

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: P270388

Luminaire Tested: **NAV-AF-02-D-UNV-T3-7027-1200**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P270388  
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-T3-7027-1200  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(2) 70 CRI, 2700K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 11612.9 lumens  
Efficiency: N/A  
Efficacy: 90.0 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): 129  
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

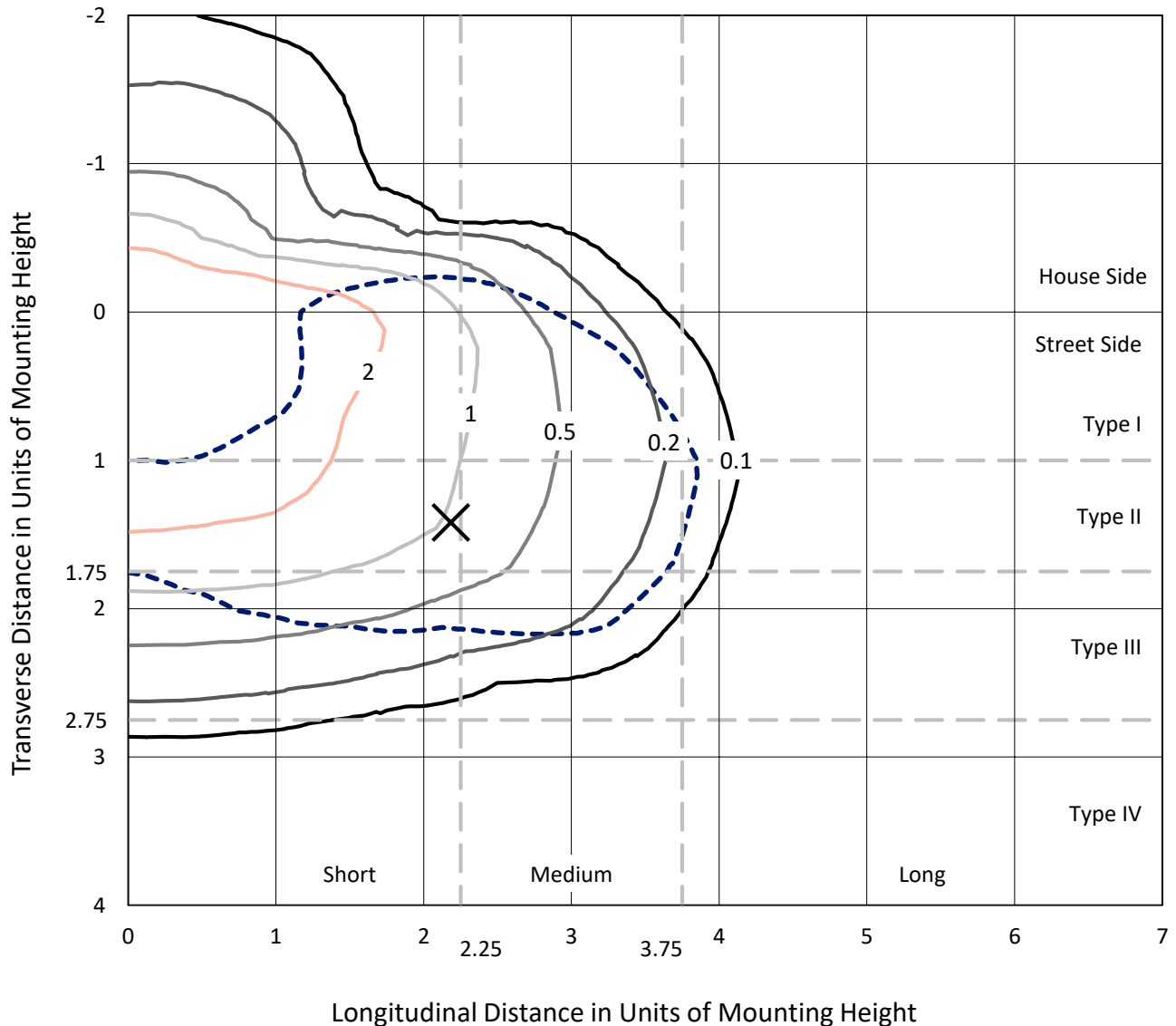


REPORT NUMBER: P270388

CATALOG NUMBER: NAV-AF-02-D-UNV-T3-7027-1200

### Iso-Footcandle Lines of Horizontal Illumination

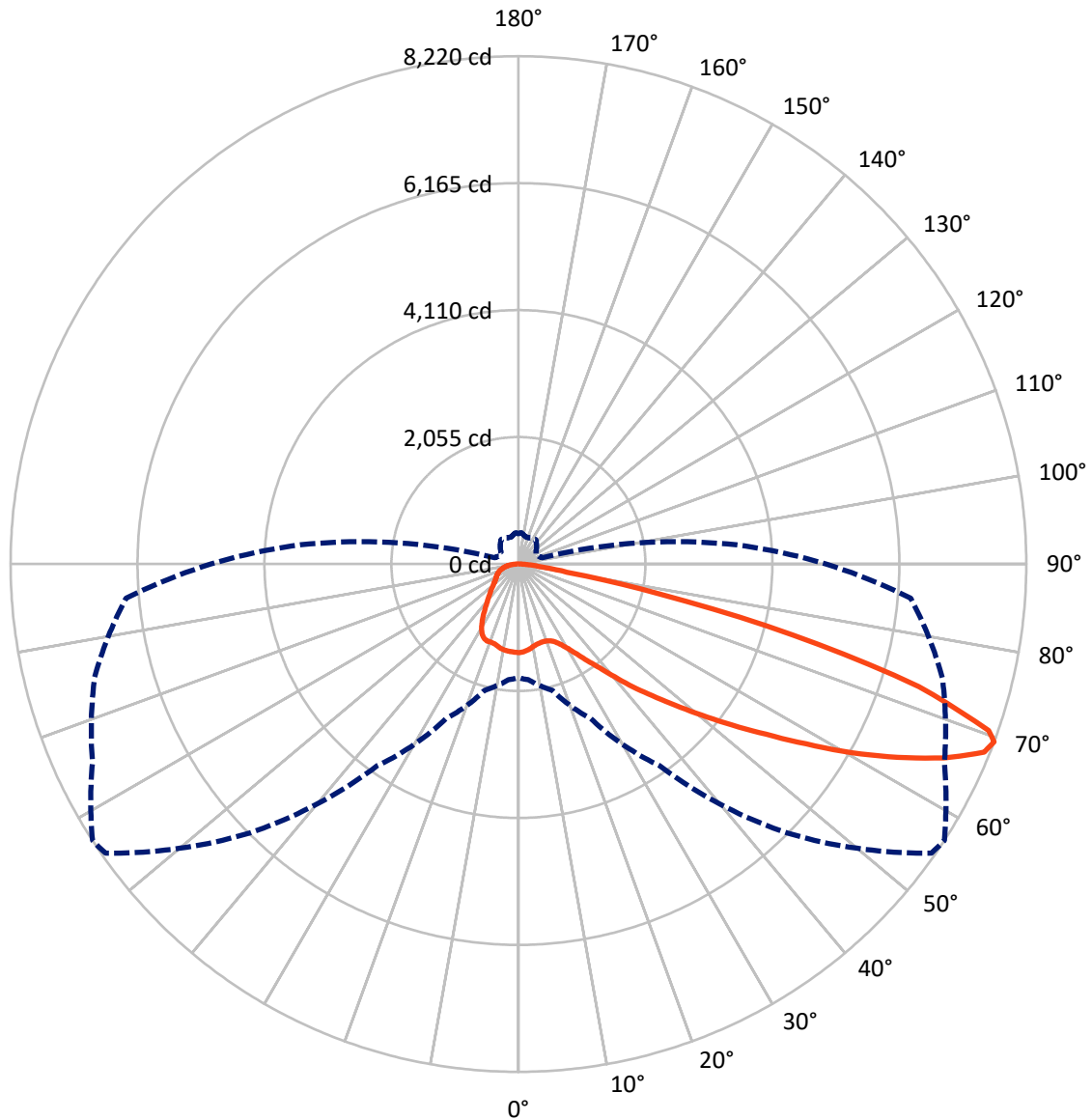
× Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 3.7 fc  
 Type III - Short - Semi-Cutoff

