

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: P195819

Luminaire Tested: **NAV-AF-03-D-UNV-T3-7050-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P195819  
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-T3-7050-600  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(3) 70 CRI, 5000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 11938 lumens  
Efficiency: N/A  
Efficacy: 124.4 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

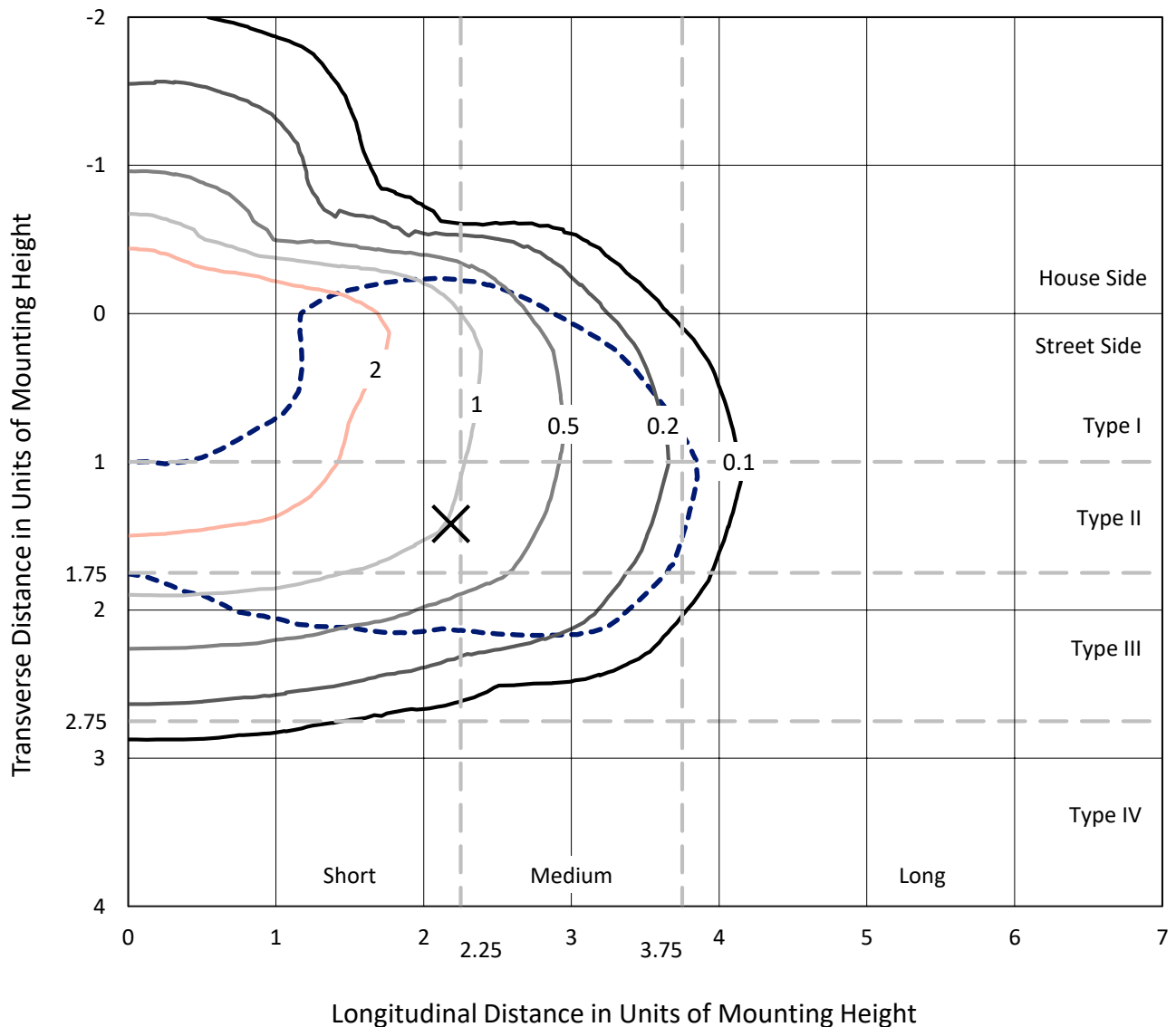
Input Watts (W): 96  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

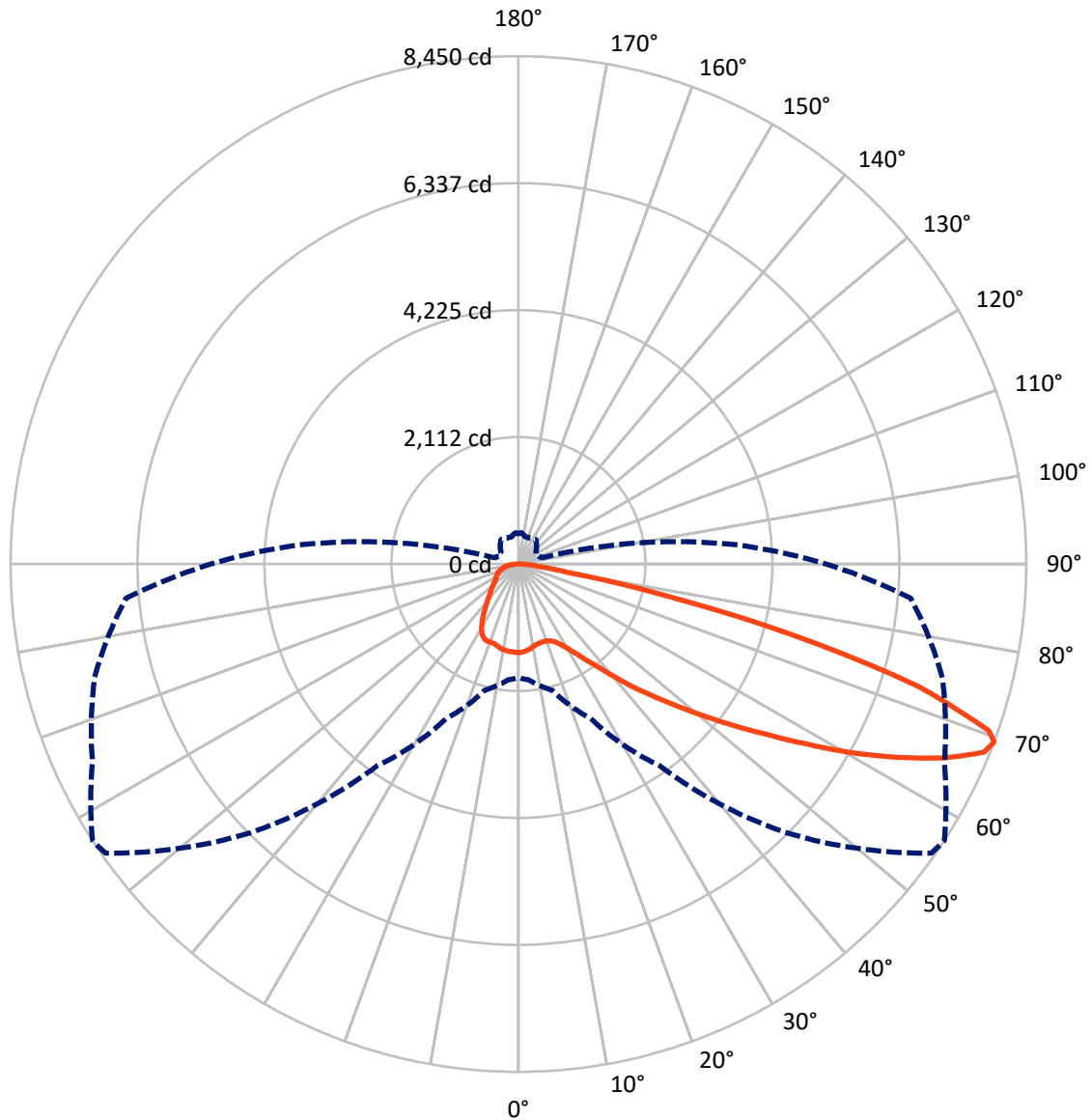
× Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 3.8 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
<b>House Side</b>	Lumens	2634.3	0.0	2634.3
	% Fixture	22.1	0.0	22.1
<b>Street Side</b>	Lumens	9303.7	0.0	9303.7
	% Fixture	77.9	0.0	77.9
<b>Total</b>	Lumens	11938.0	0.0	11938.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	138.1	1.2
10°-20°	392.6	3.3
20°-30°	653.2	5.5
30°-40°	1066.6	8.9
40°-50°	1800.1	15.1
50°-60°	2800.2	23.5
60°-70°	3335.6	27.9
70°-80°	1553.9	13.0
80°-90°	197.6	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°	11938.0	100.0
0°-180°	11938.0	100.0



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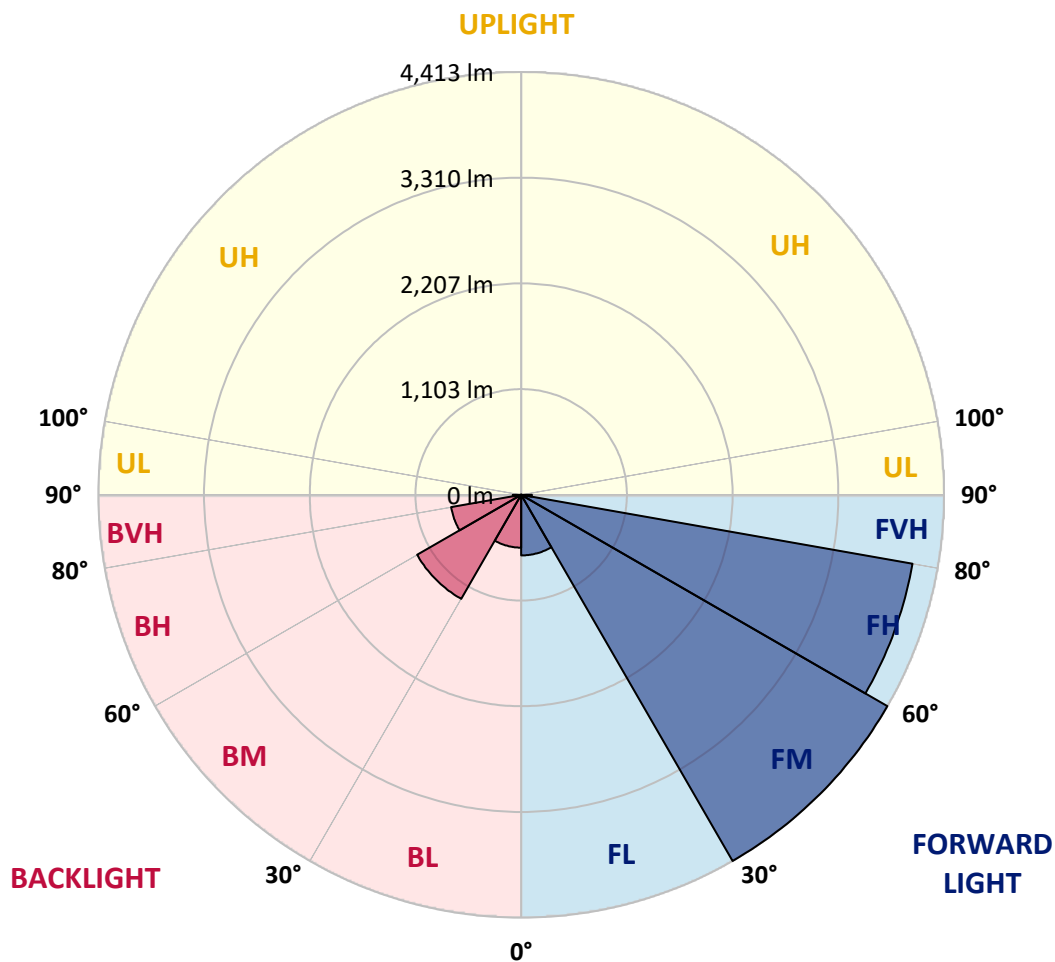
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	632.2	5.3			
FM	(30°-60°)	4413.1	37.0			
FH	(60°-80°)	4147.3	34.7			G2/5000
FVH	(80°-90°)	111.1	0.9			G2/225
BL	(0°-30°)	551.7	4.6	B2/1000		
