

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: P196261

Luminaire Tested: **NAV-AF-01-D-UNV-T2**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196261  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24136)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-AF-01-D-UNV-T2  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(1) 70 CRI, 4000K, 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE II OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6117.3 lumens  
Efficiency: N/A  
Efficacy: 103.7 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type II - Medium - Full Cutoff  
BUG Rating: B1 - U0 - G2

Input Watts (W): 59  
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

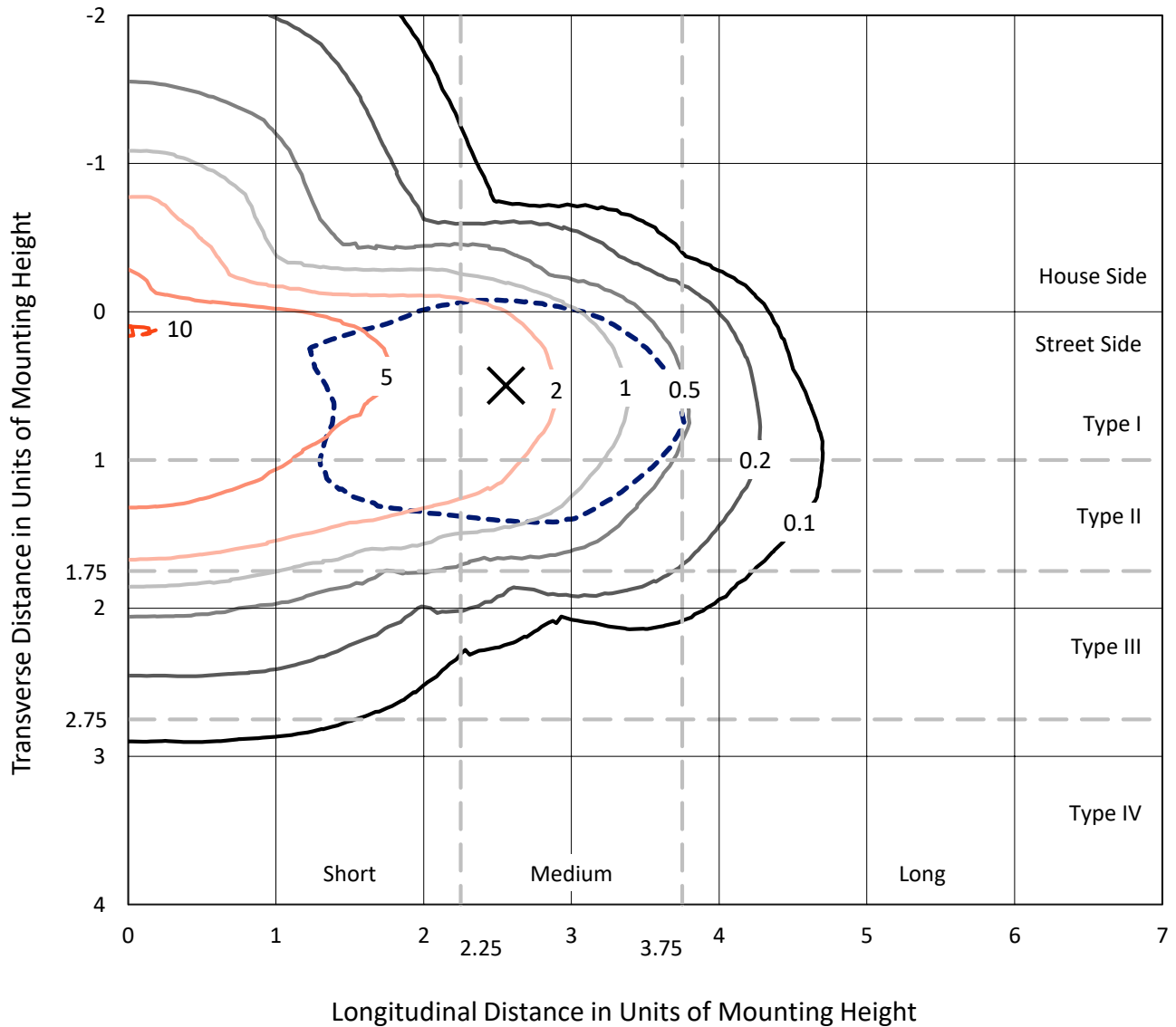


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### Iso-Footcandle Lines of Horizontal Illumination

