

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: P270311

Luminaire Tested: **NAV-AF-01-D-UNV-T3R-7027-800**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P270311  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24250)  
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-T3R-7027-800  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(1) 70 CRI, 2700K, 800mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE III  
ROADWAY OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4362.7 lumens  
Efficiency: N/A  
Efficacy: 99.2 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type III - Medium - Full Cutoff  
BUG Rating: B1 - U0 - G1

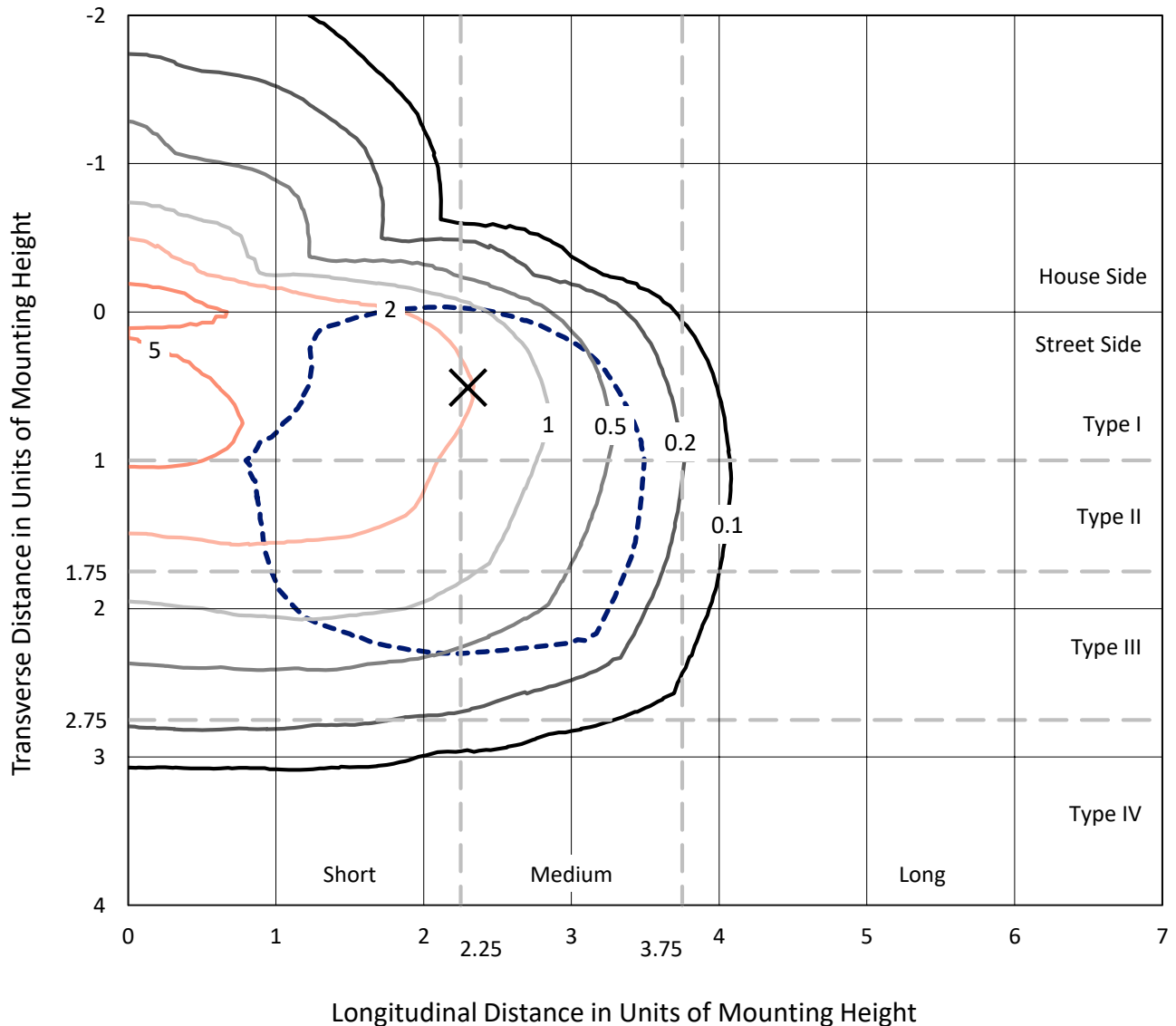
Input Watts (W): 44  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

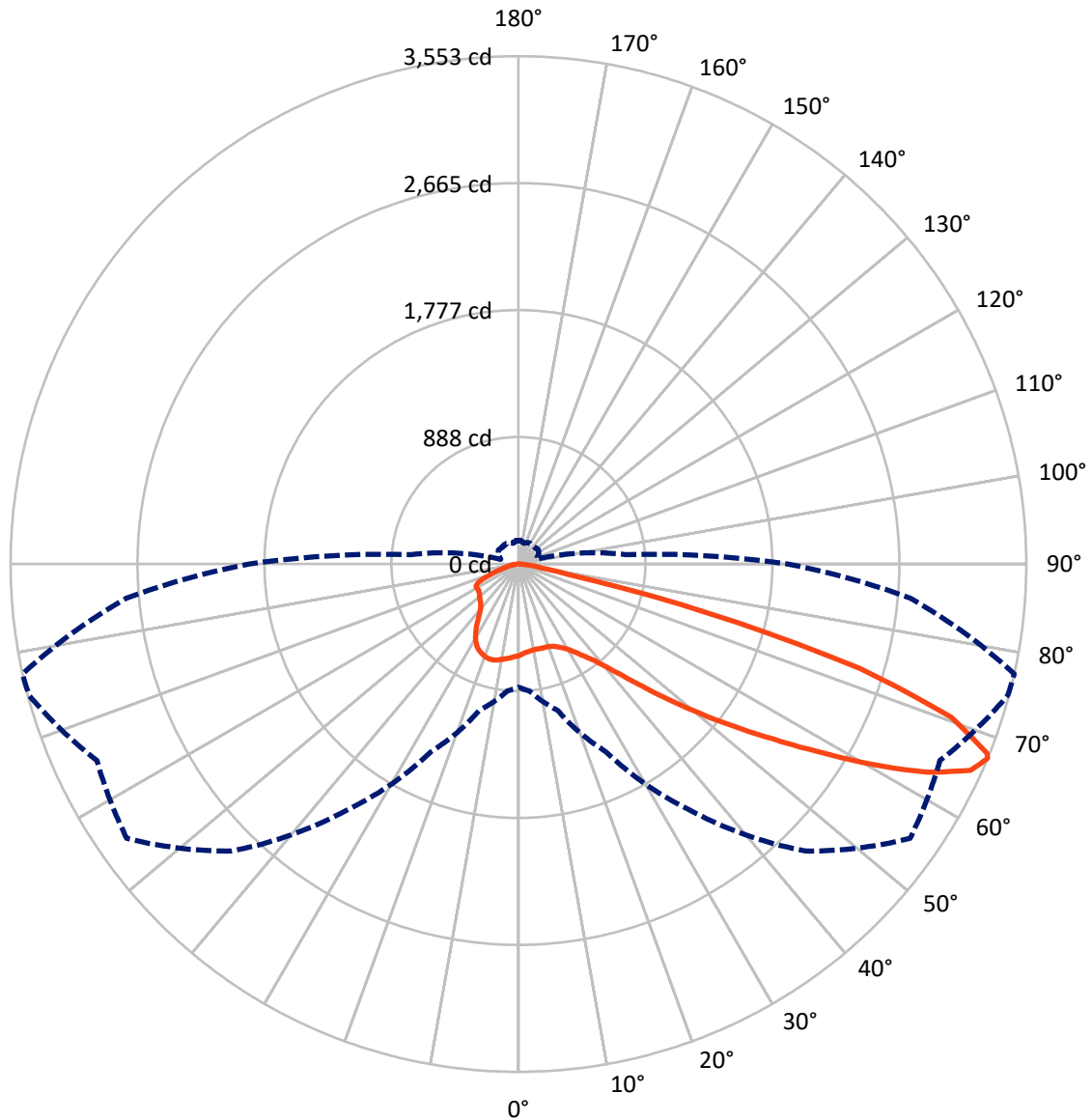
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 7.7 fc  
 Type III - Medium - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 77.5-Deg Lateral    - - - Horizontal Cone Through 67-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	749.7	0.0	749.7
	% Fixture	17.2	0.0	17.2
<b>Street Side</b>	Lumens	3612.9	0.0	3612.9
	% Fixture	82.8	0.0	82.8
<b>Total</b>	Lumens	4362.7	0.0	4362.7
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	57.2	1.3
10°-20°	158.4	3.6
20°-30°	269.1	6.2
30°-40°	430.5	9.9
40°-50°	662.7	15.2
50°-60°	919.4	21.1
60°-70°	1226.5	28.1
70°-80°	583.7	13.4
80°-90°	55.3	1.3
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°	4362.7	100.0
