

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: P270395

Luminaire Tested: **NAV-AF-02-D-UNV-T4FT-7027-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270395
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-7027-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 2700K, 800mA 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: 8617.4 lumens
Efficiency: N/A
Efficacy: 101.4 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

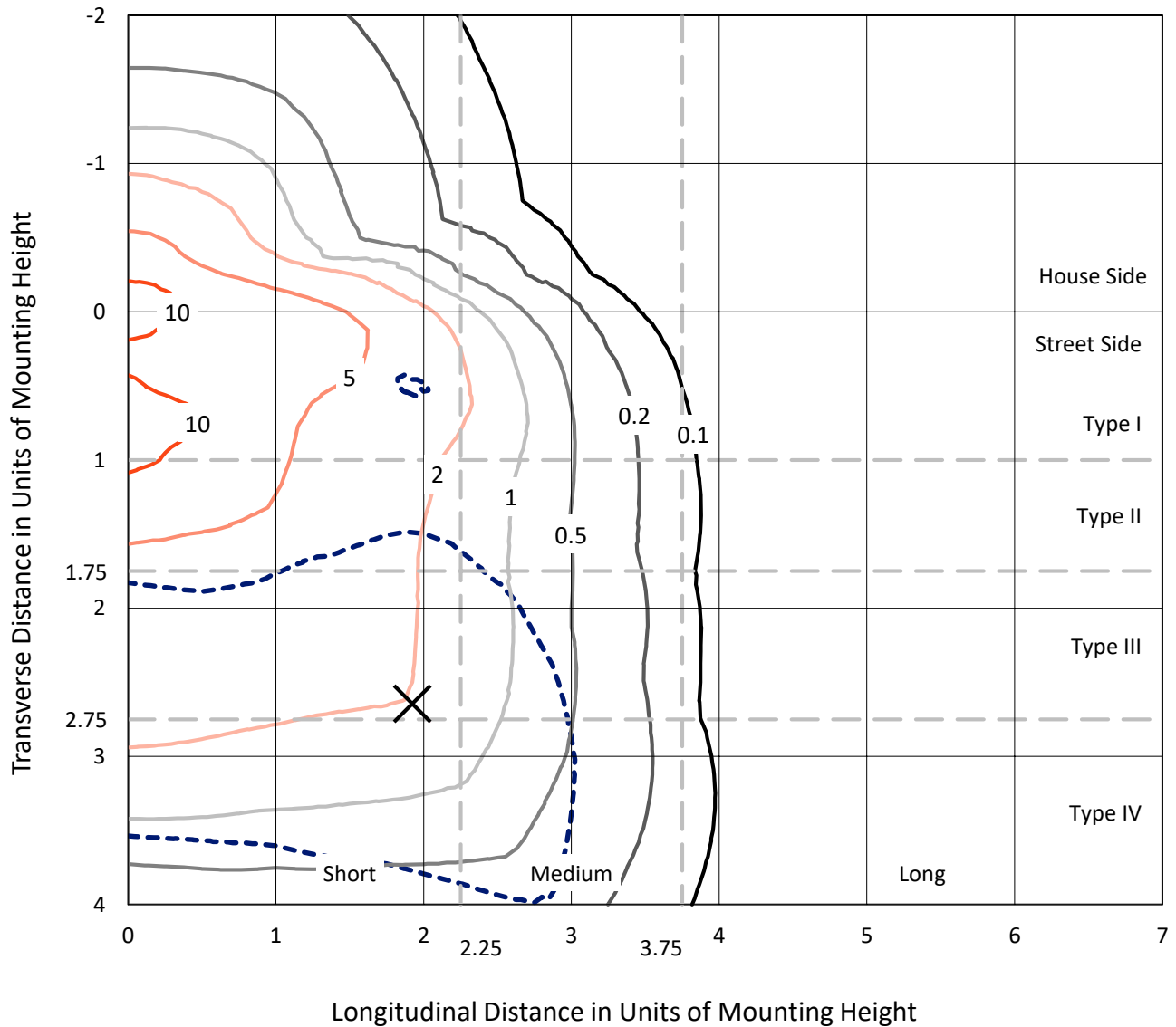
Input Watts (W): 85
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P270395
 CATALOG NUMBER: NAV-AF-02-D-UNV-T4FT-7027-800

