

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: P196255

Luminaire Tested: **NAV-AF-01-D-UNV-T2-800**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196255  
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-T2-800  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(1) 70 CRI, 4000K, 800mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE II OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4941.9 lumens  
Efficiency: N/A  
Efficacy: 112.3 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 - G1

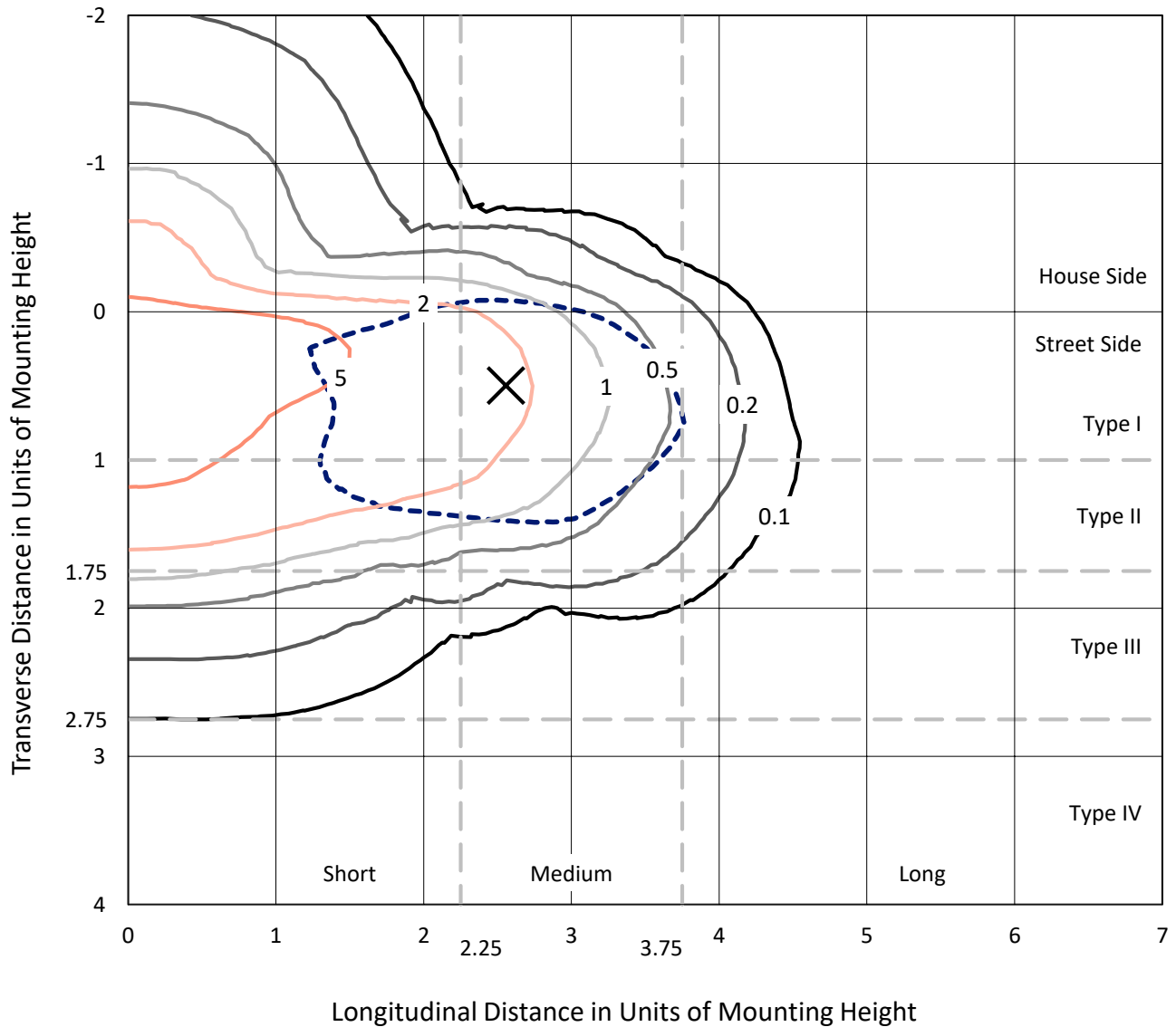
Input Watts (W): 44  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



