

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: P196363

Luminaire Tested: **NAV-AF-01-D-UNV-T4FT-1200**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196363  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24256)  
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-T4FT-1200  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(1) 70 CRI, 4000K, 1200mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE IV FORWARD THROW OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6909 lumens  
Efficiency: N/A  
Efficacy: 103.1 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type IV - Short - Non-Cutoff  
BUG Rating: B1 - U0 - G2

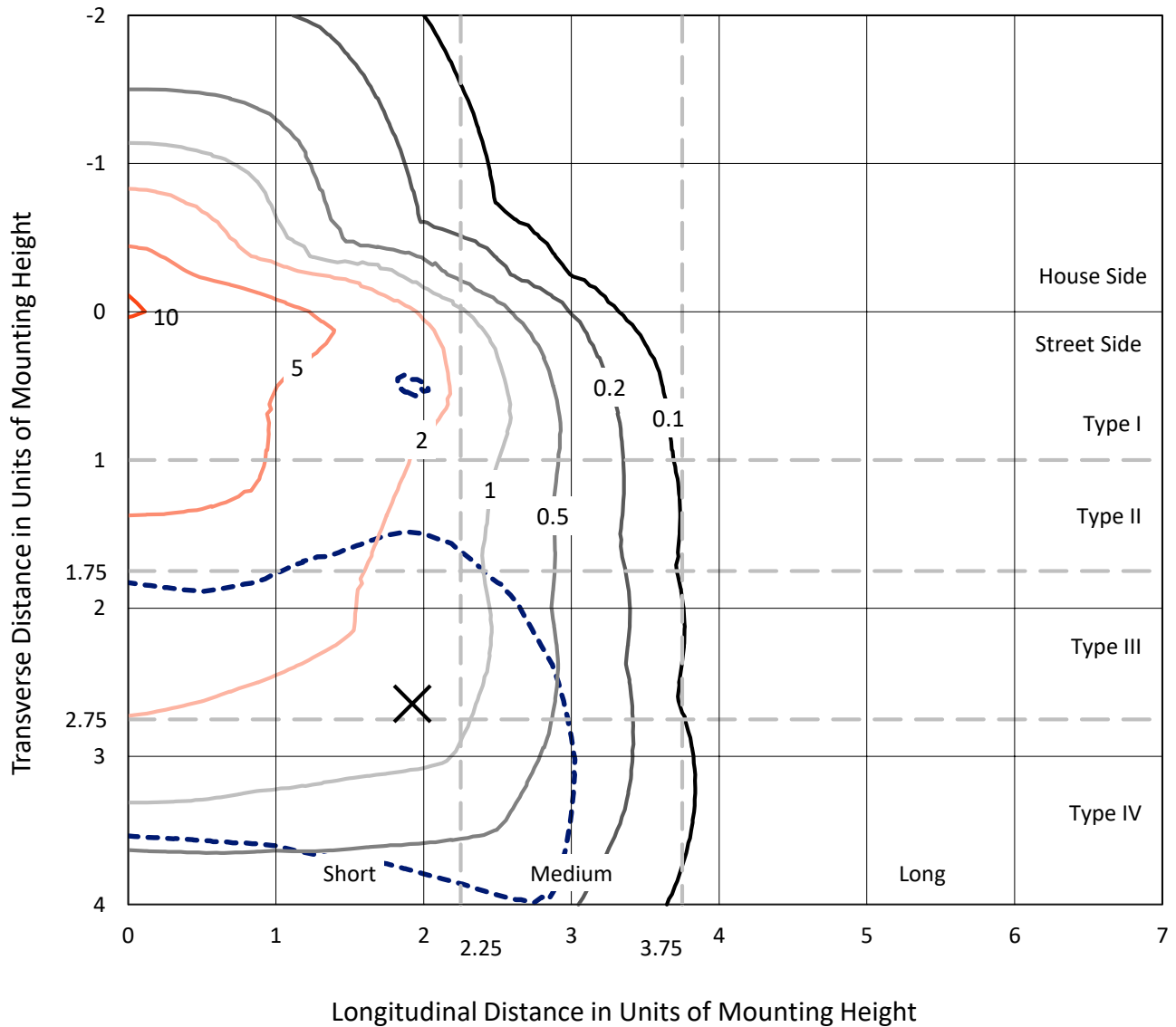
Input Watts (W): 67  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