Iso-Footcandle Lines of Horizontal Illumination

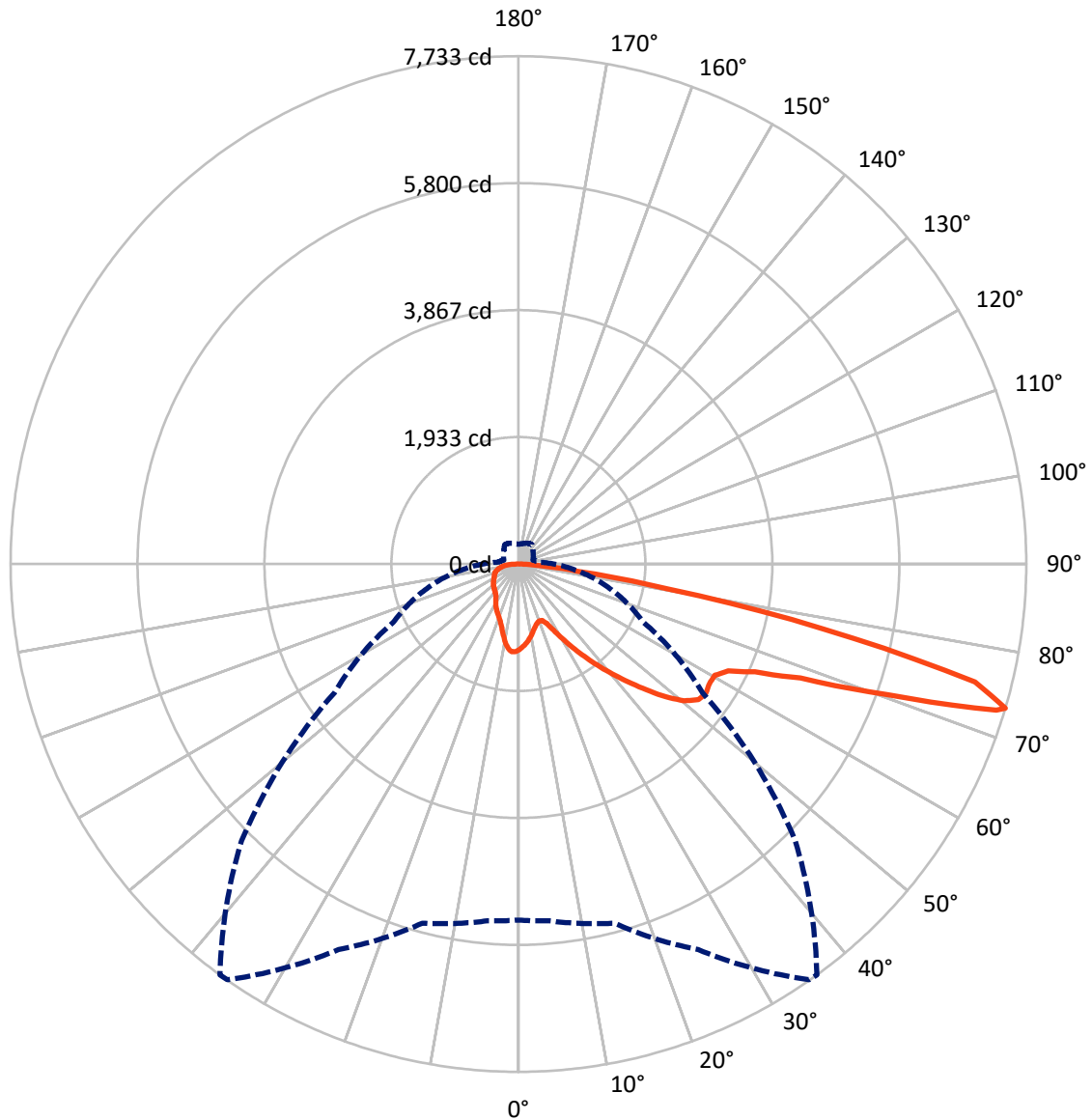
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 13.1 fc
 Type IV - Short - Non-Cutoff