BM	(30°-60°)	1253.8	10.5	B2/2500		
BH	(60°-80°)	742.3	6.2	B2/1000		G2/1000
BVH	(80°-90°)	86.5	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°	1475.1	1475.1	1475.1	1475.1	1475.1	1475.1	1475.1	1475.1	1475.1	1475.1	1475.1
2.5°	1466.6	1466.6	1470.5	1470.5	1470.5	1468.9	1464.4	1465.9	1462.8	1460.5	1456.7
5°	1436.8	1438.4	1443.0	1444.5	1446.8	1447.5	1447.5	1446.8	1447.5	1447.5	1445.2
7.5°	1395.6	1397.1	1402.4	1405.5	1412.4	1418.5	1421.6	1421.6	1425.4	1428.4	1429.2
10°	1370.4	1370.4	1373.4	1373.4	1378.8	1381.8	1391.8	1391.0	1401.7	1411.6	1416.2
12.5°	1367.3	1367.3	1365.8	1360.4	1357.4	1356.6	1366.5	1368.1	1384.1	1401.7	1410.1
15°	1377.2	1377.2	1372.6	1361.9	1350.5	1345.1	1355.1	1358.1	1375.7	1396.3	1409.3
17.5°	1409.3	1408.6	1398.6	1377.2	1357.4	1349.0	1352.0	1355.1	1371.1	1394.8	1410.9
20°	1480.4	1480.4	1459.0	1420.0	1385.6	1365.8	1361.2	1363.5	1374.9	1397.1	1417.7
22.5°	1605.0	1607.3	1569.1	1504.9	1446.0	1404.0	1385.6	1387.9	1393.3	1414.7	1437.6
25°	1788.4	1782.3	1728.0	1637.1	1545.4	1473.5	1436.1	1438.4	1438.4	1458.2	1481.9
27.5°	1982.5	1984.1	1906.1	1808.3	1687.5	1580.5	1520.9	1520.1	1519.4	1538.5	1563.7
30°	2201.9	2202.6	2112.5	1999.4	1861.0	1724.2	1634.8	1634.0	1627.1	1650.8	1683.7
32.5°	2441.9	2441.1	2336.4	2208.8	2055.1	1900.0	1783.8	1783.1	1777.7	1809.8	1849.6
35°	2707.8	2707.8	2603.9	2446.5	2280.6	2107.9	1973.4	1972.6	1975.7	2019.2	2056.7
37.5°	3028.1	3034.9	2909.6	2718.5	2537.4	2353.2	2196.5	2191.9	2169.0	2242.4	2304.3
40°	3362.1	3381.2	3251.2	3028.1	2832.4	2642.1	2469.4	2466.3	2446.5	2524.4	2624.5
