

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: P197307

Luminaire Tested: **NAV-AF-03-D-UNV-T4FT-8030-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P197307  
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-03-D-UNV-T4FT-8030-600  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(3) 80 CRI, 3000K, 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: 9816 lumens  
Efficiency: N/A  
Efficacy: 102.2 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')  
IES Classification: Type IV - Short - Non-Cutoff  
BUG Rating: B1 - U0 - G2

Input Watts (W): 96  
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

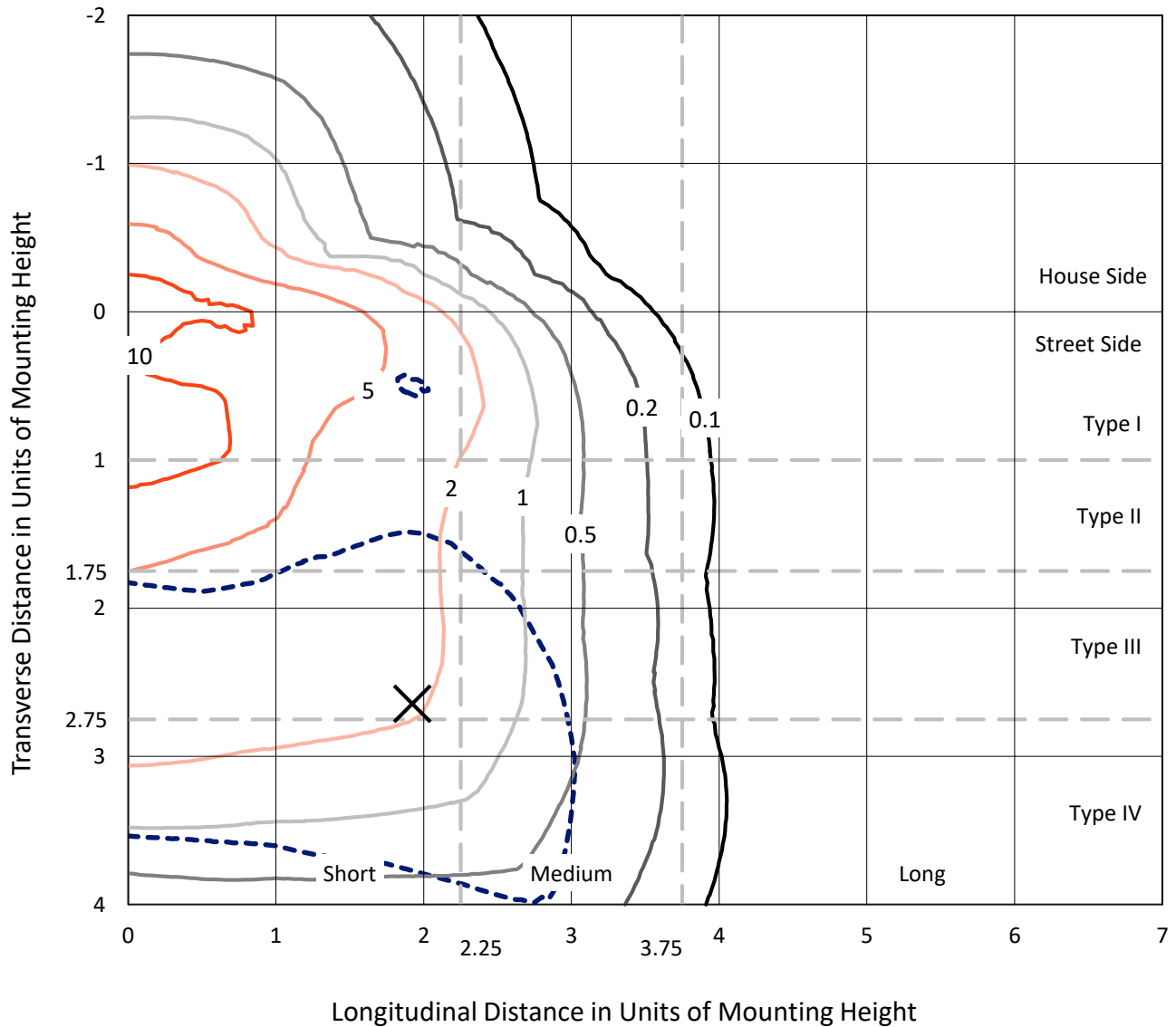


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### Iso-Footcandle Lines of Horizontal Illumination