REPORT NUMBER: P196363  
 CATALOG NUMBER: NAV-AF-01-D-UNV-T4FT-1200

### Iso-Footcandle Lines of Horizontal Illumination

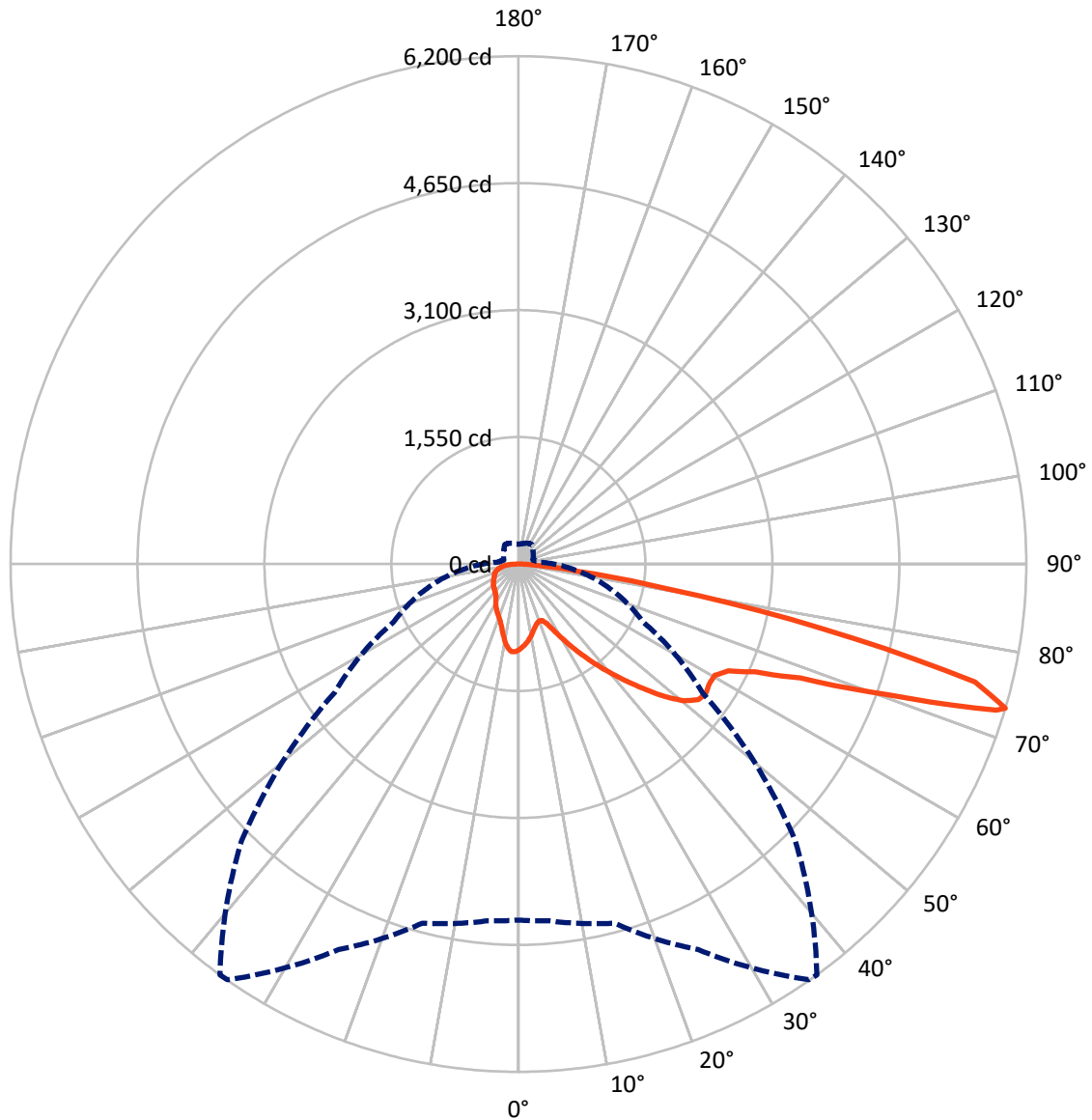
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 10.5 fc  
 Type IV - Short - Non-Cutoff

