

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: P270394

Luminaire Tested: **NAV-AF-02-D-UNV-T4FT-7027-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P270394  
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-02-D-UNV-T4FT-7027-600  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(2) 70 CRI, 2700K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV FORWARD THROW OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7027.4 lumens  
Efficiency: N/A  
Efficacy: 106.5 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type IV - Short - Non-Cutoff  
BUG Rating: B1 - U0 - G2

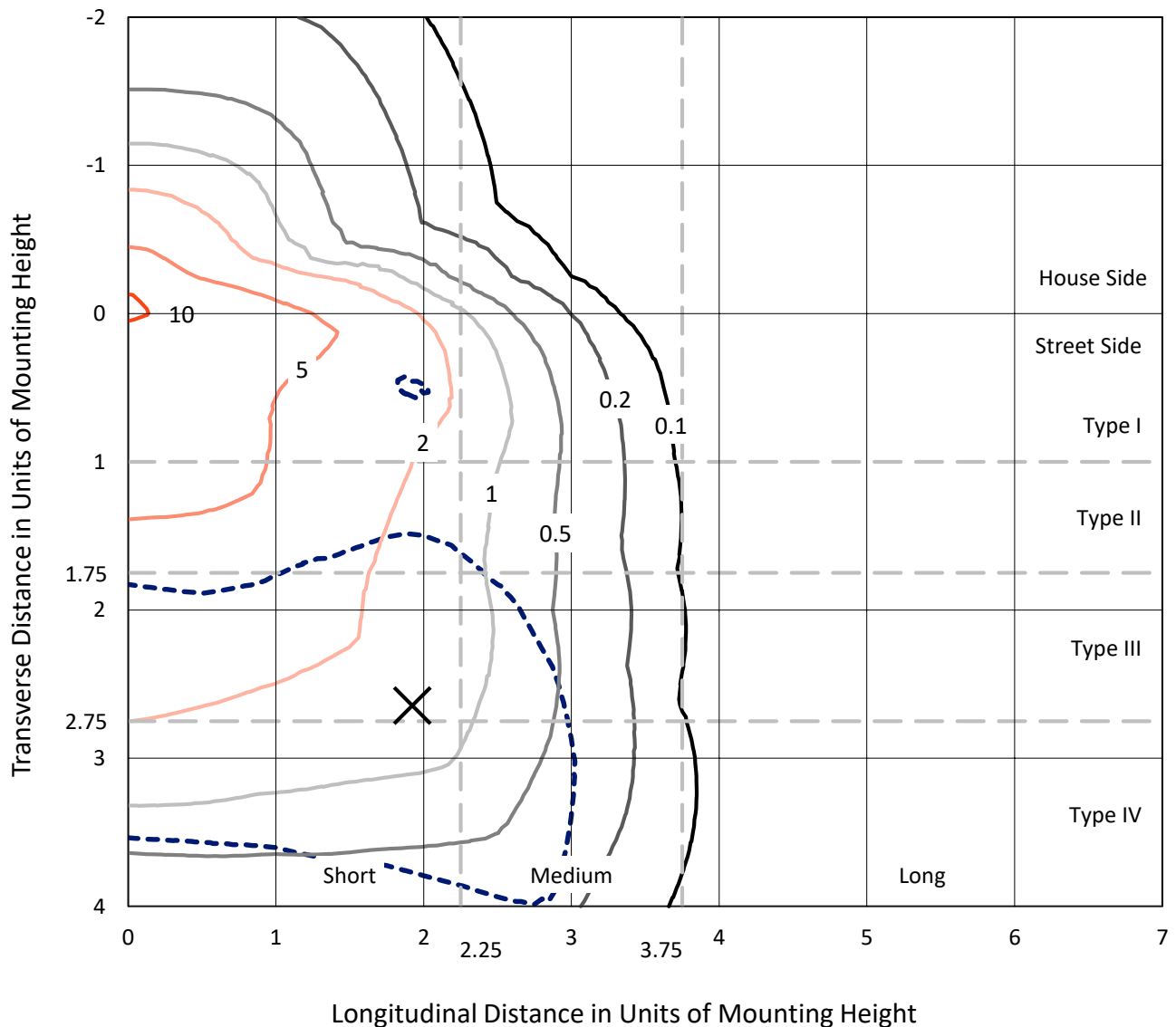
Input Watts (W): 66  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