0°-180°	4362.7	100.0



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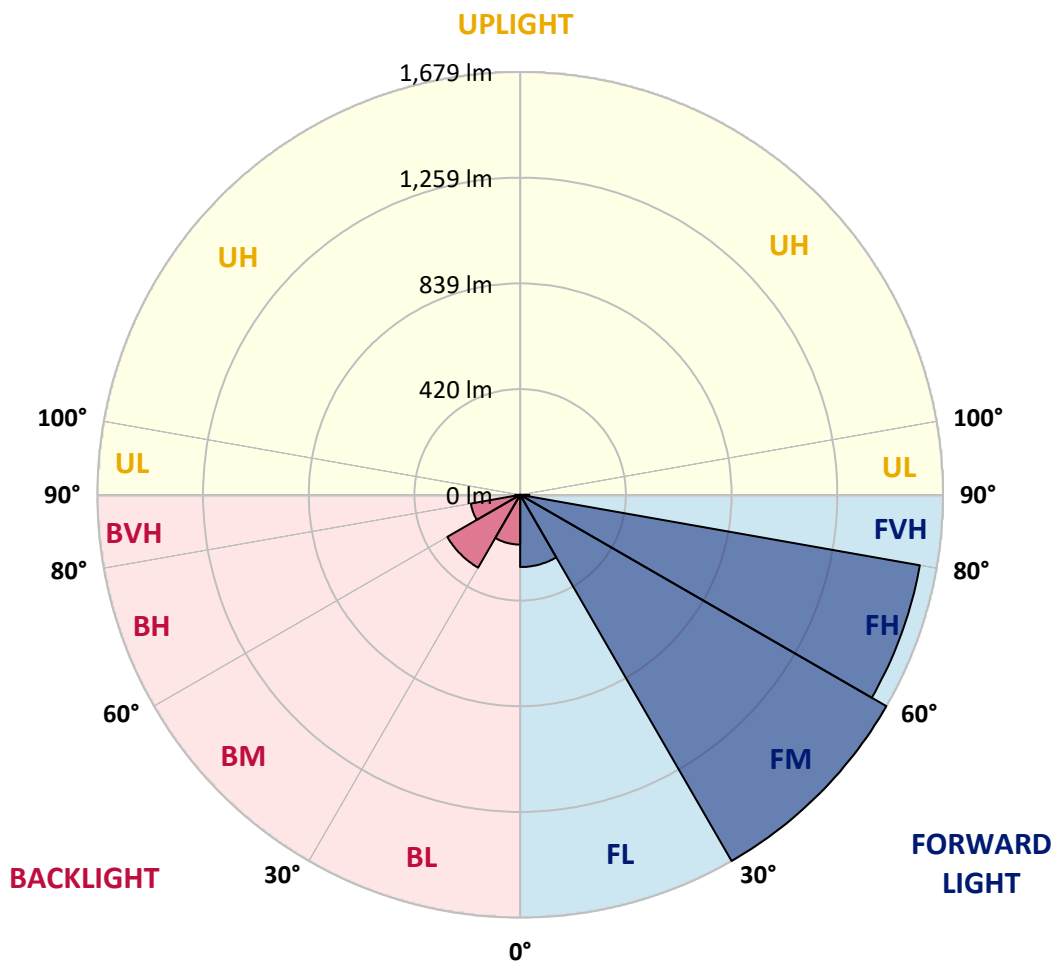
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	286.9	6.6			
FM	(30°-60°)	1678.8	38.5			
FH	(60°-80°)	1611.4	36.9			G1/1800
FVH	(80°-90°)	35.9	0.8			G1/100
BL	(0°-30°)	197.7	4.5	B1/500		
BM	(30°-60°)	333.8	7.7	B1/1000		
BH	(60°-80°)	198.8	4.6	B1/500		G1/500
BVH	(80°-90°)	19.4	0.4			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 III Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	77.5°	85°
0°	642.1	642.1	642.1	642.1	642.1	642.1	642.1	642.1	642.1	642.1	642.1
2.5°	575.8	578.4	578.7	586.6	590.0	598.9	608.6	617.2	624.9	627.6	632.3
5°	518.1	518.1	518.9	523.9	534.0	548.2	568.4	590.5	613.7	619.4	633.8
7.5°	487.8	488.4	488.9	494.0	501.9	514.5	534.8	564.9	603.5	613.0	638.1
10°	490.6	489.8	487.1	486.0	489.1	497.2	514.8	545.8	594.9	609.4	645.8
12.5°	532.9	531.3	522.4	509.3	497.5	494.5	506.7	536.1	590.8	609.4	659.0
15°	605.4	606.4	589.0	562.0	531.0	510.0	508.4	532.5	589.5	611.0	674.4
17.5°	699.8	700.3	676.1	637.0	585.4	542.0	519.4	532.5	589.5	612.6	689.3
20°	800.1	796.3	768.8	719.7	652.9	586.6	539.6	535.7	591.2	615.1	703.4
22.5°	886.1	882.7	853.7	802.2	725.7	639.1	566.8	546.6	600.0	625.1	723.0
25°	961.4	963.5	935.5	877.5	798.2	698.4	607.6	571.4	618.7	643.1	747.2
27.5°	1052.8	1048.7	1016.3	961.0	873.0	760.0	658.5	602.8	640.8	664.9	776.9
30°	1158.5	1156.6	1112.9	1056.0	955.2	828.6	708.9	636.4	669.5	694.8	814.1
32.5°	1286.8	1286.6	1239.7	1169.9	1047.7	906.3	768.5	682.5	711.6	737.2	863.5