REPORT NUMBER: P196363  
CATALOG NUMBER: NAV-AF-01-D-UNV-T4FT-1200

### Luminous Intensity Polar Plot



— Vertical Plane Through 36-Deg Lateral    - - - Horizontal Cone Through 73-Deg Vertical

REPORT NUMBER: P196363

CATALOG NUMBER: NAV-AF-01-D-UNV-T4FT-1200

**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1332.3	0.0	1332.3
	% Fixture	19.3	0.0	19.3
<b>Street Side</b>	Lumens	5576.7	0.0	5576.7
	% Fixture	80.7	0.0	80.7
<b>Total</b>	Lumens	6909.0	0.0	6909.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	95.1	1.4
10°-20°	238.7	3.5
20°-30°	382.8	5.5
30°-40°	633.1	9.2
40°-50°	979.6	14.2
50°-60°	1311.5	19.0
60°-70°	1713.2	24.8
70°-80°	1399.4	20.3
80°-90°	155.8	2.3
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°	6909.0	100.0
0°-180°	6909.0	100.0



REPORT NUMBER: P196363

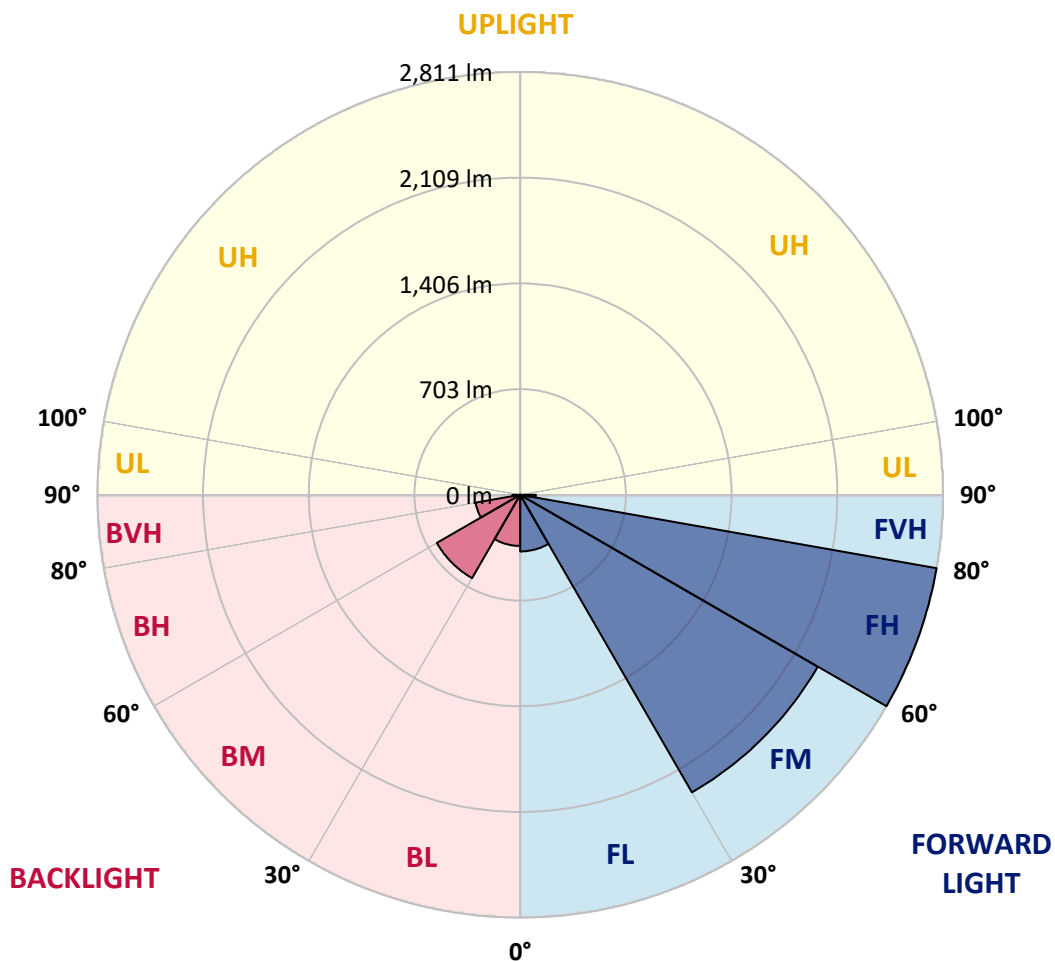
CATALOG NUMBER: NAV-AF-01-D-UNV-T4FT-1200