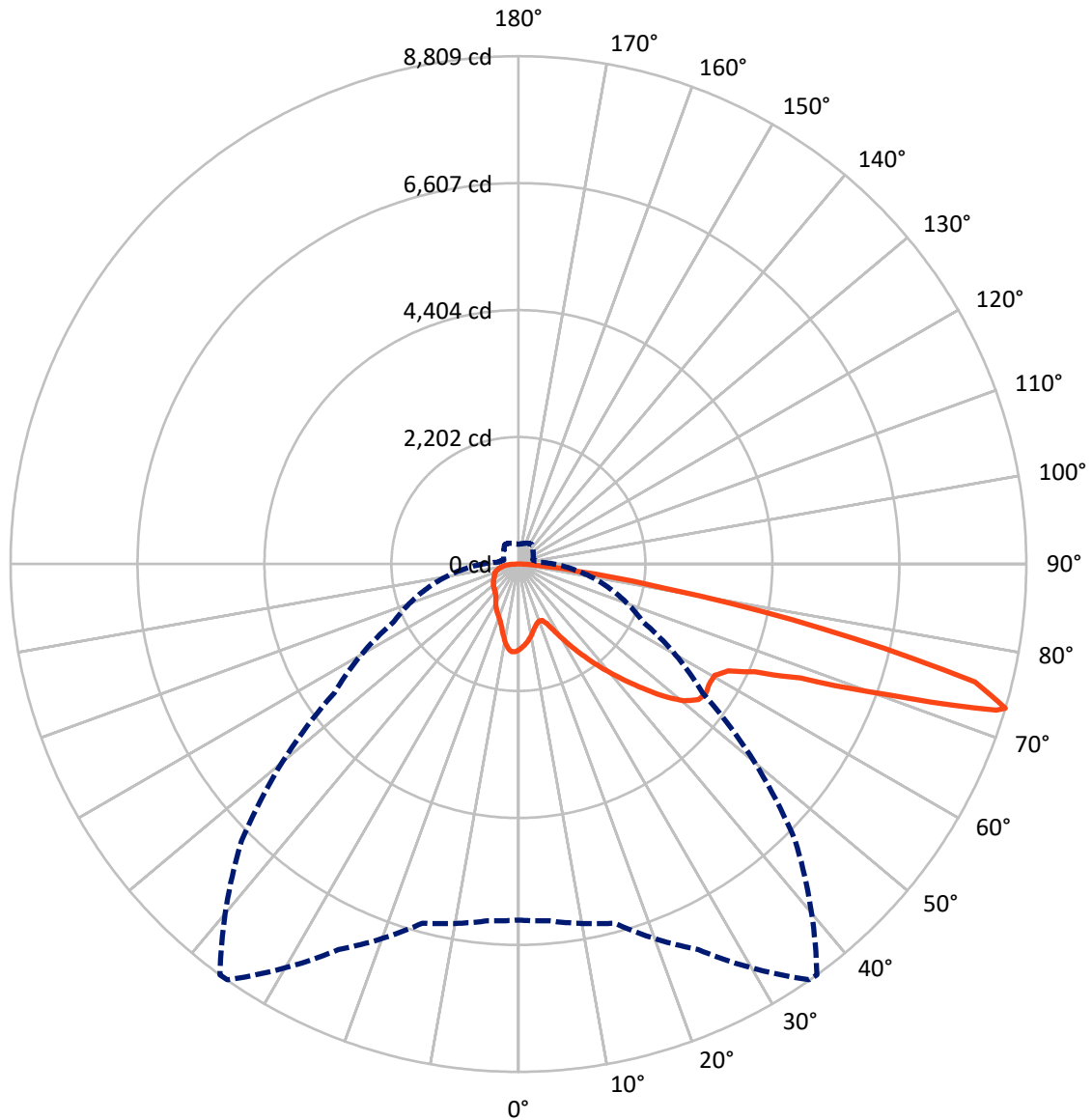
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 14.9 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	1892.8	0.0	1892.8
	% Fixture	19.3	0.0	19.3
<b>Street Side</b>	Lumens	7923.2	0.0	7923.2
	% Fixture	80.7	0.0	80.7
<b>Total</b>	Lumens	9816.0	0.0	9816.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	135.0	1.4
10°-20°	339.2	3.5
20°-30°	543.8	5.5
30°-40°	899.5	9.2
40°-50°	1391.8	14.2
50°-60°	1863.2	19.0
60°-70°	2434.0	24.8
70°-80°	1988.1	20.3
80°-90°	221.3	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°	9816.0	100.0
0°-180°	9816.0	100.0