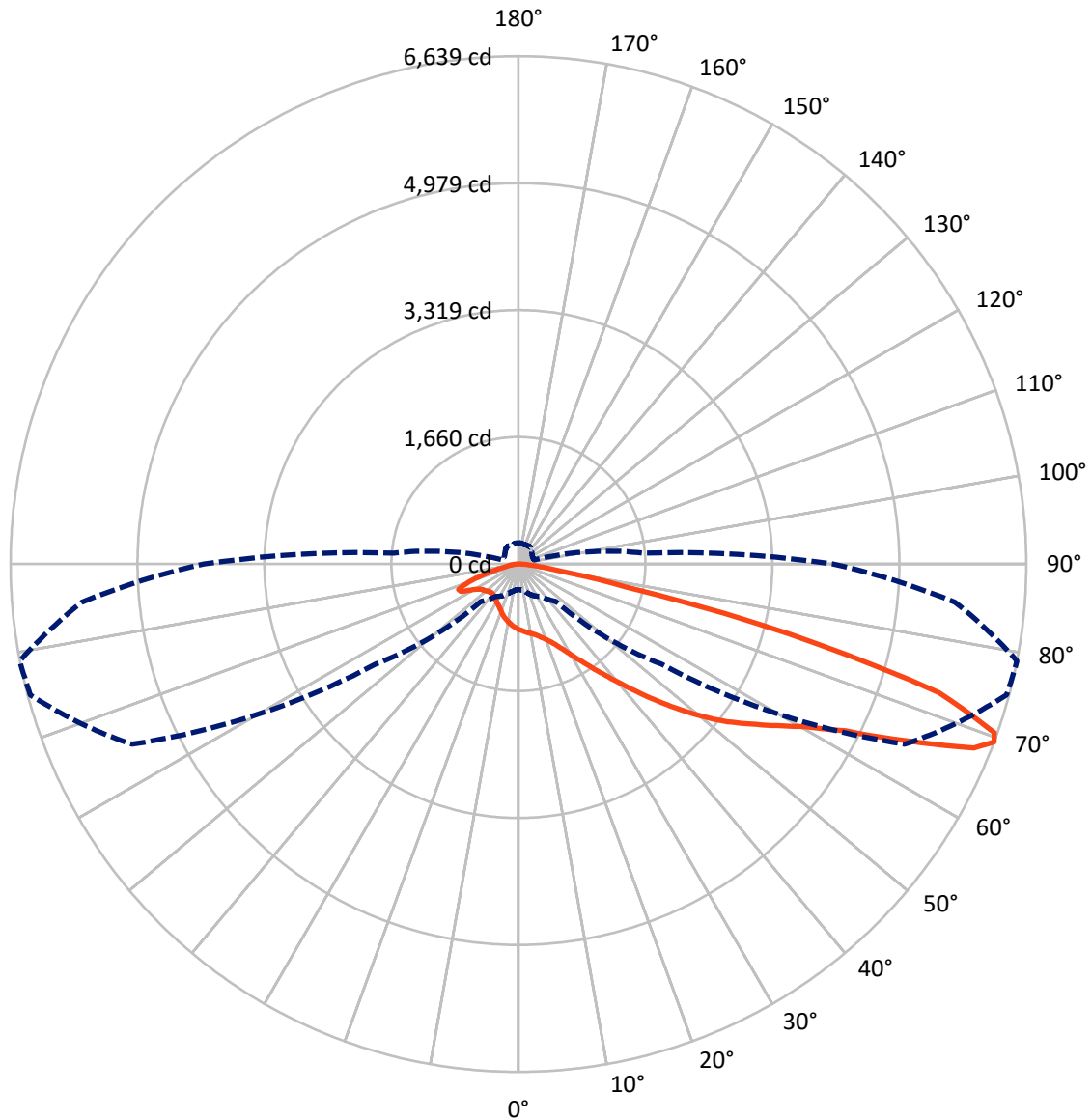
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 10.4 fc  
 Type II - Medium - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 79-Deg Lateral      - - - Horizontal Cone Through 69-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1150.8	0.0	1150.8
	% Fixture	18.8	0.0	18.8
<b>Street Side</b>	Lumens	4966.5	0.0	4966.5
	% Fixture	81.2	0.0	81.2
<b>Total</b>	Lumens	6117.3	0.0	6117.3
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	79.6	1.3
10°-20°	228.2	3.7
20°-30°	377.0	6.2
30°-40°	610.5	10.0
40°-50°	975.2	15.9
50°-60°	1396.7	22.8
60°-70°	1556.1	25.4
70°-80°	778.5	12.7
80°-90°	115.5	1.9
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°	6117.3	100.0
0°-180°	6117.3	100.0