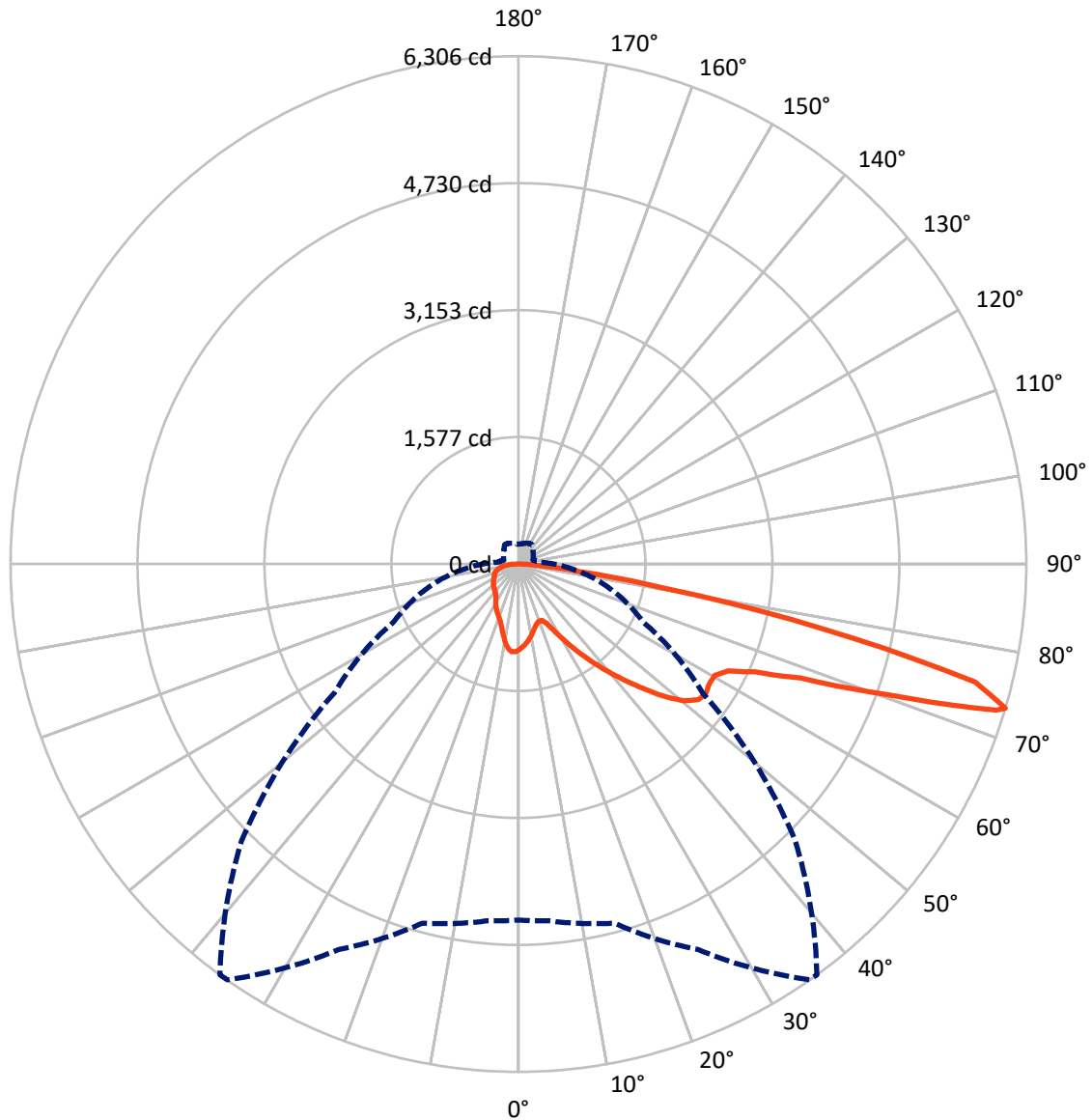
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 10.6 fc  
 Type IV - Short - Non-Cutoff

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### Luminous Intensity Polar Plot



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

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1355.1	0.0	1355.1
	% Fixture	19.3	0.0	19.3
<b>Street Side</b>	Lumens	5672.3	0.0	5672.3
	% Fixture	80.7	0.0	80.7
<b>Total</b>	Lumens	7027.4	0.0	7027.4
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	96.7	1.4
10°-20°	242.8	3.5
20°-30°	389.3	5.5
30°-40°	643.9	9.2
40°-50°	996.4	14.2
50°-60°	1333.9	19.0
60°-70°	1742.5	24.8
70°-80°	1423.3	20.3
80°-90°	158.4	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°	7027.4	100.0
0°-180°	7027.4	100.0