REPORT NUMBER: P270395
CATALOG NUMBER: NAV-AF-02-D-UNV-T4FT-7027-800

Luminous Intensity Polar Plot



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

REPORT NUMBER: P270395

CATALOG NUMBER: NAV-AF-02-D-UNV-T4FT-7027-800

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1661.7	0.0	1661.7
	% Fixture	19.3	0.0	19.3
Street Side	Lumens	6955.7	0.0	6955.7
	% Fixture	80.7	0.0	80.7
Total	Lumens	8617.4	0.0	8617.4
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	118.6	1.4
10°-20°	297.8	3.5
20°-30°	477.4	5.5
30°-40°	789.6	9.2
40°-50°	1221.9	14.2
50°-60°	1635.7	19.0
60°-70°	2136.8	24.8
70°-80°	1745.4	20.3
80°-90°	194.3	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°	8617.4	100.0
0°-180°	8617.4	100.0



REPORT NUMBER: P270395

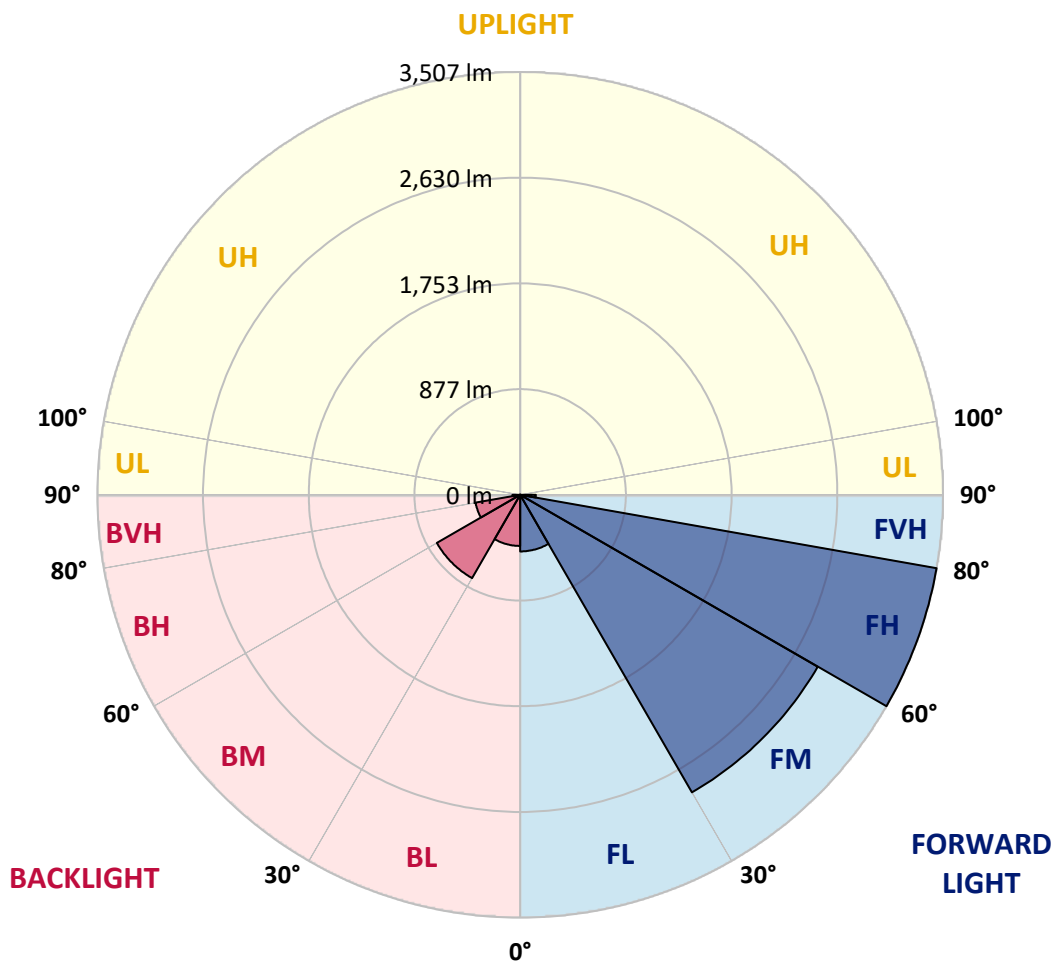
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	469.5	5.4			
FM (30°-60°)	2849.2	33.1			
FH (60°-80°)	3506.7	40.7			G2/5000
FVH (80°-90°)	130.3	1.5			G2/225
BL (0°-30°)	424.2	4.9	B1/500		
BM (30°-60°)	798.0	9.3	B1/1000		
BH (60°-80°)	375.5	4.4	B1/500		G1/500
BVH (80°-90°)	64.0	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: P270395