42.5°	3723.6	3767.1	3622.7	3394.9	3181.7	2976.1	2802.6	2794.2	2717.8	2839.3	2996.0
45°	4197.4	4225.7	4016.3	3809.9	3608.9	3374.3	3167.9	3122.8	3046.4	3202.3	3405.6
47.5°	4519.9	4506.2	4375.5	4237.2	4108.0	3883.3	3566.1	3508.8	3415.6	3621.9	3845.8
50°	4720.2	4730.1	4656.7	4649.9	4643.0	4486.3	4015.5	3946.7	3839.0	4083.5	4344.9
52.5°	4852.4	4807.3	4820.3	4976.2	5165.0	5090.1	4523.8	4447.3	4336.5	4581.1	4876.1
55°	4797.4	4737.8	4857.8	5165.0	5609.0	5625.8	5081.7	5003.0	4908.2	5110.0	5515.0
57.5°	4569.6	4599.4	4789.0	5216.2	5912.5	6105.8	5722.9	5642.7	5456.2	5661.0	6121.9
60°	4249.4	4309.8	4599.4	5135.2	6124.9	6479.5	6426.8	6373.3	6052.3	6197.5	6759.3
62.5°	3905.5	3965.1	4321.2	4996.8	6029.4	6810.5	7117.7	7084.9	6710.4	6714.2	7163.6
65°	3397.2	3421.7	3785.5	4619.3	5764.2	7109.3	7809.4	7780.3	7339.4	7155.2	7276.7
67.5°	2565.7	2596.3	2895.1	3646.4	4957.1	6947.3	8362.0	8357.4	7717.7	7318.7	7007.7
69°	1894.6	1932.1	2175.9	2830.9	4098.8	6329.7	8387.9	8449.9	7820.1	7301.9	6552.9
70°	1386.4	1429.2	1654.7	2247.0	3414.0	5648.0	8165.5	8298.5	7781.1	7195.7	6198.3
72.5°	589.3	603.8	714.6	1014.2	1731.9	3405.6	6688.2	6967.9	7027.5	6447.4	4842.5
75°	369.1	373.7	417.3	520.5	770.4	1408.6	4331.2	4712.5	5246.8	5002.2	3242.1
77.5°	278.2	282.0	307.2	358.4	478.4	525.8	2009.3	2396.0	3005.1	2942.5	1613.4
80°	213.2	215.5	232.3	260.6	337.0	329.4	651.9	819.3	1254.2	1106.7	570.9
82.5°	167.4	168.1	182.7	188.0	235.4	221.6	327.1	364.6	506.7	421.1	279.0