REPORT NUMBER: P196255  
 CATALOG NUMBER: NAV-AF-01-D-UNV-T2-800

### Iso-Footcandle Lines of Horizontal Illumination

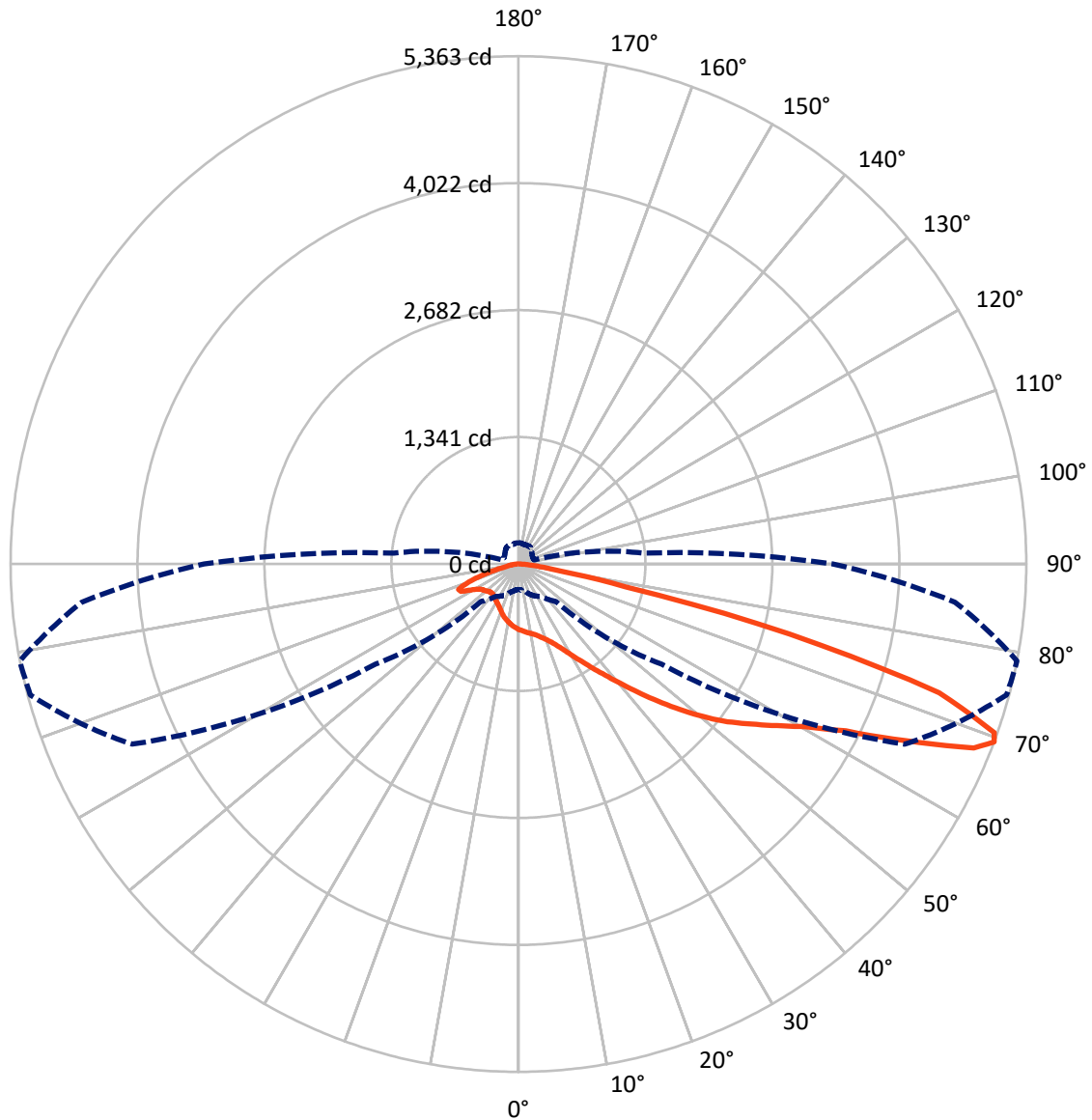
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 8.4 fc  
 Type II - Medium - Full Cutoff

REPORT NUMBER: P196255  
CATALOG NUMBER: NAV-AF-01-D-UNV-T2-800

### Luminous Intensity Polar Plot



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

REPORT NUMBER: P196255

CATALOG NUMBER: NAV-AF-01-D-UNV-T2-800

**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	929.7	0.0	929.7
	% Fixture	18.8	0.0	18.8
<b>Street Side</b>	Lumens	4012.2	0.0	4012.2
	% Fixture	81.2	0.0	81.2
<b>Total</b>	Lumens	4941.9	0.0	4941.9
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	64.3	1.3
10°-20°	184.3	3.7
20°-30°	304.6	6.2
30°-40°	493.2	10.0
40°-50°	787.9	15.9
50°-60°	1128.3	22.8
60°-70°	1257.1	25.4
70°-80°	628.9	12.7
80°-90°	93.3	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°	4941.9	100.0
0°-180°	4941.9	100.0



