

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: P196309

Luminaire Tested: **NAV-AF-01-D-UNV-T3**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196309  
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-01-D-UNV-T3  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(1) 70 CRI, 4000K, 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE III OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6251.2 lumens  
Efficiency: N/A  
Efficacy: 106.0 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type III - Short - Semi-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

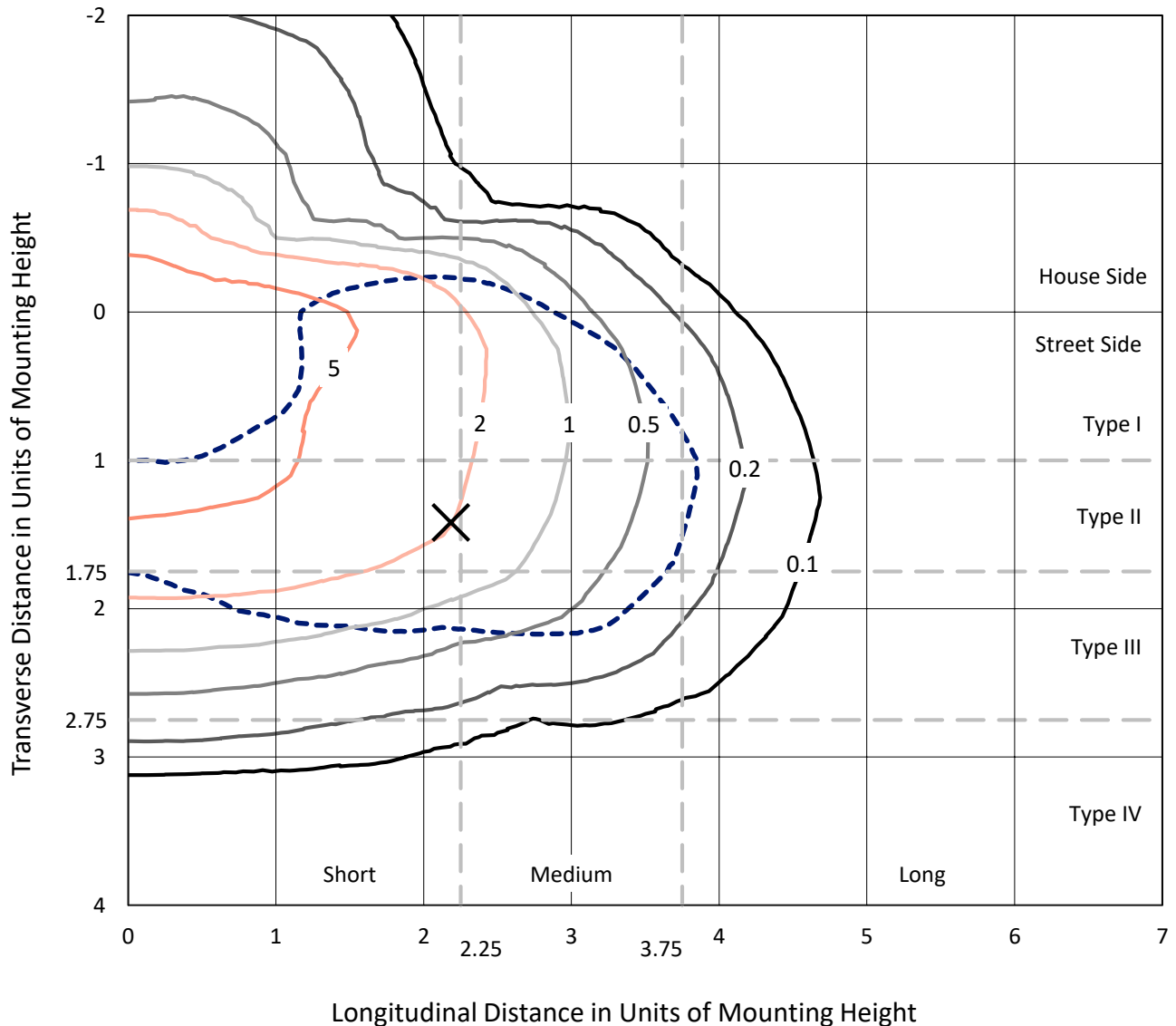


REPORT NUMBER: P196309

CATALOG NUMBER: NAV-AF-01-D-UNV-T3

### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

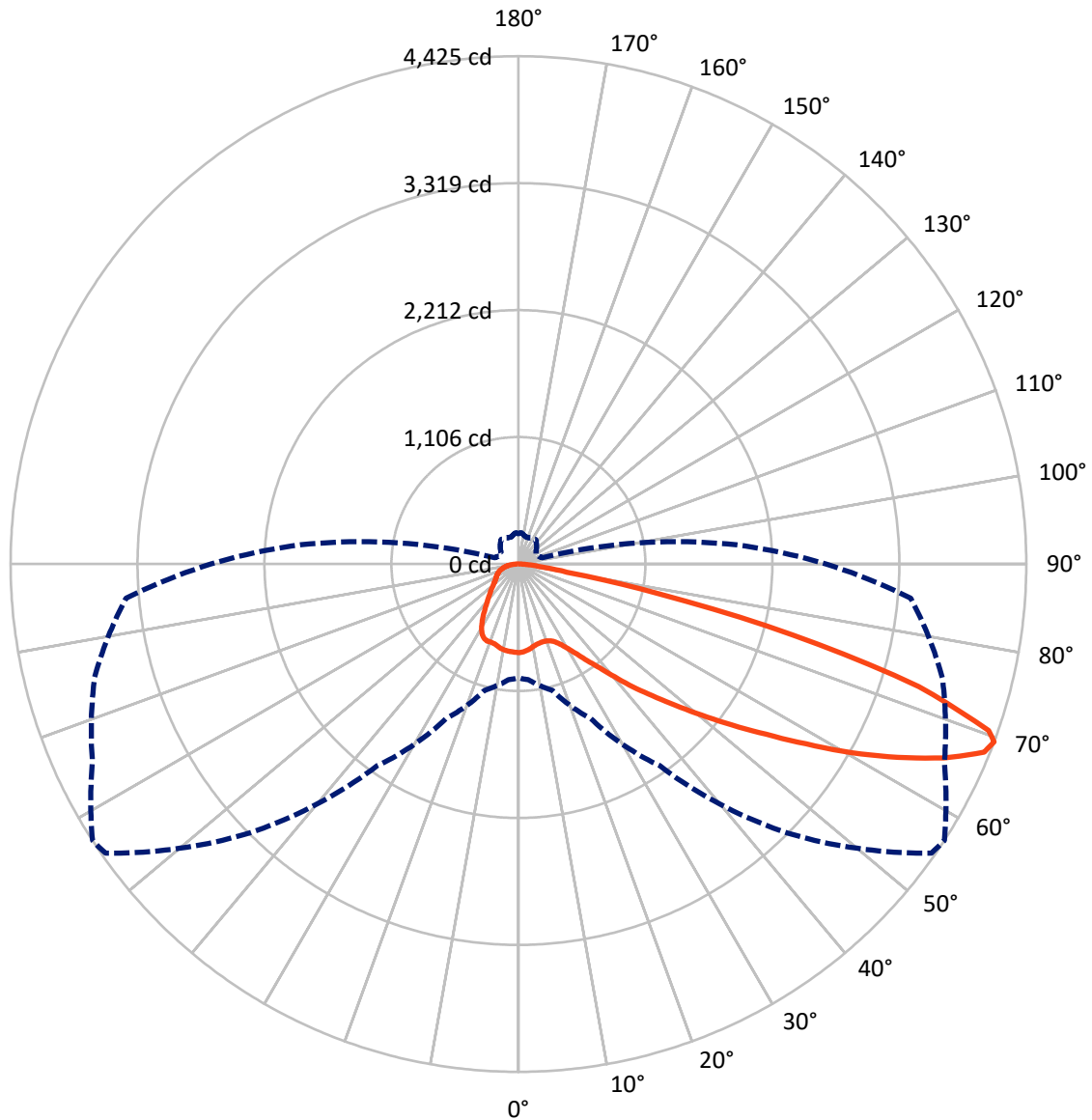


Based on 10 foot mounting height. Maximum calculated value = 7.9 fc  
 Type III - Short - Semi-Cutoff

REPORT NUMBER: P196309

CATALOG NUMBER: NAV-AF-01-D-UNV-T3

### Luminous Intensity Polar Plot



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

REPORT NUMBER: P196309

CATALOG NUMBER: NAV-AF-01-D-UNV-T3

**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1379.4	0.0	1379.4
	% Fixture	22.1	0.0	22.1
<b>Street Side</b>	Lumens	4871.8	0.0	4871.8
	% Fixture	77.9	0.0	77.9
<b>Total</b>	Lumens	6251.2	0.0	6251.2
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	72.3	1.2
10°-20°	205.6	3.3
20°-30°	342.0	5.5
30°-40°	558.5	8.9
40°-50°	942.6	15.1
50°-60°	1466.3	23.5
60°-70°	1746.7	27.9
70°-80°	813.7	13.0
80°-90°	103.5	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°	6251.2	100.0
0°-180°	6251.2	100.0