85°	148.3	150.6	165.1	137.6	150.6	133.7	179.6	194.9	269.0	253.7	105.5
87.5°	75.7	79.5	138.3	117.7	75.7	63.4	78.7	84.8	109.3	118.5	51.2
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°	1475.1	1475.1	1475.1	1475.1	1475.1	1475.1	1475.1	1475.1	1475.1	1475.1	1475.1
2.5°	1457.5	1458.2	1460.5	1464.4	1470.5	1478.1	1487.3	1496.5	1501.8	1505.6	1504.1
5°	1445.2	1446.0	1450.6	1457.5	1465.1	1476.6	1491.9	1503.3	1511.7	1517.1	1516.3
7.5°	1430.0	1432.3	1441.4	1449.1	1459.8	1468.9	1481.2	1491.9	1500.3	1505.6	1504.9
10°	1418.5	1420.8	1432.3	1442.2	1451.4	1452.9	1450.6	1447.5	1446.8	1450.6	1449.1
12.5°	1413.1	1417.7	1428.4	1435.3	1431.5	1417.0	1400.2	1393.3	1391.0	1398.6	1399.4
15°	1414.7	1418.5	1427.7	1423.1	1402.4	1378.0	1368.8	1374.2	1378.8	1383.3	1384.1
17.5°	1418.5	1420.8	1423.1	1406.3	1377.2	1361.2	1358.1	1352.8	1339.0	1331.4	1330.6
20°	1425.4	1428.4	1424.6	1397.9	1371.9	1350.5	1313.8	1280.9	1249.6	1232.8	1225.9
22.5°	1449.1	1451.4	1439.9	1413.9	1374.2	1304.6	1230.5	1173.9	1125.8	1099.8	1089.9
25°	1495.7	1499.5	1483.5	1450.6	1346.7	1225.1	1120.4	1044.0	983.6	952.3	943.9
27.5°	1577.5	1581.3	1563.7	1478.1	1282.5	1118.9	992.0	916.4	864.4	837.6	833.8
30°	1699.8	1705.1	1689.1	1477.3	1184.6	983.6	866.7	822.4	792.6	774.2	773.4
32.5°	1869.4	1889.3	1823.6	1451.4	1063.9	846.8	771.9	756.6	742.1	729.9	729.9
35°	2085.0	2131.6	1956.6	1397.1	930.9	753.6	719.2	704.7	686.3	673.3	671.8
37.5°	2342.5	2415.1	2051.3	1300.8	816.2	708.5	687.1	663.4	634.4	609.1	603.0
40°	2696.4	2713.2	2097.9	1144.1	730.6	684.0	657.3	627.5	590.8	562.5	559.5