REPORT NUMBER: P270388  
CATALOG NUMBER: NAV-AF-02-D-UNV-T3-7027-1200

### Luminous Intensity Polar Plot



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

REPORT NUMBER: P270388

CATALOG NUMBER: NAV-AF-02-D-UNV-T3-7027-1200

**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2562.5	0.0	2562.5
	% Fixture	22.1	0.0	22.1
<b>Street Side</b>	Lumens	9050.3	0.0	9050.3
	% Fixture	77.9	0.0	77.9
<b>Total</b>	Lumens	11612.9	0.0	11612.9
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	134.3	1.2
10°-20°	381.9	3.3
20°-30°	635.4	5.5
30°-40°	1037.5	8.9
40°-50°	1751.1	15.1
50°-60°	2723.9	23.5
60°-70°	3244.8	27.9
70°-80°	1511.6	13.0
80°-90°	192.3	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°	11612.9	100.0
0°-180°	11612.9	100.0



REPORT NUMBER: P270388

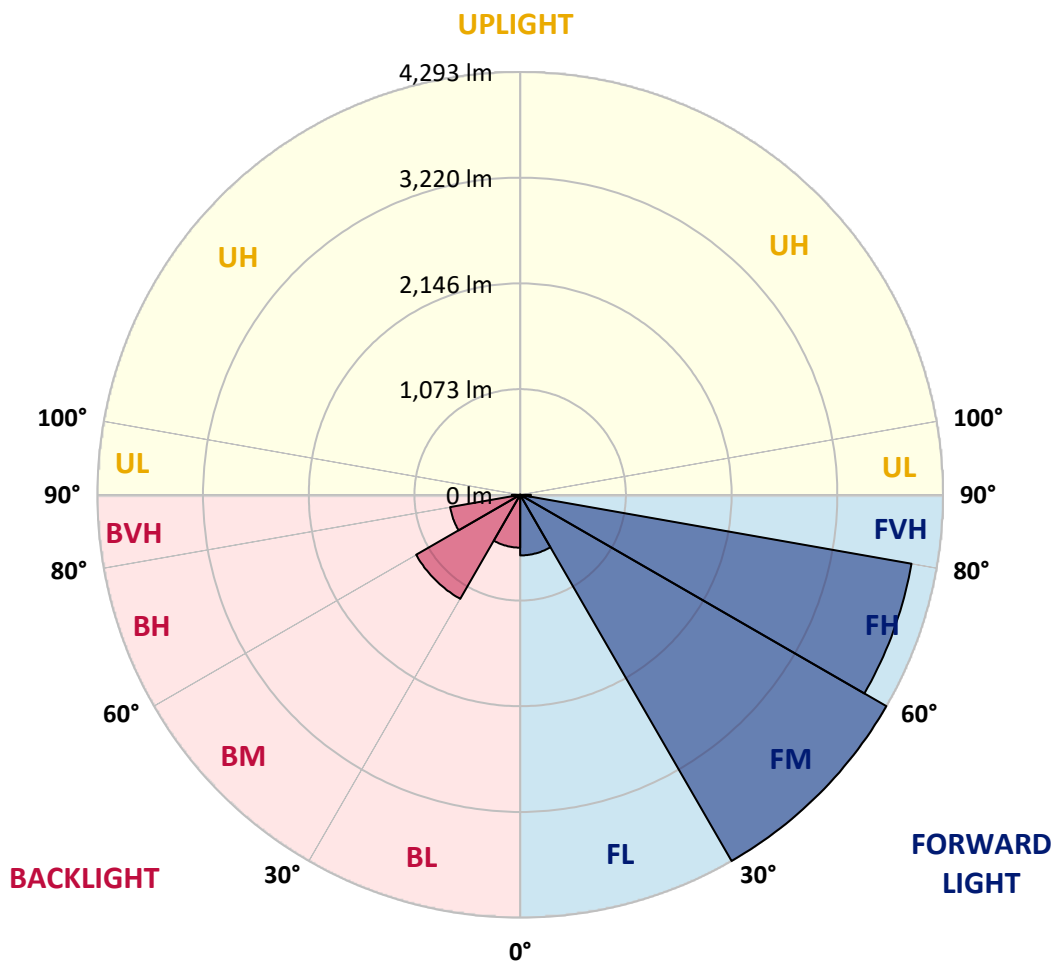
CATALOG NUMBER: NAV-AF-02-D-UNV-T3-7027-1200