REPORT NUMBER: P196309

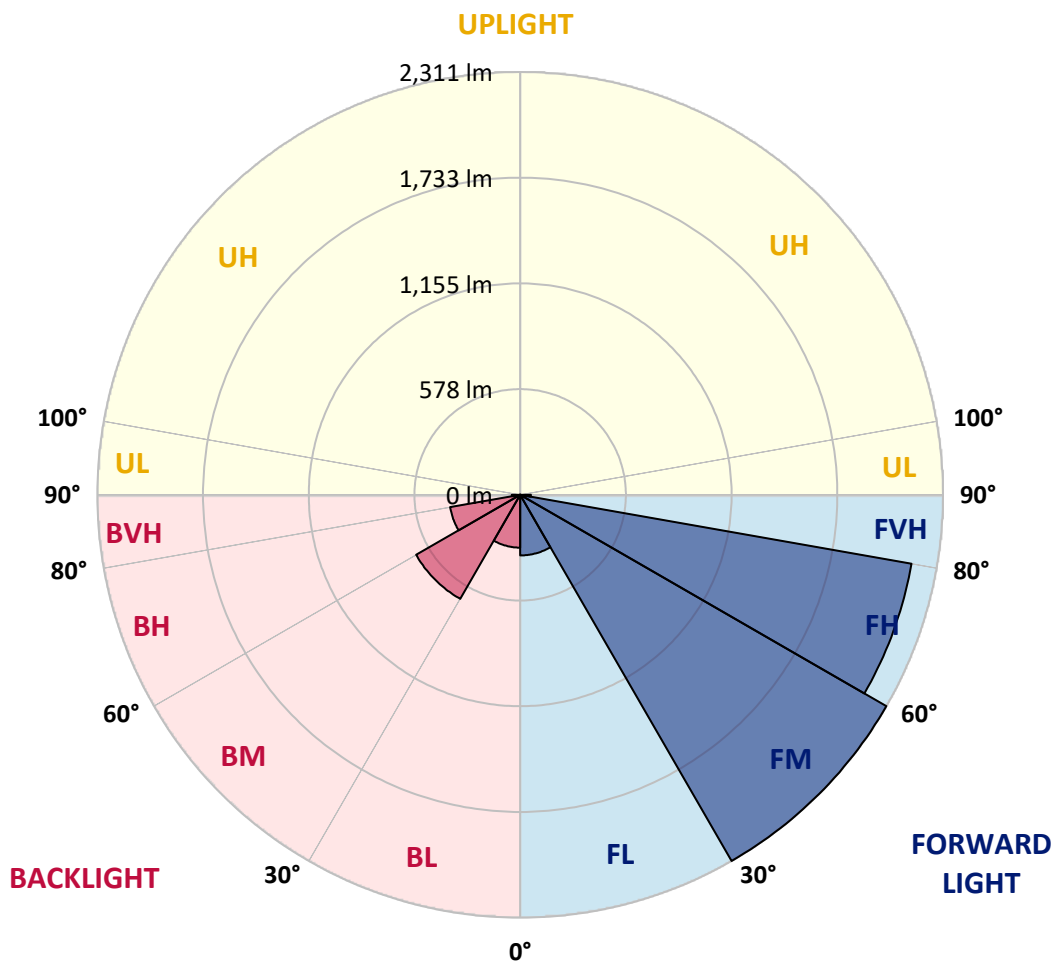
CATALOG NUMBER: NAV-AF-01-D-UNV-T3

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

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	331.1	5.3			
FM	(30°-60°)	2310.9	37.0			
FH	(60°-80°)	2171.7	34.7			G2/5000
FVH	(80°-90°)	58.2	0.9			G1/100
BL	(0°-30°)	288.9	4.6	B1/500		
BM	(30°-60°)	656.5	10.5	B1/1000		
BH	(60°-80°)	388.7	6.2	B1/500		G1/500
BVH	(80°-90°)	45.3	0.7			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 III Short