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

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	376.5	5.4			
FM	(30°-60°)	2284.4	33.1			
FH	(60°-80°)	2811.5	40.7			G2/5000
FVH	(80°-90°)	104.5	1.5			G2/225
BL	(0°-30°)	340.1	4.9	B1/500		
BM	(30°-60°)	639.8	9.3	B1/1000		
BH	(60°-80°)	301.1	4.4	B1/500		G1/500
BVH	(80°-90°)	51.3	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 IV Short





REPORT NUMBER: P196363

CATALOG NUMBER: NAV-AF-01-D-UNV-T4FT-1200

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	1046.5	1046.5	1046.5	1046.5	1046.5	1046.5	1046.5	1046.5	1046.5	1046.5	1046.5
2.5°	1006.6	1009.2	1009.7	1012.7	1012.7	1012.3	1013.6	1018.9	1021.5	1027.7	1032.9
5°	957.0	960.0	961.4	966.6	973.2	973.6	978.5	988.6	998.2	1011.8	1023.3
7.5°	901.2	904.7	908.3	919.2	928.8	929.8	939.0	955.2	967.9	984.6	1005.3
10°	847.2	848.1	851.6	865.6	878.4	879.7	892.8	911.3	928.4	951.7	975.0
12.5°	802.9	805.5	804.7	815.2	826.1	827.1	844.5	867.9	892.8	919.2	946.8
15°	787.6	787.1	777.9	777.4	782.3	783.2	800.3	827.5	855.6	888.0	923.6
17.5°	798.0	794.5	770.4	755.4	752.4	753.3	766.0	795.9	825.7	863.1	905.6
20°	856.0	842.4	785.7	749.7	739.7	739.7	747.2	771.3	804.2	847.6	901.2
22.5°	993.4	972.3	851.6	787.6	752.0	748.5	742.8	761.2	797.6	849.9	919.2
25°	1166.4	1156.2	972.3	888.0	814.8	803.3	765.6	772.1	811.2	873.6	968.4
27.5°	1326.6	1309.1	1130.8	1034.2	930.6	913.1	833.2	806.4	843.7	917.5	1039.5
30°	1420.1	1408.2	1293.6	1201.5	1078.1	1055.7	941.1	874.0	901.6	989.9	1140.5
32.5°	1521.9	1514.9	1457.0	1373.1	1237.9	1212.0	1080.7	984.2	990.3	1086.1	1262.0
35°	1620.7	1629.9	1597.0	1535.6	1410.0	1385.8	1268.2	1128.2	1099.7	1194.0	1392.0
37.5°	1739.2	1741.4	1720.8	1680.8	1590.8	1571.0	1474.1	1281.8	1218.6	1309.1	1517.5