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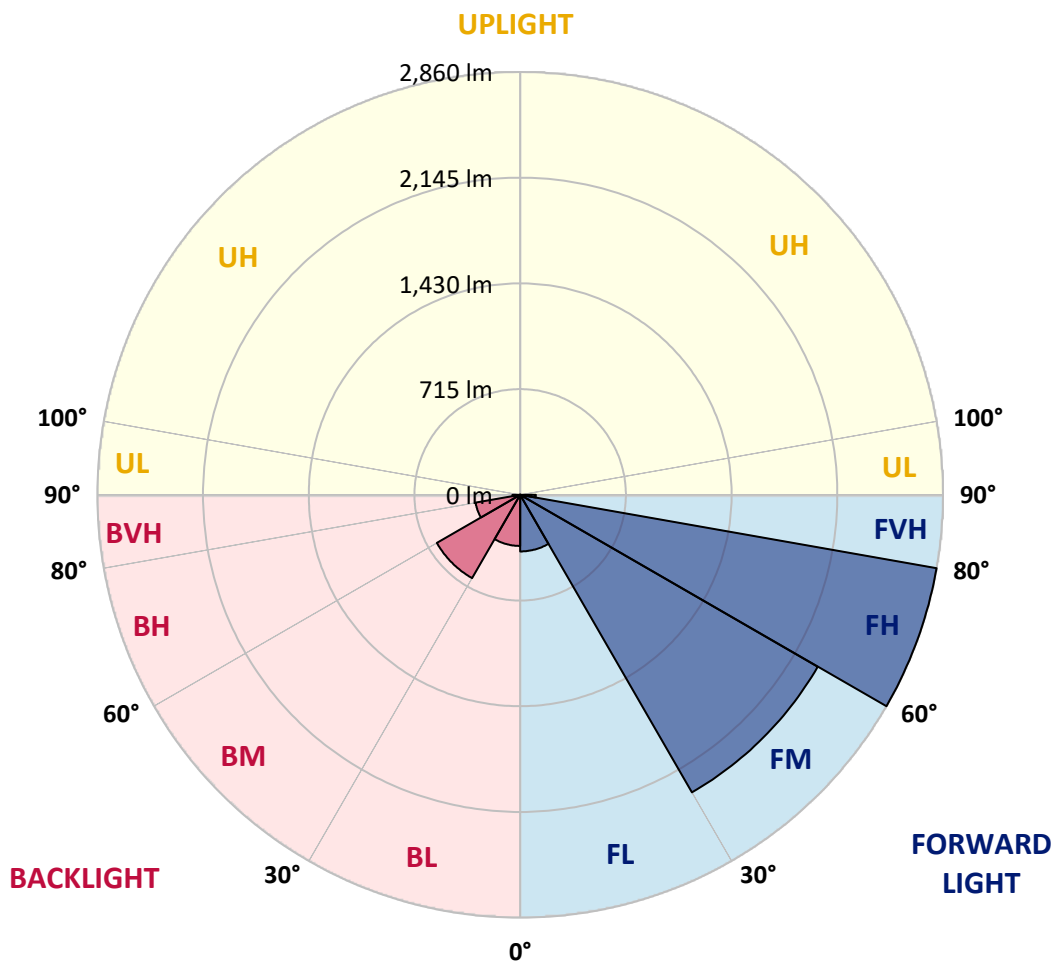
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	382.9	5.4			
FM (30°-60°)	2323.5	33.1			
FH (60°-80°)	2859.6	40.7			G2/5000
FVH (80°-90°)	106.3	1.5			G2/225
BL (0°-30°)	345.9	4.9	B1/500		
BM (30°-60°)	650.8	9.3	B1/1000		
BH (60°-80°)	306.2	4.4	B1/500		G1/500
BVH (80°-90°)	52.2	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