REPORT NUMBER: P196309

CATALOG NUMBER: NAV-AF-01-D-UNV-T3

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	57°	65°	75°	85°
0°	772.4	772.4	772.4	772.4	772.4	772.4	772.4	772.4	772.4	772.4	772.4
2.5°	768.0	768.0	770.0	770.0	770.0	769.2	766.8	767.6	766.0	764.8	762.8
5°	752.4	753.2	755.6	756.4	757.6	758.0	758.0	757.6	758.0	758.0	756.8
7.5°	730.8	731.6	734.4	736.0	739.6	742.8	744.4	744.4	746.3	748.0	748.4
10°	717.6	717.6	719.1	719.1	722.0	723.5	728.8	728.3	734.0	739.2	741.5
12.5°	716.0	716.0	715.1	712.4	710.7	710.3	715.6	716.4	724.8	734.0	738.4
15°	721.2	721.2	718.7	713.2	707.2	704.4	709.6	711.2	720.4	731.2	738.0
17.5°	738.0	737.5	732.4	721.2	710.7	706.3	708.0	709.6	718.0	730.4	738.8
20°	775.2	775.2	764.0	743.6	725.6	715.1	712.8	714.0	720.0	731.6	742.4
22.5°	840.5	841.7	821.6	788.0	757.2	735.2	725.6	726.8	729.6	740.8	752.8
25°	936.5	933.2	904.9	857.2	809.3	771.6	752.0	753.2	753.2	763.6	776.0
27.5°	1038.2	1038.9	998.1	946.8	883.6	827.7	796.4	796.1	795.7	805.6	818.9
30°	1153.0	1153.4	1106.2	1047.0	974.5	902.9	856.0	855.6	852.0	864.5	881.7
32.5°	1278.7	1278.3	1223.4	1156.7	1076.1	994.9	934.1	933.6	930.9	947.7	968.5
35°	1417.9	1417.9	1363.5	1281.0	1194.2	1103.8	1033.4	1033.0	1034.5	1057.3	1077.0
37.5°	1585.7	1589.3	1523.6	1423.5	1328.7	1232.2	1150.2	1147.8	1135.8	1174.2	1206.7
40°	1760.5	1770.5	1702.5	1585.7	1483.2	1383.5	1293.1	1291.5	1281.0	1321.9	1374.3
42.5°	1949.8	1972.7	1897.0	1777.7	1666.1	1558.4	1467.5	1463.1	1423.1	1486.8	1568.8
45°	2197.9	2212.7	2103.1	1995.1	1889.8	1766.9	1658.8	1635.3	1595.2	1676.9	1783.3
47.5°	2366.8	2359.6	2291.2	2218.8	2151.2	2033.4	1867.4	1837.3	1788.5	1896.6	2013.9
50°	2471.7	2476.9	2438.5	2434.8	2431.2	2349.2	2102.7	2066.7	2010.2	2138.3	2275.1
52.5°	2540.9	2517.3	2524.1	2605.8	2704.6	2665.4	2368.8	2328.8	2270.7	2398.8	2553.3
55°	2512.1	2480.9	2543.8	2704.6	2937.1	2945.9	2661.0	2619.8	2570.2	2675.8	2887.9
57.5°	2392.9	2408.4	2507.7	2731.4	3096.1	3197.2	2996.7	2954.8	2857.1	2964.3	3205.7
60°	2225.1	2256.7	2408.4	2689.0	3207.3	3392.9	3365.4	3337.4	3169.2	3245.3	3539.4
62.5°	2045.1	2076.3	2262.8	2616.6	3157.2	3566.2	3727.1	3709.9	3513.8	3515.9	3751.2
65°	1778.9	1791.7	1982.3	2418.9	3018.4	3722.7	4089.3	4074.1	3843.2	3746.8	3810.4
67.5°	1343.5	1359.5	1516.0	1909.4	2595.7	3637.9	4378.6	4376.3	4041.3	3832.4	3669.5
69°	992.2	1011.7	1139.4	1482.4	2146.4	3314.6	4392.2	4424.7	4095.0	3823.6	3431.4
70°	726.0	748.4	866.4	1176.6	1787.7	2957.6	4275.8	4345.5	4074.5	3767.9	3245.7
72.5°	308.5	316.2	374.2	531.1	906.8	1783.3	3502.3	3648.7	3680.0	3376.1	2535.7
75°	193.3	195.7	218.5	272.5	403.5	737.5	2268.0	2467.7	2747.4	2619.4	1697.7
77.5°	145.7	147.7	160.9	187.7	250.5	275.4	1052.1	1254.6	1573.6	1540.8	844.9
80°	111.7	112.8	121.6	136.5	176.5	172.5	341.4	429.0	656.7	579.5	298.9
82.5°	87.7	88.1	95.6	98.4	123.3	116.1	171.2	190.9	265.4	220.5	146.1
85°	77.6	78.9	86.4	72.0	78.9	70.1	94.0	102.1	140.9	132.9	55.2
87.5°	39.6	41.6	72.4	61.6	39.6	33.2	41.2	44.4	57.2	62.0	26.8
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: P196309