**Coefficient of Utilization**



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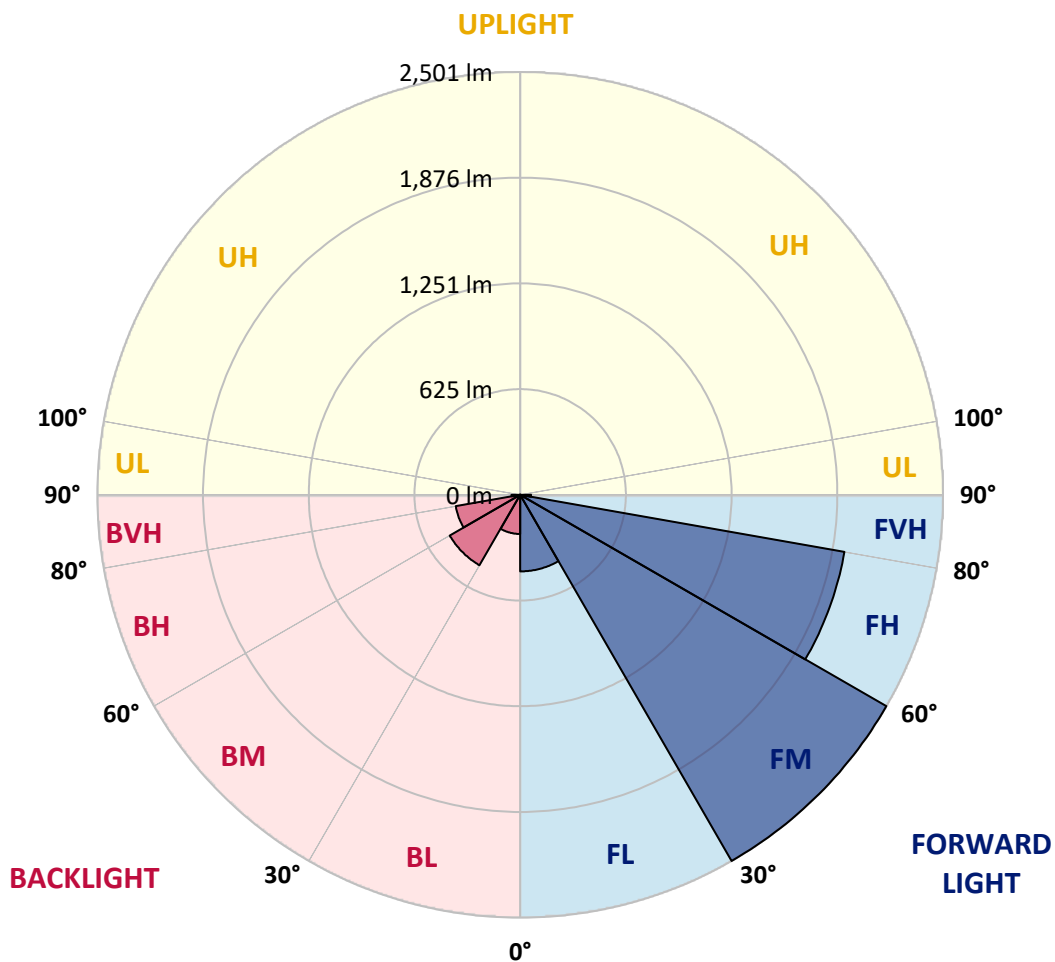
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	452.9	7.4			
FM (30°-60°)	2501.4	40.9			
FH (60°-80°)	1947.6	31.8			G2/5000
FVH (80°-90°)	64.6	1.1			G1/100
BL (0°-30°)	231.8	3.8	B1/500		
BM (30°-60°)	481.0	7.9	B1/1000		
BH (60°-80°)	386.9	6.3	B1/500		G1/500
BVH (80°-90°)	51.0	0.8			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 II Medium