35°	1432.2	1431.9	1383.4	1291.1	1154.1	992.4	838.7	738.5	763.6	790.7	922.3
37.5°	1533.0	1531.4	1506.1	1416.5	1272.0	1092.3	926.3	814.1	822.8	852.9	993.2
40°	1552.5	1562.2	1584.0	1531.2	1400.6	1203.5	1014.1	895.3	903.3	942.2	1082.5
42.5°	1531.4	1544.0	1616.6	1631.5	1529.3	1338.0	1124.1	1007.8	1018.0	1066.3	1187.3
45°	1513.0	1524.2	1615.1	1687.0	1656.2	1484.8	1261.5	1145.0	1164.5	1224.3	1307.0
47.5°	1481.8	1492.1	1583.3	1697.0	1728.8	1626.1	1426.8	1310.1	1343.4	1416.0	1443.5
50°	1480.1	1484.8	1539.8	1663.7	1753.9	1733.4	1609.9	1503.1	1554.3	1638.0	1594.5
52.5°	1439.3	1471.3	1521.2	1610.2	1754.4	1796.0	1790.3	1714.9	1793.8	1886.4	1760.0
55°	1188.4	1225.4	1459.1	1584.0	1751.2	1849.6	1955.2	1940.0	2063.4	2160.9	1945.5
57.5°	1109.6	1125.2	1280.2	1591.8	1778.1	1938.4	2119.8	2181.9	2372.0	2478.2	2168.1
60°	1088.0	1104.6	1244.2	1595.6	1851.2	2099.9	2343.4	2455.1	2734.7	2847.4	2420.8
62.5°	1064.1	1085.4	1246.9	1599.2	1979.7	2338.7	2639.9	2751.4	3107.1	3207.7	2657.5
65°	994.0	1022.4	1197.0	1577.1	2120.1	2638.7	3032.0	3060.4	3414.7	3478.6	2800.5
67°	861.0	892.0	1060.1	1449.1	2107.2	2840.6	3345.7	3253.8	3545.6	3553.3	2754.2
67.5°	819.0	851.1	1013.6	1396.1	2070.2	2867.1	3401.3	3280.5	3544.5	3535.9	2710.9
70°	551.5	587.6	717.8	1025.0	1660.5	2668.3	3387.8	3198.2	3312.1	3213.1	2329.0
72.5°	273.8	274.8	358.2	561.4	1006.1	1913.7	2826.1	2736.0	2684.8	2497.8	1709.1
75°	132.0	134.2	169.2	248.1	424.2	988.0	1927.4	1846.1	1571.9	1361.0	855.4