CATALOG NUMBER: NAV-AF-01-D-UNV-T3

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	772.4	772.4	772.4	772.4	772.4	772.4	772.4	772.4	772.4	772.4	772.4
2.5°	763.2	763.6	764.8	766.8	770.0	774.0	778.8	783.6	786.4	788.4	787.6
5°	756.8	757.2	759.6	763.2	767.2	773.2	781.2	787.2	791.7	794.4	794.0
7.5°	748.8	750.0	754.8	758.8	764.3	769.2	775.6	781.2	785.6	788.4	788.0
10°	742.8	744.0	750.0	755.2	760.0	760.8	759.6	758.0	757.6	759.6	758.8
12.5°	740.0	742.4	748.0	751.6	749.6	741.9	733.1	729.6	728.3	732.4	732.7
15°	740.8	742.8	747.6	745.2	734.4	721.6	716.8	719.5	722.0	724.4	724.8
17.5°	742.8	744.0	745.2	736.4	721.2	712.8	711.2	708.4	701.1	697.1	696.7
20°	746.3	748.0	746.0	732.0	718.4	707.2	687.9	670.7	654.4	645.6	641.9
22.5°	758.8	760.0	754.0	740.4	719.5	683.1	644.4	614.7	589.5	575.9	570.7
25°	783.2	785.2	776.8	759.6	705.1	641.5	586.7	546.7	515.1	498.7	494.3
27.5°	826.0	828.1	818.9	774.0	671.6	585.9	519.5	479.9	452.7	438.6	436.6
30°	890.1	892.8	884.4	773.6	620.3	515.1	453.9	430.7	415.0	405.4	405.0
32.5°	978.9	989.3	954.9	760.0	557.1	443.4	404.2	396.2	388.6	382.2	382.2
35°	1091.8	1116.1	1024.5	731.6	487.4	394.7	376.5	369.0	359.4	352.6	351.8
37.5°	1226.6	1264.7	1074.2	681.2	427.4	371.0	359.8	347.4	332.2	319.0	315.8
40°	1412.0	1420.8	1098.5	599.1	382.6	358.2	344.2	328.6	309.3	294.5	293.0
42.5°	1598.1	1569.2	1093.7	511.1	357.0	346.6	328.2	311.0	293.8	281.3	281.3
45°	1809.7	1698.9	1057.3	422.6	333.8	333.4	313.3	297.0	283.8	274.6	272.5
47.5°	2012.2	1815.3	994.5	357.4	309.7	320.2	303.7	290.5	278.5	269.8	268.1
50°	2258.0	1950.3	927.7	311.8	286.5	308.5	299.7	293.0	281.3	266.2	264.5
52.5°	2502.1	2107.9	876.1	277.3	266.2	299.3	302.2	303.0	292.2	262.5	260.5
55°	2764.2	2276.4	821.6	250.5	249.3	294.9	307.8	307.0	301.8	263.3	260.1
57.5°	3013.6	2445.7	740.4	231.7	236.1	290.5	308.9	296.1	286.9	267.3	262.2
60°	3220.0	2585.7	621.1	218.5	224.9	281.7	301.0	281.7	266.2	266.6	261.8
62.5°	3320.5	2625.0	475.1	203.3	215.7	267.3	289.4	271.0	256.6	268.1	265.4
65°	3244.1	2513.3	338.6	189.3	204.5	250.5	282.5	261.8	251.7	276.1	272.9
67.5°	2969.5	2209.2	245.7	176.9	193.7	233.3	269.8	253.3	246.9	282.1	275.0
69°	2677.8	1907.4	212.9	169.7	186.1	224.1	261.4	248.9	243.4	273.7	263.3
70°	2435.2	1674.9	196.5	165.3	179.7	218.9	254.9	246.1	239.7	263.7	251.3
72.5°	1746.1	1082.6	165.3	152.1	162.9	207.4	240.9	235.7	226.1	238.1	230.2
75°	1055.0	565.1	140.5	138.5	145.3	191.3	224.5	218.1	208.5	209.7	205.7
77.5°	484.7	261.0	117.6	122.4	126.8	171.2	204.5	197.3	188.5	185.3	185.7
80°	212.5	152.5	98.4	104.4	106.9	154.1	182.9	174.9	165.3	182.5	169.3
82.5°	114.9	88.5	76.8	80.8	87.7	134.1	158.9	148.4	139.2	162.0	130.8
85°	46.4	45.2	52.1	56.1	60.9	96.5	132.9	122.0	110.9	99.2	96.9
87.5°	20.0	21.6	25.6	27.2	32.4	60.0	89.2	78.1	78.5	67.2	66.1
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)