CATALOG NUMBER: NAV-AF-02-D-UNV-T4FT-7027-800

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	1305.2	1305.2	1305.2	1305.2	1305.2	1305.2	1305.2	1305.2	1305.2	1305.2	1305.2
2.5°	1255.6	1258.7	1259.3	1263.1	1263.1	1262.6	1264.3	1270.8	1274.1	1281.7	1288.3
5°	1193.6	1197.4	1199.1	1205.6	1213.9	1214.4	1220.3	1233.1	1245.1	1261.9	1276.2
7.5°	1124.0	1128.5	1132.9	1146.4	1158.5	1159.6	1171.1	1191.4	1207.3	1228.2	1253.9
10°	1056.8	1057.8	1062.2	1079.8	1095.7	1097.2	1113.7	1136.6	1158.0	1187.0	1216.0
12.5°	1001.4	1004.8	1003.5	1016.7	1030.4	1031.6	1053.4	1082.5	1113.7	1146.4	1181.0
15°	982.2	981.7	970.2	969.7	975.6	976.7	998.1	1032.1	1067.0	1107.6	1151.9
17.5°	995.4	991.0	960.8	942.3	938.5	939.5	955.3	992.6	1029.8	1076.3	1129.4
20°	1067.6	1050.7	980.1	935.1	922.6	922.6	931.9	961.9	1003.0	1057.2	1124.0
22.5°	1239.0	1212.7	1062.2	982.2	937.9	933.5	926.4	949.4	994.9	1060.0	1146.4
25°	1454.7	1442.1	1212.7	1107.6	1016.3	1002.0	954.9	963.2	1011.9	1089.6	1207.9
27.5°	1654.6	1632.7	1410.3	1290.0	1160.7	1138.8	1039.2	1005.8	1052.4	1144.4	1296.6
30°	1771.2	1756.5	1613.5	1498.6	1344.8	1316.7	1173.8	1090.2	1124.6	1234.7	1422.5
32.5°	1898.3	1889.4	1817.2	1712.7	1543.9	1511.7	1347.9	1227.5	1235.2	1354.6	1574.1
35°	2021.5	2033.0	1991.9	1915.2	1758.6	1728.5	1581.7	1407.1	1371.5	1489.3	1736.2
37.5°	2169.2	2172.0	2146.3	2096.5	1984.1	1959.6	1838.7	1598.8	1519.9	1632.7	1892.8
40°	2464.4	2421.1	2320.4	2280.9	2214.1	2198.8	2060.8	1774.5	1657.9	1780.0	2040.6
42.5°	2783.6	2716.2	2558.6	2494.0	2467.1	2452.9	2245.9	1891.7	1787.1	1927.3	2185.7