77.5°	100.6	103.0	131.3	161.5	176.8	322.2	954.5	771.6	455.5	363.8	241.0
80°	77.7	82.3	110.9	124.1	117.0	129.1	300.2	236.3	177.1	162.7	119.5
82.5°	60.6	63.4	94.1	94.1	80.8	86.5	139.6	136.5	110.0	99.3	64.1
85°	42.8	48.2	75.7	70.1	53.1	53.7	83.6	80.0	56.7	45.5	25.2
87.5°	19.1	24.6	54.0	45.9	28.2	21.9	34.2	29.4	22.4	17.2	11.6
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°	642.1	642.1	642.1	642.1	642.1	642.1	642.1	642.1	642.1	642.1	642.1
2.5°	637.7	642.1	648.8	652.9	658.3	660.4	662.6	666.4	669.2	668.5	667.1
5°	643.6	651.0	659.4	662.1	662.1	659.4	657.6	658.0	657.2	656.7	655.0
7.5°	652.3	662.3	668.2	665.6	657.2	646.7	636.7	630.7	625.1	621.5	622.6
10°	664.4	675.5	675.7	663.8	643.9	621.1	601.3	588.7	576.5	571.1	572.8
12.5°	682.1	693.0	683.6	658.0	623.0	587.0	550.9	524.8	501.3	495.7	494.0
15°	700.9	709.5	688.5	645.3	592.7	533.7	473.0	433.9	407.7	403.2	401.5
17.5°	717.2	722.1	686.0	622.6	545.0	451.9	381.3	354.9	349.5	352.1	352.1
20°	731.8	730.2	675.5	587.6	469.8	361.4	320.3	320.1	327.4	334.1	334.7
22.5°	750.3	737.5	658.7	535.6	380.0	301.6	294.5	301.6	309.6	317.1	317.9
25°	772.1	745.7	636.4	461.4	305.6	273.8	276.7	282.5	287.7	293.7	293.9
27.5°	793.9	751.8	604.9	374.4	265.1	255.8	259.2	261.5	262.9	266.6	266.6
30°	819.3	756.7	559.3	299.9	246.4	240.2	238.4	237.3	238.4	243.5	243.8
32.5°	851.1	765.3	497.0	257.3	237.8	229.2	219.5	214.2	217.8	227.0	228.7
35°	887.2	775.5	422.4	240.2	234.8	223.8	206.0	197.6	199.1	207.4	208.8
37.5°	932.5	788.8	348.7	236.3	237.8	223.3	199.9	187.9	182.0	182.3	182.0