40°	1975.8	1941.2	1860.3	1828.7	1775.2	1763.0	1652.3	1422.7	1329.2	1427.1	1636.0
42.5°	2231.8	2177.8	2051.3	1999.6	1978.0	1966.6	1800.7	1516.6	1432.8	1545.2	1752.4
45°	2438.1	2394.1	2270.3	2206.3	2209.0	2190.4	1930.2	1600.5	1545.2	1663.7	1882.3
47.5°	2641.3	2568.0	2429.3	2420.1	2450.8	2423.6	2054.0	1684.4	1662.4	1792.7	2012.2
50°	2654.5	2587.8	2531.6	2605.4	2658.0	2624.2	2166.3	1794.1	1784.0	1949.0	2179.9
52.5°	2494.3	2484.5	2570.2	2694.5	2781.8	2751.5	2258.1	1906.9	1908.2	2144.4	2384.1
55°	2435.9	2423.6	2526.3	2679.1	2797.2	2779.2	2326.6	2034.2	2046.1	2381.4	2603.1
57.5°	2534.2	2503.5	2523.6	2650.1	2761.1	2750.6	2397.7	2175.5	2197.1	2654.5	2805.4
60°	2839.3	2776.5	2669.4	2693.1	2762.5	2756.3	2499.5	2333.1	2369.2	2938.9	2933.6
62.5°	3296.3	3225.2	3007.0	2901.6	2886.3	2874.4	2667.7	2526.7	2544.7	3144.3	2859.0
65°	3797.6	3721.2	3461.8	3289.2	3198.8	3173.3	2938.9	2760.2	2647.5	3143.9	2568.4
67.5°	4360.3	4279.5	4021.0	3856.4	3758.5	3715.1	3379.2	2949.1	2614.0	2877.9	2055.3
70°	4936.7	4859.8	4741.4	4798.9	4841.9	4775.6	4072.8	3011.8	2374.4	2256.3	1380.2
72.5°	4630.7	4624.6	4714.6	5259.8	6089.0	6102.2	4765.5	2834.5	1834.5	1341.1	735.7
73°	4346.7	4372.6	4539.4	5191.8	6195.7	6200.1	4779.1	2742.7	1684.4	1155.4	646.2
75°	2251.9	2427.6	3046.4	4209.7	5736.9	5757.6	4212.8	2076.4	1003.9	641.8	435.5
77.5°	603.1	595.3	981.5	2050.9	3824.8	3797.6	2661.9	1005.3	481.1	402.5	305.6
80°	206.7	209.4	334.1	750.2	1785.4	1849.0	1155.4	438.5	316.5	280.5	216.5
82.5°	105.4	108.8	174.7	319.2	746.7	730.9	371.8	258.1	212.1	170.3	121.1
85°	56.2	57.9	96.2	165.5	273.9	277.0	130.8	137.8	134.7	96.6	59.7
87.5°	27.6	28.5	46.1	72.8	101.4	97.9	45.6	59.7	66.3	54.4	32.9
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: P196363