45°	3040.9	2986.1	2831.7	2751.9	2755.1	2732.1	2407.5	1996.3	1927.3	2075.2	2347.8
47.5°	3294.4	3202.9	3030.0	3018.5	3056.8	3022.8	2561.8	2100.9	2073.5	2236.2	2509.9
50°	3310.9	3227.6	3157.5	3249.4	3315.3	3273.1	2702.0	2237.7	2225.1	2431.1	2719.0
52.5°	3111.0	3099.0	3205.7	3360.6	3469.7	3431.9	2816.5	2378.4	2380.1	2674.7	2973.6
55°	3038.2	3022.8	3151.0	3341.5	3488.7	3466.3	2901.9	2537.3	2551.9	2970.2	3246.8
57.5°	3160.9	3122.5	3147.8	3305.4	3443.9	3430.7	2990.5	2713.5	2740.3	3310.9	3499.2
60°	3541.4	3463.1	3329.5	3359.0	3445.5	3437.9	3117.6	2910.1	2955.0	3665.7	3659.1
62.5°	4111.4	4022.6	3750.6	3619.1	3600.0	3585.1	3327.3	3151.6	3174.0	3921.9	3566.0
65°	4736.7	4641.4	4317.8	4102.6	3989.8	3958.0	3665.7	3442.8	3302.1	3921.3	3203.5
67.5°	5438.5	5337.8	5015.2	4810.0	4687.9	4633.6	4214.8	3678.2	3260.5	3589.5	2563.6
70°	6157.4	6061.7	5913.7	5985.4	6039.1	5956.5	5079.8	3756.5	2961.5	2814.2	1721.4
72.5°	5775.8	5768.1	5880.3	6560.4	7594.6	7611.1	5943.8	3535.3	2288.2	1672.6	917.7
73°	5421.5	5453.8	5661.8	6475.5	7727.7	7733.1	5960.9	3420.8	2100.9	1441.2	806.0
75°	2808.8	3027.7	3799.8	5250.8	7155.4	7181.3	5254.5	2589.8	1252.1	800.5	543.1
77.5°	752.3	742.4	1224.3	2558.1	4770.4	4736.7	3320.1	1253.9	600.1	502.1	381.2
80°	257.9	261.1	416.6	935.8	2226.8	2306.2	1441.2	547.0	394.7	349.9	269.9
82.5°	131.4	135.7	217.8	398.0	931.4	911.6	463.7	322.0	264.5	212.4	151.2
85°	70.1	72.3	120.0	206.4	341.6	345.5	163.1	171.9	168.2	120.5	74.5
87.5°	34.5	35.7	57.5	90.9	126.5	122.1	57.0	74.5	82.6	67.9	41.1
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: P270395