**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	615.0	5.3			
FM	(30°-60°)	4292.9	37.0			
FH	(60°-80°)	4034.3	34.7			G2/5000
FVH	(80°-90°)	108.1	0.9			G2/225
BL	(0°-30°)	536.7	4.6	B2/1000		
BM	(30°-60°)	1219.6	10.5	B2/2500		
BH	(60°-80°)	722.1	6.2	B2/1000		G2/1000
BVH	(80°-90°)	84.2	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





REPORT NUMBER: P270388

CATALOG NUMBER: NAV-AF-02-D-UNV-T3-7027-1200

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	57°	65°	75°	85°
0°	1435.0	1435.0	1435.0	1435.0	1435.0	1435.0	1435.0	1435.0	1435.0	1435.0	1435.0
2.5°	1426.7	1426.7	1430.5	1430.5	1430.5	1428.9	1424.5	1426.0	1422.9	1420.8	1417.0
5°	1397.8	1399.2	1403.6	1405.2	1407.4	1408.2	1408.2	1407.4	1408.2	1408.2	1405.8
7.5°	1357.6	1359.0	1364.3	1367.2	1373.9	1379.8	1382.9	1382.9	1386.5	1389.6	1390.2
10°	1333.1	1333.1	1336.0	1336.0	1341.2	1344.1	1353.8	1353.0	1363.4	1373.1	1377.6
12.5°	1330.1	1330.1	1328.6	1323.4	1320.4	1319.6	1329.3	1330.7	1346.4	1363.4	1371.7
15°	1339.7	1339.7	1335.3	1324.9	1313.7	1308.6	1318.2	1321.1	1338.3	1358.2	1371.0
17.5°	1371.0	1370.3	1360.6	1339.7	1320.4	1312.2	1315.2	1318.2	1333.8	1356.8	1372.4
20°	1440.2	1440.2	1419.3	1381.4	1347.8	1328.6	1324.1	1326.3	1337.4	1359.0	1379.1
22.5°	1561.3	1563.5	1526.3	1463.9	1406.7	1365.8	1347.8	1350.2	1355.4	1376.2	1398.4
25°	1739.7	1733.8	1681.0	1592.4	1503.3	1433.3	1397.0	1399.2	1399.2	1418.6	1441.6
27.5°	1928.5	1930.0	1854.2	1759.1	1641.6	1537.4	1479.5	1478.8	1478.0	1496.5	1521.1
30°	2141.9	2142.6	2055.0	1944.9	1810.4	1677.2	1590.3	1589.6	1582.9	1605.9	1637.9
32.5°	2375.4	2374.6	2272.8	2148.7	1999.2	1848.3	1735.3	1734.4	1729.2	1760.5	1799.1
35°	2634.1	2634.1	2533.0	2379.8	2218.5	2050.6	1919.6	1918.9	1921.8	1964.2	2000.6
37.5°	2945.6	2952.3	2830.4	2644.5	2468.4	2289.2	2136.7	2132.2	2109.9	2181.4	2241.5