40°	990.6	801.9	290.4	237.3	244.2	224.7	196.9	178.3	165.8	166.4	167.4
42.5°	1051.1	810.6	253.5	240.6	252.2	226.6	195.8	168.8	158.0	167.2	175.6
45°	1122.1	808.1	234.4	243.5	258.1	227.4	191.7	167.8	158.8	186.4	201.9
47.5°	1203.5	797.7	223.6	244.9	259.7	227.0	188.7	171.2	165.6	213.3	231.1
50°	1291.9	781.3	215.0	242.7	258.9	226.0	192.0	175.6	168.3	219.2	233.0
52.5°	1388.8	766.2	206.0	237.8	254.8	222.7	196.0	173.6	160.7	201.9	212.4
55°	1503.4	762.7	196.0	229.4	248.1	219.2	193.9	167.8	152.4	179.0	185.5
57.5°	1634.5	784.5	183.2	219.2	238.9	212.2	188.7	164.5	149.4	163.0	166.4
60°	1800.8	832.6	169.3	208.4	227.6	201.7	184.2	165.3	150.1	160.4	161.2
62.5°	1930.7	876.1	156.9	195.2	212.4	189.1	179.3	166.0	152.6	163.8	162.4
65°	1978.0	854.8	141.6	175.6	191.2	175.0	172.6	166.6	152.6	165.6	162.7
67°	1881.2	753.1	127.0	155.9	170.9	162.7	166.0	164.5	149.9	165.3	160.2
67.5°	1835.1	717.2	123.2	152.6	165.6	158.8	164.5	163.4	149.1	164.7	158.8
70°	1513.4	514.5	104.2	128.1	138.6	140.0	154.5	156.5	142.7	154.8	144.0
72.5°	1076.8	322.0	89.8	99.3	111.8	119.7	141.0	147.0	134.0	134.6	125.7
75°	532.9	172.8	80.0	76.5	87.0	99.8	123.0	134.0	121.4	112.2	109.2
77.5°	179.9	97.8	67.7	61.8	67.7	80.0	102.0	117.0	107.1	95.0	93.1
80°	93.1	71.1	52.9	49.6	53.4	62.1	79.8	97.3	91.4	91.9	75.7
82.5°	58.0	43.4	38.0	37.8	40.5	47.5	58.7	79.1	78.5	67.2	48.8
85°	26.9	25.2	24.3	25.2	26.0	26.9	38.3	56.4	59.6	36.1	32.1
87.5°	11.3	11.0	9.7	10.5	11.6	11.3	15.5	24.1	33.4	22.6	20.8
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)