CATALOG NUMBER: NAV-AF-02-D-UNV-T4FT-7027-800

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1305.2	1305.2	1305.2	1305.2	1305.2	1305.2	1305.2	1305.2	1305.2	1305.2	1305.2
2.5°	1296.6	1296.6	1303.6	1315.7	1324.5	1332.6	1338.1	1346.9	1351.8	1351.3	1350.7
5°	1287.8	1293.2	1307.5	1322.2	1332.0	1338.7	1338.7	1342.4	1342.4	1340.9	1338.7
7.5°	1267.5	1276.9	1297.6	1310.7	1313.5	1306.3	1292.1	1281.3	1267.5	1260.4	1257.6
10°	1235.2	1247.2	1273.5	1279.5	1265.4	1240.1	1205.6	1176.2	1149.8	1137.8	1133.9
12.5°	1203.5	1219.3	1244.0	1234.7	1200.8	1151.4	1098.3	1057.8	1028.2	1016.7	1012.8
15°	1177.1	1196.4	1215.4	1186.5	1127.4	1058.9	1000.4	962.5	940.0	931.4	929.1
17.5°	1159.6	1182.1	1188.6	1134.5	1052.4	975.6	923.6	899.1	889.1	885.3	884.2
20°	1160.7	1185.9	1170.0	1084.1	980.1	902.8	868.4	861.2	861.2	861.2	860.7
22.5°	1190.9	1212.7	1162.3	1037.1	910.5	841.5	826.8	832.8	837.2	837.2	836.6
25°	1253.2	1265.4	1167.8	991.5	845.3	788.4	789.0	800.5	804.3	804.3	803.3
27.5°	1348.5	1338.7	1177.7	941.2	781.3	740.3	747.8	758.3	761.0	759.3	758.9
30°	1467.9	1428.5	1185.9	882.0	721.1	695.4	701.9	708.0	705.8	701.9	701.3
32.5°	1601.5	1519.9	1181.0	815.8	668.0	648.8	652.7	655.9	652.7	643.4	643.4
35°	1734.0	1602.5	1154.1	743.5	625.8	603.9	603.4	613.7	613.3	602.3	602.9
37.5°	1850.1	1667.8	1102.2	677.3	589.6	571.1	573.3	579.9	583.1	568.3	566.7
40°	1951.4	1712.7	1028.7	620.9	560.6	561.8	555.7	545.4	541.5	534.9	533.9
42.5°	2046.6	1743.9	951.0	573.7	545.9	558.4	538.3	513.7	503.2	509.2	513.0
45°	2140.2	1779.0	876.0	534.9	527.2	548.7	520.7	493.3	481.3	483.9	487.8
47.5°	2254.7	1827.6	785.7	493.3	498.7	530.5	509.8	480.1	462.1	451.2	447.9
50°	2405.2	1898.3	668.5	448.4	468.6	510.9	500.4	461.0	441.2	419.4	413.8
52.5°	2593.5	1965.0	550.2	412.3	444.0	493.9	485.2	444.7	420.4	394.3	389.9
55°	2781.4	1974.4	448.4	381.2	416.2	470.9	466.5	431.5	397.5	376.1	371.8
57.5°	2912.8	1886.3	380.0	354.8	389.2	442.3	449.5	415.6	378.4	361.8	359.1
60°	2915.0	1675.3	338.4	337.3	369.1	417.7	431.9	397.0	366.2	355.3	353.2
62.5°	2683.3	1350.2	311.5	324.1	354.2	397.5	418.9	386.5	363.5	359.1	356.9
65°	2249.1	997.6	290.2	312.2	340.5	380.5	407.9	383.2	362.5	360.8	359.1
67.5°	1660.6	683.9	272.1	296.8	325.2	363.1	397.5	378.4	355.9	362.5	360.3
70°	1044.6	456.6	255.2	279.3	305.0	342.8	383.8	369.6	347.6	343.8	336.8
72.5°	589.6	330.1	234.8	256.7	278.7	315.9	365.3	354.8	329.0	313.7	306.6
73°	532.8	312.6	230.0	251.3	272.6	310.5	360.8	350.3	323.6	306.6	300.0
75°	389.9	255.7	207.5	228.9	247.5	285.2	340.0	328.5	299.4	279.3	274.8
77.5°	282.5	197.1	178.6	197.6	214.1	250.2	308.7	295.6	267.2	256.2	251.9
80°	203.6	149.5	147.9	166.5	180.6	217.4	275.4	261.8	234.4	266.6	259.5
82.5°	121.5	95.8	108.4	129.3	144.0	182.4	239.3	223.4	197.1	199.3	169.7
85°	58.0	54.2	67.4	84.9	95.3	124.9	199.3	186.7	157.7	129.3	126.5
87.5°	25.7	24.7	32.2	37.8	50.9	75.0	136.4	121.0	114.4	68.5	53.7
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)