REPORT NUMBER: P196255

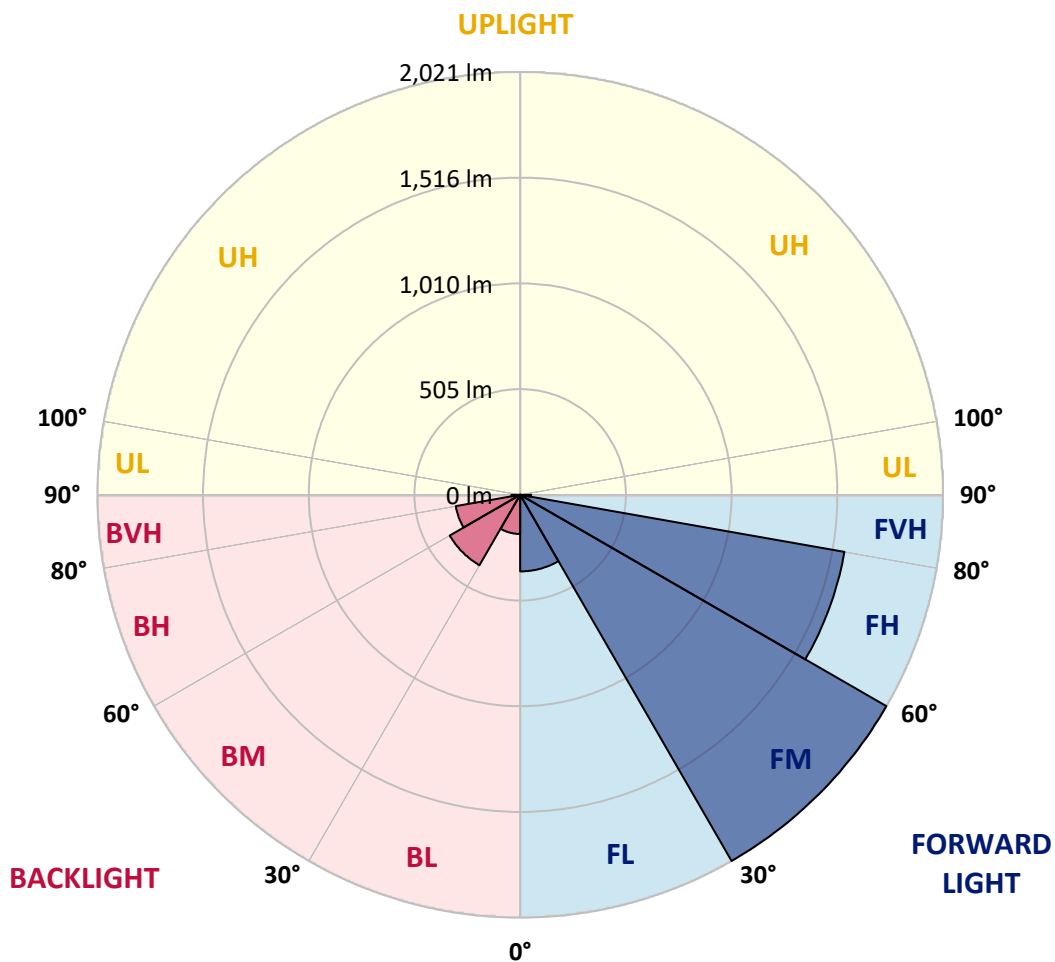
CATALOG NUMBER: NAV-AF-01-D-UNV-T2-800

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	365.9	7.4			
FM (30°-60°)	2020.8	40.9			
FH (60°-80°)	1573.4	31.8			G1/1800
FVH (80°-90°)	52.2	1.1			G1/100
BL (0°-30°)	187.3	3.8	B1/500		
BM (30°-60°)	388.6	7.9	B1/1000		
BH (60°-80°)	312.6	6.3	B1/500		G1/500
BVH (80°-90°)	41.2	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-G1**