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	79°	85°
0°	858.5	858.5	858.5	858.5	858.5	858.5	858.5	858.5	858.5	858.5	858.5
2.5°	942.4	940.5	940.1	934.1	930.9	924.0	908.1	891.7	876.5	868.5	860.0
5°	1021.3	1017.3	1015.3	1005.4	996.6	981.3	956.0	930.1	902.9	888.8	872.1
7.5°	1069.0	1069.4	1069.4	1061.3	1052.5	1034.1	1002.1	966.5	926.1	907.7	881.3
10°	1073.0	1073.4	1079.3	1081.4	1083.4	1073.8	1044.1	999.3	947.3	923.3	888.8
12.5°	1033.3	1036.1	1046.2	1060.6	1081.0	1091.4	1078.6	1034.5	974.5	945.3	903.3
15°	980.1	983.0	995.7	1017.7	1050.6	1085.4	1103.4	1074.9	1010.2	975.7	924.4
17.5°	954.1	957.3	966.1	983.7	1015.7	1062.5	1116.6	1118.2	1052.1	1012.5	949.7
20°	941.7	944.1	955.3	969.7	994.1	1038.9	1117.8	1163.8	1102.1	1056.1	980.5
22.5°	970.1	970.9	976.5	984.5	1001.0	1035.3	1117.0	1211.1	1164.6	1110.9	1020.1
25°	1053.3	1048.1	1044.1	1034.1	1038.1	1062.5	1129.7	1261.4	1244.6	1183.0	1073.0
27.5°	1151.8	1151.0	1140.6	1117.4	1102.5	1118.2	1166.2	1317.9	1342.7	1274.7	1142.2
30°	1261.4	1261.8	1251.1	1222.6	1192.7	1194.2	1224.3	1383.1	1460.0	1385.1	1227.4
32.5°	1376.3	1383.5	1363.5	1335.1	1298.6	1287.1	1307.4	1462.0	1595.6	1515.6	1326.3
35°	1513.6	1514.8	1492.8	1451.2	1414.7	1396.3	1415.2	1560.4	1752.1	1668.8	1446.8
37.5°	1656.1	1656.9	1634.1	1580.8	1534.8	1522.8	1543.6	1680.1	1917.8	1843.4	1588.4
40°	1772.5	1781.0	1763.0	1712.9	1666.5	1659.2	1689.3	1823.3	2129.5	2049.9	1756.9
42.5°	1904.6	1914.1	1892.6	1840.6	1803.8	1801.3	1848.2	1986.7	2340.0	2288.8	1947.8
45°	2053.5	2067.1	2037.0	1978.6	1947.4	2000.3	2003.0	2167.5	2582.5	2556.1	2162.7
47.5°	2215.9	2227.2	2202.7	2139.9	2105.8	2182.4	2154.7	2363.2	2844.6	2842.7	2395.2
50°	2341.2	2353.6	2356.1	2328.4	2292.7	2302.4	2321.2	2568.9	3106.0	3137.2	2635.7
52.5°	2318.4	2330.4	2384.4	2456.8	2514.1	2489.2	2512.1	2787.4	3358.6	3424.5	2864.3
55°	2134.3	2140.7	2242.0	2414.1	2657.7	2776.2	2777.8	3025.2	3598.6	3691.1	3081.2
57.5°	1802.5	1803.4	1935.0	2188.7	2574.2	2962.4	3197.2	3323.7	3849.2	3985.6	3350.2
60°	1275.4	1278.7	1431.9	1763.7	2274.3	2940.0	3648.3	3858.0	4139.4	4316.6	3696.7
62.5°	757.2	764.3	880.0	1146.2	1689.3	2651.8	3914.8	4808.5	4566.8	4802.0	4251.4
65°	492.7	498.7	567.9	701.5	998.1	1929.4	3827.2	5728.9	5375.6	5565.7	5048.6
67.5°	379.4	384.2	438.6	519.5	612.3	1042.9	3060.0	5921.9	6360.1	6419.3	5721.4
69°	333.4	337.4	377.4	455.0	515.5	690.4	2280.4	5571.7	6606.2	6638.6	5729.8
70°	308.9	312.2	349.7	417.1	473.4	551.1	1745.3	5165.1	6516.2	6599.1	5564.4
72.5°	254.5	257.4	284.2	335.7	387.0	392.6	773.2	3771.5	5486.8	5751.7	4708.8
75°	212.5	214.1	231.7	269.3	313.3	312.5	395.0	2136.3	3348.1	3663.9	2907.5
77.5°	177.3	178.5	190.1	213.3	247.3	246.1	278.1	922.1	1478.4	1426.3	1001.0
80°	156.5	157.3	163.3	169.3	190.9	189.7	206.1	423.4	601.5	555.9	378.6
82.5°	118.9	120.5	150.9	153.6	148.1	142.9	143.7	246.5	308.1	280.6	203.3
85°	67.2	67.6	96.9	113.2	128.9	96.9	93.3	127.3	152.1	133.3	88.9
