	18.4
87.5°	25.2	22.9	25.2	18.4	13.8	11.5	13.8	13.8	13.8	9.2	9.2
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)