CATALOG NUMBER: NAV-AF-01-D-UNV-T4FT-1200

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1046.5	1046.5	1046.5	1046.5	1046.5	1046.5	1046.5	1046.5	1046.5	1046.5	1046.5
2.5°	1039.5	1039.5	1045.1	1054.9	1061.9	1068.5	1072.9	1079.8	1083.8	1083.4	1083.0
5°	1032.5	1036.9	1048.3	1060.1	1068.1	1073.3	1073.3	1076.3	1076.3	1075.0	1073.3
7.5°	1016.2	1023.7	1040.3	1050.9	1053.1	1047.4	1035.9	1027.2	1016.2	1010.5	1008.3
10°	990.3	999.9	1021.0	1025.9	1014.5	994.3	966.6	943.0	921.9	912.2	909.1
12.5°	964.8	977.6	997.4	989.9	962.7	923.2	880.6	848.1	824.4	815.2	812.1
15°	943.8	959.1	974.6	951.2	903.9	848.9	802.0	771.7	753.7	746.7	744.9
17.5°	929.8	947.8	953.0	909.5	843.7	782.3	740.5	720.8	712.9	709.8	708.9
20°	930.6	950.8	938.0	869.2	785.7	723.8	696.2	690.5	690.5	690.5	690.1
22.5°	954.7	972.3	931.9	831.5	730.0	674.7	662.9	667.7	671.2	671.2	670.7
25°	1004.8	1014.5	936.3	794.9	677.8	632.1	632.6	641.8	644.9	644.9	643.9
27.5°	1081.2	1073.3	944.2	754.6	626.5	593.5	599.7	607.9	610.2	608.9	608.5
30°	1176.9	1145.3	950.8	707.2	578.2	557.5	562.7	567.6	565.8	562.7	562.3
32.5°	1284.0	1218.6	946.8	654.1	535.5	520.2	523.2	525.9	523.2	515.8	515.8
35°	1390.2	1284.8	925.4	596.2	501.8	484.2	483.8	492.0	491.6	482.8	483.3
37.5°	1483.3	1337.1	883.6	543.0	472.8	457.9	459.6	464.8	467.5	455.6	454.3
40°	1564.5	1373.1	824.8	497.8	449.5	450.4	445.6	437.2	434.1	428.9	428.0
42.5°	1640.9	1398.2	762.5	460.0	437.6	447.7	431.5	411.7	403.5	408.3	411.3
45°	1716.0	1426.2	702.4	428.9	422.7	439.9	417.5	395.5	385.9	388.0	391.2
47.5°	1807.7	1465.3	629.9	395.5	399.9	425.3	408.7	384.9	370.5	361.7	359.1
50°	1928.4	1521.9	536.0	359.6	375.7	409.6	401.2	369.6	353.8	336.2	331.8
52.5°	2079.5	1575.4	441.2	330.5	356.0	396.0	388.9	356.4	337.2	316.1	312.5
55°	2230.0	1582.9	359.6	305.6	333.6	377.5	374.0	346.0	318.6	301.6	298.1
57.5°	2335.3	1512.2	304.6	284.5	312.1	354.7	360.4	333.2	303.3	290.2	288.0
60°	2337.1	1343.2	271.3	270.4	295.8	334.9	346.4	318.2	293.7	284.9	283.2
62.5°	2151.4	1082.5	249.8	259.8	284.0	318.6	335.8	310.0	291.4	288.0	286.2
65°	1803.3	799.8	232.6	250.2	273.0	305.0	327.0	307.3	290.6	289.3	288.0
67.5°	1331.4	548.3	218.2	237.9	260.8	291.0	318.6	303.3	285.3	290.6	288.9
70°	837.6	366.1	204.6	223.9	244.5	274.8	307.7	296.3	278.8	275.7	270.0
72.5°	472.8	264.7	188.3	205.9	223.4	253.3	292.8	284.5	263.8	251.5	245.8
73°	427.1	250.6	184.3	201.5	218.6	248.9	289.3	280.9	259.4	245.8	240.6
75°	312.5	205.0	166.3	183.5	198.5	228.7	272.6	263.4	240.1	223.9	220.3
77.5°	226.5	158.0	143.1	158.5	171.7	200.6	247.6	237.0	214.2	205.4	201.9
80°	163.3	119.9	118.6	133.5	144.8	174.3	220.8	209.8	187.9	213.8	208.1
82.5°	97.5	76.8	87.0	103.6	115.5	146.2	191.8	179.1	158.0	159.8	136.1
85°	46.5	43.5	54.0	68.0	76.4	100.0	159.8	149.7	126.4	103.6	101.4
87.5°	20.7	19.7	25.9	30.3	40.8	60.1	109.4	97.0	91.8	54.8	43.1
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)