40°	3270.5	3289.1	3162.8	2945.6	2755.3	2570.1	2402.2	2399.2	2379.8	2455.6	2553.1
42.5°	3622.1	3664.5	3524.1	3302.4	3095.0	2895.1	2726.3	2718.1	2643.7	2762.0	2914.5
45°	4083.1	4110.6	3906.9	3706.1	3510.7	3282.3	3081.6	3037.8	2963.5	3115.1	3312.9
47.5°	4396.8	4383.5	4256.3	4121.8	3996.1	3777.6	3469.1	3413.2	3322.6	3523.3	3741.1
50°	4591.6	4601.3	4530.0	4523.2	4516.6	4364.1	3906.2	3839.3	3734.4	3972.3	4226.5
52.5°	4720.2	4676.3	4689.1	4840.6	5024.3	4951.5	4400.5	4326.1	4218.4	4456.3	4743.3
55°	4666.8	4608.8	4725.4	5024.3	5456.2	5472.7	4943.4	4866.7	4774.5	4970.9	5364.9
57.5°	4445.2	4474.2	4658.5	5074.2	5751.5	5939.6	5567.1	5489.1	5307.5	5506.8	5955.1
60°	4133.7	4192.4	4474.2	4995.4	5958.1	6303.0	6251.8	6199.7	5887.5	6028.7	6575.2
62.5°	3799.1	3857.1	4203.6	4860.8	5865.3	6625.0	6923.9	6891.8	6527.7	6531.3	6968.5
65°	3304.8	3328.5	3682.4	4493.5	5607.2	6915.7	7596.7	7568.5	7139.5	6960.2	7078.6
67.5°	2495.9	2525.6	2816.2	3547.0	4822.1	6758.0	8134.2	8129.8	7507.6	7119.3	6816.8
69°	1843.1	1879.4	2116.6	2753.8	3987.1	6157.3	8159.6	8219.8	7607.1	7103.1	6374.5
70°	1348.6	1390.2	1609.7	2185.8	3321.0	5494.3	7943.2	8072.4	7569.2	6999.8	6029.6
72.5°	573.2	587.3	695.2	986.6	1684.7	3312.9	6506.1	6778.3	6836.1	6271.8	4710.6
75°	359.1	363.5	405.9	506.4	749.5	1370.3	4213.2	4584.2	5103.9	4865.9	3153.8
77.5°	270.6	274.3	298.9	348.7	465.4	511.6	1954.5	2330.7	2923.4	2862.3	1569.5
80°	207.4	209.7	226.1	253.5	327.9	320.4	634.2	796.9	1220.0	1076.4	555.3
82.5°	162.9	163.5	177.7	182.8	229.0	215.7	318.2	354.7	492.9	409.6	271.4
85°	144.3	146.5	160.5	133.8	146.5	130.2	174.7	189.6	261.6	246.9	102.5
87.5°	73.7	77.3	134.6	114.5	73.7	61.8	76.5	82.6	106.3	115.3	49.9
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: P270388