87.5°	30.0	31.2	46.4	53.6	69.7	56.9	53.2	54.0	65.7	54.4	35.2
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°	858.5	858.5	858.5	858.5	858.5	858.5	858.5	858.5	858.5	858.5	858.5
2.5°	852.0	845.3	829.2	812.8	796.4	786.0	775.2	765.2	761.2	760.8	753.2
5°	855.6	839.6	803.2	763.2	725.2	695.6	670.7	654.7	639.1	636.4	629.5
7.5°	856.8	830.8	771.6	707.6	649.6	608.8	583.9	573.1	565.5	563.4	561.1
10°	856.4	819.6	736.4	648.8	582.7	551.9	542.7	545.1	548.3	549.8	549.8
12.5°	862.9	814.4	701.1	593.5	539.5	524.7	531.8	544.3	553.9	557.9	558.7
15°	874.4	811.2	662.4	545.4	509.0	512.7	530.3	548.3	561.9	567.9	569.5
17.5°	888.8	806.8	617.6	505.8	491.4	503.9	526.7	549.5	565.9	573.5	574.7
20°	904.9	800.5	571.1	476.3	475.9	491.4	514.2	539.9	557.5	565.9	565.5
22.5°	926.5	794.4	527.8	454.6	458.6	473.0	491.8	515.1	531.5	539.1	537.5
25°	955.3	788.8	489.1	435.5	439.1	448.7	461.9	479.5	491.0	495.0	492.2
27.5°	994.1	784.4	458.6	417.8	417.5	421.9	429.8	439.5	445.0	443.9	439.5
30°	1041.8	780.0	436.2	402.2	396.6	396.2	399.8	405.4	409.0	401.8	398.2
32.5°	1095.0	772.4	416.2	388.6	378.6	375.0	376.5	384.2	399.1	391.8	389.0
35°	1157.8	763.6	396.2	373.8	366.2	359.4	360.6	377.0	421.9	416.6	413.8
37.5°	1233.5	755.6	377.8	357.8	357.4	349.0	348.2	367.8	427.8	416.6	414.2
40°	1324.3	754.0	361.4	340.1	346.6	343.4	340.5	352.6	394.7	371.8	367.3
42.5°	1434.0	761.2	349.3	323.4	334.2	341.8	336.6	339.4	356.6	336.1	332.6
45°	1562.0	780.8	340.5	308.5	321.0	340.5	334.6	332.2	335.0	323.8	321.4
47.5°	1711.3	815.6	334.6	296.1	308.5	337.4	333.8	329.0	327.8	321.4	319.8
50°	1871.0	862.4	330.6	285.0	297.4	331.7	333.4	326.5	324.6	321.7	321.0
52.5°	2029.4	913.3	325.8	275.4	288.2	325.0	333.8	324.2	321.4	319.8	319.0
55°	2187.2	966.1	317.0	266.9	281.3	317.0	333.4	321.0	317.7	317.7	317.7
57.5°	2391.7	1046.6	305.4	260.1	272.5	306.6	328.2	317.3	312.9	313.3	313.7
60°	2687.0	1181.4	292.6	252.6	261.0	294.5	320.2	311.0	305.8	307.4	307.8
62.5°	3180.5	1417.1	275.0	241.7	248.9	281.7	309.7	302.2	297.4	300.1	300.5
65°	3838.4	1702.5	251.7	228.1	236.5	267.3	296.6	291.7	286.5	293.4	293.0
67.5°	4239.8	1786.1	227.3	213.7	224.5	252.2	280.2	278.1	274.6	286.5	285.7
69°	4108.2	1634.9	213.3	204.5	216.1	241.7	269.8	268.9	266.2	277.7	276.9
70°	3903.6	1493.6	204.5	198.5	211.8	235.3	262.9	262.9	260.1	270.2	268.1
72.5°	3135.7	1107.8	184.1	183.3	196.5	217.7	244.5	246.5	244.9	248.6	246.5
75°	1840.9	667.6	164.1	166.5	178.1	198.9	224.1	225.8	224.1	223.7	224.1
77.5°	638.3	299.3	144.8	148.4	158.5	179.7	201.7	204.9	202.5	199.7	200.5
80°	249.7	174.1	124.1	129.3	137.7	158.0	179.3	181.3	177.7	177.3	174.1
82.5°	150.1	106.1	96.5	104.9	115.3	137.3	154.9	154.1	151.3	167.7	146.9
85°	65.3	58.8	70.5	78.9	84.1	102.8	130.8	127.3	120.5	106.1	103.6
87.5°	26.4	30.4	38.8	46.9	50.4	66.4	89.6	86.4	87.7	72.0	71.6
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)