Type II Medium





REPORT NUMBER: P196255

CATALOG NUMBER: NAV-AF-01-D-UNV-T2-800

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	79°	85°
0°	693.5	693.5	693.5	693.5	693.5	693.5	693.5	693.5	693.5	693.5	693.5
2.5°	761.4	759.7	759.4	754.6	752.0	746.5	733.6	720.4	708.1	701.5	694.8
5°	825.1	821.8	820.2	812.1	805.1	792.8	772.4	751.4	729.4	718.1	704.5
7.5°	863.6	863.9	863.9	857.4	850.3	835.4	809.6	780.8	748.2	733.3	712.0
10°	866.7	867.2	872.0	873.6	875.2	867.5	843.5	807.3	765.3	745.8	718.1
12.5°	834.8	837.1	845.2	856.8	873.3	881.7	871.3	835.8	787.3	763.6	729.7
15°	791.8	794.0	804.3	822.1	848.6	876.8	891.4	868.4	816.0	788.2	746.9
17.5°	770.8	773.4	780.5	794.7	820.6	858.4	902.0	903.4	850.0	818.0	767.2
20°	760.8	762.7	771.7	783.4	803.1	839.3	903.0	940.2	890.4	853.2	792.1
22.5°	783.7	784.4	788.9	795.3	808.6	836.4	902.3	978.4	940.8	897.5	824.1
25°	851.0	846.8	843.5	835.4	838.7	858.4	912.7	1019.1	1005.5	955.7	866.7
27.5°	930.5	929.9	921.5	902.7	890.7	903.4	942.1	1064.7	1084.7	1029.7	922.7
30°	1019.1	1019.4	1010.7	987.8	963.4	964.7	989.0	1117.4	1179.5	1119.0	991.5
32.5°	1111.8	1117.7	1101.5	1078.6	1049.1	1039.7	1056.3	1181.1	1289.0	1224.4	1071.4
35°	1222.7	1223.8	1206.0	1172.3	1142.9	1128.0	1143.2	1260.6	1415.5	1348.2	1168.7
37.5°	1337.8	1338.5	1320.1	1277.1	1239.9	1230.2	1247.0	1357.3	1549.3	1489.2	1283.2
40°	1431.9	1438.8	1424.2	1383.7	1346.3	1340.5	1364.7	1473.0	1720.3	1656.0	1419.3
42.5°	1538.6	1546.4	1528.9	1486.9	1457.2	1455.2	1493.1	1604.9	1890.4	1849.0	1573.5
45°	1658.9	1669.9	1645.6	1598.5	1573.2	1616.0	1618.2	1751.1	2086.3	2065.0	1747.2
47.5°	1790.2	1799.3	1779.5	1728.8	1701.3	1763.1	1740.8	1909.1	2298.1	2296.5	1935.0
50°	1891.3	1901.4	1903.3	1881.0	1852.3	1860.0	1875.2	2075.4	2509.2	2534.5	2129.4
52.5°	1872.9	1882.6	1926.3	1984.8	2031.1	2011.0	2029.4	2251.8	2713.2	2766.6	2313.9
55°	1724.2	1729.4	1811.2	1950.3	2147.1	2242.8	2244.1	2443.9	2907.2	2981.9	2489.1
57.5°	1456.2	1456.9	1563.2	1768.2	2079.6	2393.2	2583.0	2685.1	3109.6	3219.8	2706.4
60°	1030.4	1033.0	1156.9	1424.9	1837.4	2375.1	2947.3	3116.7	3344.0	3487.2	2986.4
62.5°	611.7	617.6	711.0	926.0	1364.7	2142.3	3162.7	3884.6	3689.3	3879.4	3434.6
65°	398.0	402.8	458.8	566.7	806.3	1558.7	3091.9	4628.2	4342.7	4496.3	4078.6
67.5°	306.5	310.4	354.4	419.6	494.7	842.5	2472.1	4784.0	5138.1	5186.0	4622.0
69°	269.3	272.5	304.8	367.6	416.4	557.7	1842.2	4501.1	5336.9	5363.1	4628.9
70°	249.6	252.2	282.5	336.9	382.5	445.2	1409.9	4172.6	5264.1	5331.1	4495.4
72.5°	205.6	207.9	229.6	271.3	312.6	317.2	624.6	3046.9	4432.5	4646.7	3804.0
75°	171.7	173.0	187.2	217.6	253.2	252.5	319.1	1725.8	2704.8	2959.9	2348.9
77.5°	143.2	144.2	153.5	172.4	199.8	198.9	224.7	744.9	1194.3	1152.3	808.6
80°	126.4	127.1	132.0	136.8	154.3	153.2	166.5	342.1	485.9	449.1	305.9
82.5°	96.1	97.3	121.9	124.2	119.6	115.4	116.1	199.2	249.0	226.7	164.3
85°	54.3	54.6	78.3	91.5	104.1	78.3	75.3	102.8	122.9	107.6	71.8
87.5°	24.2	25.3	37.5	43.4	56.3	45.9	43.0	43.7	53.0	44.0	28.4
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: P196255