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	1064.4	1064.4	1064.4	1064.4	1064.4	1064.4	1064.4	1064.4	1064.4	1064.4	1064.4
2.5°	1023.8	1026.6	1026.9	1030.0	1030.0	1029.5	1031.0	1036.4	1039.0	1045.3	1050.6
5°	973.4	976.5	977.8	983.1	989.9	990.3	995.2	1005.6	1015.4	1029.2	1040.7
7.5°	916.7	920.3	923.7	935.0	944.7	945.6	955.1	971.5	984.5	1001.5	1022.5
10°	861.7	862.6	866.1	880.5	893.5	894.8	908.1	927.0	944.4	968.1	991.6
12.5°	816.6	819.3	818.4	829.1	840.4	841.3	859.0	882.8	908.1	935.0	963.2
15°	801.0	800.6	791.1	790.8	795.7	796.5	814.0	841.6	870.2	903.2	939.4
17.5°	811.7	808.1	783.6	768.4	765.3	766.2	779.1	809.6	839.8	877.9	921.1
20°	870.6	856.9	799.2	762.7	752.3	752.3	760.0	784.5	817.9	862.3	916.7
22.5°	1010.5	989.0	866.1	801.0	764.8	761.3	755.5	774.2	811.3	864.3	935.0
25°	1186.3	1176.2	989.0	903.2	828.6	817.1	778.7	785.4	825.2	888.6	985.0
27.5°	1349.3	1331.5	1150.2	1051.9	946.5	928.7	847.5	820.2	858.2	933.2	1057.3
30°	1444.5	1432.3	1315.8	1222.1	1096.7	1073.8	957.4	889.0	917.1	1006.8	1160.0
32.5°	1548.0	1540.9	1481.9	1396.7	1259.2	1232.7	1099.3	1001.0	1007.3	1104.6	1283.7
35°	1648.5	1657.8	1624.3	1561.9	1434.1	1409.6	1290.0	1147.5	1118.5	1214.5	1415.9
37.5°	1769.0	1771.3	1750.3	1709.7	1618.0	1598.1	1499.4	1303.8	1239.5	1331.5	1543.6
40°	2009.7	1974.5	1892.3	1860.1	1805.7	1793.1	1680.5	1447.1	1351.9	1451.5	1664.1
42.5°	2269.9	2215.1	2086.5	2033.9	2011.9	2000.3	1831.6	1542.7	1457.4	1571.7	1782.3
45°	2479.9	2435.1	2309.4	2244.1	2246.8	2228.1	1963.2	1627.9	1571.7	1692.2	1914.6
47.5°	2686.7	2612.0	2470.9	2461.5	2492.7	2465.0	2089.2	1713.2	1690.9	1823.5	2046.8
50°	2699.9	2632.2	2574.9	2650.0	2703.4	2669.1	2203.5	1824.8	1814.5	1982.4	2217.2
52.5°	2537.1	2527.2	2614.2	2740.5	2829.4	2798.6	2296.7	1939.6	1940.9	2181.2	2425.0
55°	2477.6	2465.0	2569.6	2725.0	2845.1	2826.7	2366.4	2069.1	2081.2	2422.2	2647.8
57.5°	2577.6	2546.3	2566.8	2695.5	2808.6	2797.7	2438.8	2212.9	2234.8	2699.9	2853.6
60°	2888.0	2824.1	2715.1	2739.2	2809.8	2803.5	2542.4	2373.1	2409.8	2989.3	2983.9
62.5°	3352.7	3280.4	3058.5	2951.3	2935.8	2923.7	2713.4	2570.1	2588.3	3198.2	2908.1
65°	3862.6	3785.0	3521.0	3345.6	3253.7	3227.7	2989.3	2807.6	2692.8	3197.7	2612.5
67.5°	4435.0	4352.8	4090.0	3922.4	3822.8	3778.7	3437.2	2999.6	2659.0	2927.2	2090.4
70°	5021.3	4943.2	4822.6	4881.1	4924.9	4857.4	4142.7	3063.4	2415.2	2295.0	1403.8
72.5°	4710.2	4703.9	4795.4	5349.9	6193.4	6206.7	4847.2	2883.0	1865.9	1364.0	748.3
73°	4421.2	4447.6	4617.2	5280.7	6301.9	6306.3	4861.0	2789.6	1713.2	1175.3	657.2
75°	2290.5	2469.1	3098.8	4282.0	5835.3	5856.2	4285.1	2111.9	1021.2	652.8	443.0
77.5°	613.5	605.5	998.3	2086.0	3890.3	3862.6	2707.5	1022.5	489.3	409.4	310.8
80°	210.4	213.0	339.7	763.1	1816.0	1880.6	1175.3	446.1	322.0	285.3	220.2
82.5°	107.2	110.8	177.8	324.6	759.4	743.3	378.1	262.6	215.7	173.3	123.2
85°	57.1	58.8	97.7	168.3	278.7	281.8	133.0	140.1	137.1	98.3	60.7