CATALOG NUMBER: NAV-AF-02-D-UNV-T3-7027-1200

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1435.0	1435.0	1435.0	1435.0	1435.0	1435.0	1435.0	1435.0	1435.0	1435.0	1435.0
2.5°	1417.7	1418.6	1420.8	1424.5	1430.5	1437.8	1446.8	1455.8	1461.0	1464.6	1463.1
5°	1405.8	1406.7	1411.1	1417.7	1425.3	1436.4	1451.2	1462.4	1470.5	1475.7	1475.0
7.5°	1391.0	1393.2	1402.2	1409.6	1420.0	1428.9	1440.8	1451.2	1459.4	1464.6	1463.9
10°	1379.8	1382.1	1393.2	1403.0	1411.9	1413.4	1411.1	1408.2	1407.4	1411.1	1409.6
12.5°	1374.6	1379.1	1389.6	1396.2	1392.6	1378.4	1362.0	1355.4	1353.0	1360.6	1361.3
15°	1376.2	1379.8	1388.8	1384.3	1364.3	1340.5	1331.6	1336.8	1341.2	1345.8	1346.4
17.5°	1379.8	1382.1	1384.3	1367.9	1339.7	1324.1	1321.1	1315.9	1302.5	1295.1	1294.4
20°	1386.5	1389.6	1385.8	1359.9	1334.5	1313.7	1278.0	1246.0	1215.5	1199.1	1192.5
22.5°	1409.6	1411.9	1400.6	1375.5	1336.8	1269.0	1197.0	1141.9	1095.2	1069.8	1060.2
25°	1455.0	1458.7	1443.0	1411.1	1310.0	1191.8	1090.0	1015.5	956.9	926.3	918.2
27.5°	1534.6	1538.3	1521.1	1437.8	1247.6	1088.4	965.0	891.4	840.9	814.9	811.1
30°	1653.5	1658.7	1643.1	1437.1	1152.3	956.9	843.1	800.0	770.9	753.0	752.4
32.5°	1818.4	1837.8	1774.0	1411.9	1034.8	823.7	751.0	736.0	721.9	710.0	710.0
35°	2028.2	2073.5	1903.2	1359.0	905.5	733.0	699.6	685.4	667.6	655.0	653.4
37.5°	2278.7	2349.3	1995.4	1265.4	794.0	689.2	668.3	645.3	617.0	592.5	586.7
40°	2623.0	2639.3	2040.8	1113.0	710.7	665.5	639.4	610.4	574.6	547.2	544.3
42.5°	2968.7	2915.1	2031.8	949.4	663.2	643.8	609.6	577.7	545.7	522.6	522.6
45°	3361.9	3156.0	1964.2	785.1	620.0	619.3	582.1	551.6	527.1	510.0	506.4
47.5°	3738.1	3372.3	1847.5	663.8	575.5	594.8	564.2	539.7	517.5	501.1	498.1
50°	4194.6	3623.0	1723.4	579.1	532.3	573.2	556.9	544.3	522.6	494.3	491.5
52.5°	4648.1	3915.8	1627.4	515.2	494.3	556.1	561.4	562.8	542.8	487.7	483.9
55°	5135.2	4228.9	1526.3	465.4	463.2	548.0	571.7	570.2	560.5	489.1	483.3
57.5°	5598.2	4543.3	1375.5	430.5	438.6	539.7	573.9	550.1	533.1	496.7	487.1
60°	5982.0	4803.5	1153.9	405.9	417.8	523.4	559.0	523.4	494.3	495.1	486.3
62.5°	6168.5	4876.4	882.5	377.6	400.7	496.7	537.5	503.3	476.6	498.1	492.9
65°	6026.5	4668.9	629.0	351.6	380.0	465.4	524.9	486.3	467.7	513.0	507.1
67.5°	5516.5	4103.9	456.5	328.6	359.9	433.4	501.1	470.6	458.8	524.2	510.7
69°	4974.5	3543.4	395.6	315.2	345.7	416.4	485.4	462.4	452.0	508.5	489.1
70°	4524.0	3111.4	365.0	307.0	333.8	406.7	473.5	457.2	445.3	489.9	466.8
72.5°	3243.7	2011.0	307.0	282.4	302.5	385.2	447.5	438.0	420.0	442.3	427.6
75°	1959.7	1049.8	261.0	257.3	269.9	355.4	417.2	405.1	387.3	389.5	382.1
77.5°	900.3	484.7	218.6	227.5	235.6	318.2	380.0	366.5	350.2	344.2	344.9
80°	394.7	283.2	182.8	194.0	198.5	286.2	339.7	324.8	307.0	339.0	314.4
82.5°	213.3	164.3	142.7	150.1	162.9	249.1	295.2	275.8	258.7	301.1	243.1
85°	86.2	84.0	96.7	104.1	112.9	179.2	246.9	226.7	205.9	184.4	179.9
87.5°	37.2	40.2	47.6	50.6	60.2	111.5	165.7	144.9	145.7	125.0	122.7
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)