CATALOG NUMBER: NAV-AF-01-D-UNV-T2-800

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	693.5	693.5	693.5	693.5	693.5	693.5	693.5	693.5	693.5	693.5	693.5
2.5°	688.3	682.8	669.9	656.6	643.4	634.9	626.3	618.2	614.9	614.6	608.5
5°	691.2	678.3	648.9	616.5	585.8	561.9	541.9	529.0	516.3	514.0	508.6
7.5°	692.2	671.2	623.4	571.6	524.8	491.7	471.7	463.0	456.8	455.2	453.3
10°	691.9	662.2	594.8	524.1	470.8	445.8	438.4	440.4	442.9	444.3	444.3
12.5°	697.0	658.0	566.4	479.5	435.8	423.9	429.6	439.7	447.4	450.7	451.3
15°	706.4	655.3	535.1	440.7	411.2	414.2	428.4	442.9	453.9	458.8	460.0
17.5°	718.1	651.8	498.9	408.7	397.0	407.0	425.4	443.9	457.2	463.3	464.3
20°	731.0	646.6	461.4	384.7	384.4	397.0	415.4	436.2	450.4	457.2	456.8
22.5°	748.5	641.8	426.5	367.2	370.5	382.2	397.3	416.1	429.3	435.5	434.2
25°	771.7	637.2	395.1	351.8	354.7	362.4	373.1	387.3	396.7	400.0	397.6
27.5°	803.1	633.7	370.5	337.6	337.2	340.7	347.2	355.0	359.6	358.5	355.0
30°	841.6	630.1	352.4	324.9	320.4	320.1	322.9	327.5	330.4	324.6	321.7
32.5°	884.5	624.0	336.2	313.9	305.9	302.9	304.2	310.4	322.3	316.5	314.3
35°	935.4	616.8	320.1	302.0	295.8	290.3	291.3	304.5	340.7	336.6	334.3
37.5°	996.5	610.4	305.2	289.1	288.7	281.9	281.3	297.2	345.7	336.6	334.6
40°	1069.8	609.2	292.0	274.8	280.0	277.4	275.2	284.8	318.8	300.3	296.8
42.5°	1158.4	614.9	282.2	261.3	270.0	276.1	271.9	274.2	288.1	271.6	268.6
45°	1261.9	630.8	275.2	249.3	259.3	275.2	270.3	268.3	270.6	261.6	259.6
47.5°	1382.5	658.9	270.3	239.3	249.3	272.5	269.6	265.8	264.8	259.6	258.3
50°	1511.5	696.7	267.1	230.2	240.2	268.0	269.3	263.8	262.2	259.9	259.3
52.5°	1639.5	737.8	263.2	222.4	232.8	262.5	269.6	261.9	259.6	258.3	257.7
55°	1766.9	780.5	256.0	215.6	227.3	256.0	269.3	259.3	256.7	256.7	256.7
57.5°	1932.1	845.5	246.7	210.1	220.1	247.7	265.1	256.4	252.9	253.2	253.5
60°	2170.7	954.4	236.3	204.0	210.8	237.9	258.6	251.2	247.0	248.3	248.6
62.5°	2569.3	1144.9	222.1	195.3	201.1	227.6	250.2	244.1	240.2	242.4	242.8
65°	3100.9	1375.4	203.4	184.3	191.1	215.9	239.6	235.7	231.5	237.0	236.7
67.5°	3425.1	1443.0	183.6	172.7	181.4	203.7	226.3	224.7	221.8	231.5	230.9
69°	3318.8	1320.7	172.4	165.2	174.6	195.3	217.9	217.3	215.0	224.3	223.7
70°	3153.6	1206.6	165.2	160.4	171.0	190.1	212.4	212.4	210.1	218.2	216.7
72.5°	2533.1	894.9	148.7	148.1	158.8	175.8	197.5	199.2	197.8	200.8	199.2
75°	1487.3	539.3	132.6	134.5	143.8	160.7	181.1	182.4	181.1	180.8	181.1
77.5°	515.7	241.8	117.0	120.0	128.1	145.2	163.0	165.5	163.6	161.3	161.9
80°	201.7	140.7	100.2	104.4	111.2	127.7	144.8	146.5	143.5	143.2	140.7
82.5°	121.2	85.7	77.9	84.7	93.1	110.9	125.1	124.5	122.2	135.4	118.7
85°	52.7	47.6	56.9	63.7	67.9	83.1	105.8	102.8	97.3	85.7	83.8
87.5°	21.4	24.6	31.4	37.8	40.7	53.7	72.4	69.9	70.8	58.2	57.9
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)