42.5°	3051.8	2996.7	2088.8	976.0	681.7	661.9	626.7	593.8	561.0	537.3	537.3
45°	3456.1	3244.4	2019.2	807.1	637.4	636.6	598.4	567.1	541.9	524.3	520.5
47.5°	3842.8	3466.8	1899.2	682.5	591.6	611.4	580.1	554.9	531.9	515.1	512.1
50°	4312.1	3724.3	1771.6	595.4	547.2	589.3	572.4	559.5	537.3	508.2	505.2
52.5°	4778.3	4025.5	1673.0	529.6	508.2	571.7	577.0	578.6	557.9	501.4	497.5
55°	5278.9	4347.2	1569.1	478.4	476.1	563.3	587.7	586.2	576.3	502.9	496.8
57.5°	5755.0	4670.5	1413.9	442.5	450.9	554.9	590.0	565.6	548.0	510.5	500.6
60°	6149.4	4938.0	1186.2	417.3	429.5	538.1	574.7	538.1	508.2	509.0	499.8
62.5°	6341.2	5012.9	907.2	388.3	411.9	510.5	552.6	517.4	489.9	512.1	506.7
65°	6195.2	4799.7	646.6	361.5	390.5	478.4	539.6	499.8	480.7	527.4	521.2
67.5°	5670.9	4218.8	469.3	337.8	369.9	445.6	515.1	483.8	471.6	538.8	525.1
69°	5113.8	3642.5	406.6	324.1	355.4	428.0	499.1	475.4	464.7	522.8	502.9
70°	4650.6	3198.5	375.3	315.6	343.2	418.1	486.8	470.0	457.8	503.7	480.0
72.5°	3334.5	2067.4	315.6	290.4	311.1	395.9	460.1	450.2	431.8	454.7	439.5
75°	2014.6	1079.2	268.3	264.4	277.4	365.3	428.8	416.5	398.2	400.5	392.8
77.5°	925.5	498.3	224.7	233.9	242.3	327.1	390.5	376.8	360.0	353.9	354.6
80°	405.8	291.2	188.0	199.5	204.1	294.2	349.3	334.0	315.6	348.5	323.3
82.5°	219.3	168.9	146.7	154.4	167.4	256.0	303.4	283.5	266.0	309.5	249.9
85°	88.7	86.4	99.4	107.0	116.2	184.2	253.7	233.1	211.7	189.5	185.0
87.5°	38.2	41.3	48.9	52.0	61.9	114.6	170.4	149.0	149.8	128.4	126.1
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)