87.5°	28.1	29.0	46.9	74.1	103.1	99.5	46.4	60.7	67.5	55.3	33.4
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°	1064.4	1064.4	1064.4	1064.4	1064.4	1064.4	1064.4	1064.4	1064.4	1064.4	1064.4
2.5°	1057.3	1057.3	1063.1	1072.9	1080.1	1086.8	1091.3	1098.4	1102.4	1102.0	1101.5
5°	1050.2	1054.6	1066.3	1078.2	1086.3	1091.7	1091.7	1094.9	1094.9	1093.4	1091.7
7.5°	1033.6	1041.2	1058.3	1069.0	1071.1	1065.3	1053.7	1044.8	1033.6	1027.8	1025.7
10°	1007.3	1017.2	1038.5	1043.6	1031.9	1011.3	983.1	959.1	937.7	927.8	924.6
12.5°	981.4	994.3	1014.5	1006.8	979.2	939.0	895.7	862.6	838.5	829.1	826.0
15°	960.0	975.6	991.2	967.6	919.3	863.5	815.8	784.9	766.7	759.4	757.7
17.5°	945.6	964.1	969.4	925.2	858.2	795.7	753.3	733.1	725.1	722.0	721.1
20°	946.5	967.1	954.2	884.0	799.2	736.3	708.1	702.4	702.4	702.4	701.8
22.5°	971.2	989.0	947.9	845.7	742.4	686.2	674.2	679.1	682.7	682.7	682.3
25°	1022.0	1031.9	952.4	808.7	689.4	642.9	643.4	652.8	655.9	655.9	655.0
27.5°	1099.7	1091.7	960.4	767.5	637.2	603.8	609.9	618.5	620.5	619.3	618.8
30°	1197.0	1164.9	967.1	719.4	588.0	567.0	572.4	577.3	575.5	572.4	572.0
32.5°	1306.0	1239.5	963.2	665.3	544.7	529.1	532.2	534.9	532.2	524.6	524.6
35°	1414.0	1306.9	941.2	606.4	510.3	492.5	492.0	500.5	500.0	491.2	491.6
37.5°	1508.8	1360.0	898.8	552.3	480.9	465.7	467.5	472.9	475.6	463.4	462.1
40°	1591.3	1396.7	838.9	506.4	457.1	458.0	453.1	444.8	441.5	436.2	435.3
42.5°	1669.1	1422.0	775.5	467.9	445.2	455.4	438.9	418.8	410.3	415.2	418.4
45°	1745.3	1450.7	714.4	436.2	430.0	447.4	424.5	402.4	392.5	394.7	397.8
47.5°	1838.7	1490.4	640.8	402.4	406.8	432.7	415.6	391.7	376.8	367.9	365.3
50°	1961.4	1548.0	545.2	365.7	382.1	416.5	408.1	375.9	360.0	342.1	337.6
52.5°	2115.1	1602.4	448.8	336.2	362.0	402.7	395.7	362.6	343.0	321.5	317.9
55°	2268.2	1610.0	365.7	310.8	339.3	383.9	380.4	351.9	324.2	306.7	303.2
57.5°	2375.4	1538.2	309.8	289.3	317.5	360.8	366.6	338.9	308.6	295.2	292.8
60°	2377.2	1366.3	275.9	275.1	300.9	340.6	352.2	323.7	298.6	289.8	287.9
62.5°	2188.4	1101.1	254.1	264.3	288.9	324.2	341.5	315.2	296.5	292.8	291.1
65°	1834.2	813.5	236.7	254.5	277.8	310.4	332.6	312.5	295.6	294.3	292.8
67.5°	1354.3	557.7	221.9	242.1	265.2	296.0	324.2	308.6	290.2	295.6	293.7
70°	852.0	372.3	208.0	227.7	248.7	279.6	313.0	301.4	283.5	280.5	274.6
72.5°	480.9	269.2	191.6	209.5	227.4	257.6	297.8	289.3	268.4	255.8	250.1
73°	434.4	254.9	187.6	205.0	222.4	253.1	294.3	285.8	263.9	250.1	244.7
75°	317.9	208.4	169.2	186.7	201.8	232.7	277.2	268.0	244.2	227.7	224.1
77.5°	230.3	160.7	145.5	161.2	174.6	204.1	251.9	241.1	217.8	208.9	205.4
80°	166.0	121.9	120.6	135.7	147.3	177.2	224.5	213.4	191.1	217.4	211.6
82.5°	99.2	78.2	88.5	105.5	117.4	148.7	195.1	182.1	160.7	162.6	138.3
85°	47.3	44.1	54.9	69.2	77.8	101.8	162.6	152.3	128.5	105.5	103.1
87.5°	21.0	20.1	26.3	30.8	41.5	61.2	111.2	98.6	93.3	55.9	43.7
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)