**Coefficient of Utilization**



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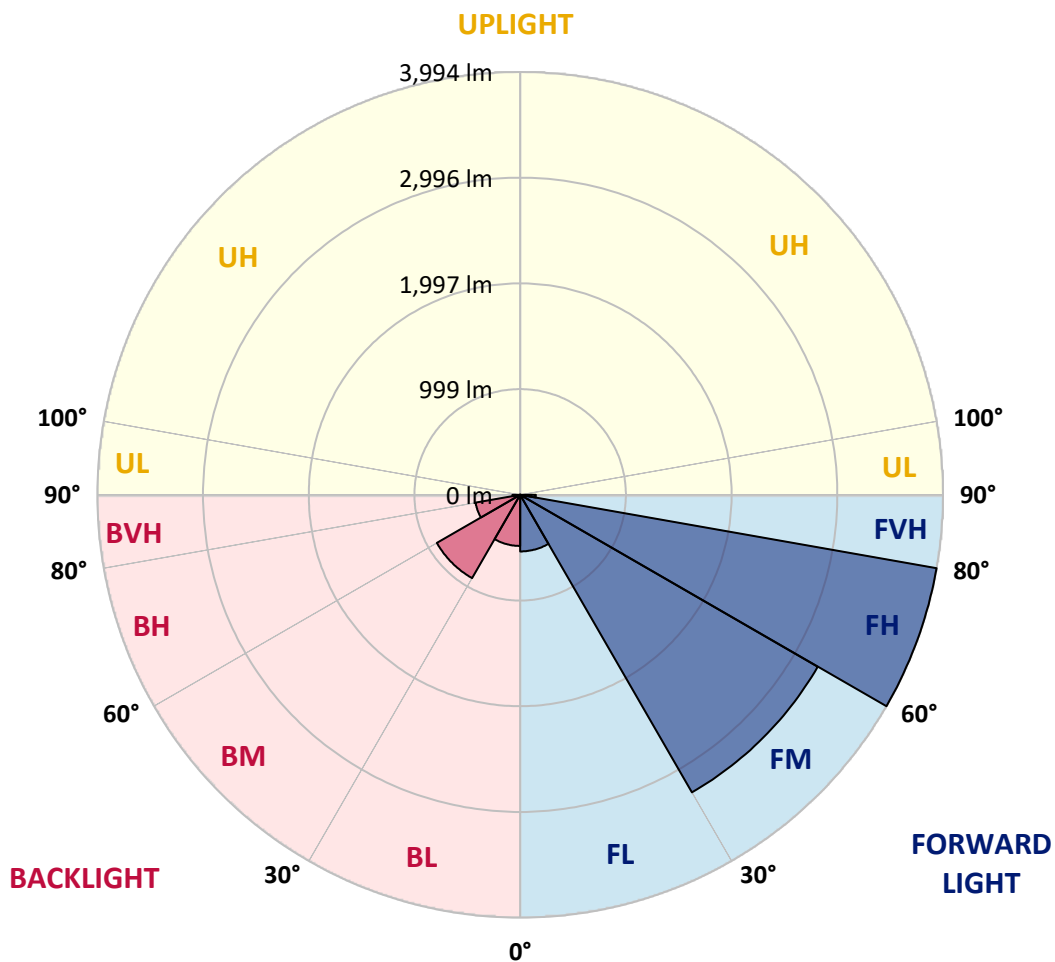
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	534.9	5.4			
FM (30°-60°)	3245.5	33.1			
FH (60°-80°)	3994.4	40.7			G2/5000
FVH (80°-90°)	148.4	1.5			G2/225
BL (0°-30°)	483.2	4.9	B1/500		
BM (30°-60°)	909.0	9.3	B1/1000		
BH (60°-80°)	427.7	4.4	B1/500		G1/500
BVH (80°-90°)	72.9	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°	1486.8	1486.8	1486.8	1486.8	1486.8	1486.8	1486.8	1486.8	1486.8	1486.8	1486.8
2.5°	1430.1	1433.8	1434.4	1438.8	1438.8	1438.2	1440.1	1447.5	1451.3	1460.0	1467.5
5°	1359.6	1364.0	1365.8	1373.3	1382.7	1383.3	1390.2	1404.5	1418.2	1437.6	1453.8
7.5°	1280.4	1285.4	1290.4	1306.0	1319.7	1320.9	1334.0	1357.1	1375.2	1398.9	1428.2
10°	1203.7	1204.9	1209.9	1229.9	1248.0	1249.8	1268.6	1294.7	1319.1	1352.1	1385.2
12.5°	1140.7	1144.4	1143.2	1158.2	1173.8	1175.0	1199.9	1233.0	1268.6	1306.0	1345.3
15°	1118.9	1118.2	1105.2	1104.5	1111.4	1112.6	1137.0	1175.6	1215.5	1261.7	1312.2
17.5°	1133.8	1128.8	1094.5	1073.3	1069.0	1070.2	1088.3	1130.7	1173.1	1226.1	1286.6
20°	1216.2	1196.8	1116.4	1065.2	1050.9	1050.9	1061.5	1095.8	1142.6	1204.3	1280.4
22.5°	1411.4	1381.4	1209.9	1118.9	1068.4	1063.4	1055.3	1081.5	1133.2	1207.4	1306.0
25°	1657.1	1642.8	1381.4	1261.7	1157.5	1141.3	1087.7	1097.0	1152.5	1241.1	1375.8
27.5°	1884.7	1859.8	1606.6	1469.4	1322.2	1297.2	1183.7	1145.7	1198.7	1303.5	1476.9
30°	2017.6	2000.7	1838.0	1707.0	1531.7	1499.9	1337.2	1241.7	1281.0	1406.4	1620.3
32.5°	2162.3	2152.3	2070.0	1950.9	1758.8	1722.0	1535.5	1398.3	1407.0	1543.0	1793.1
35°	2302.6	2315.7	2268.9	2181.6	2003.2	1968.9	1801.8	1602.8	1562.3	1696.4	1977.7
37.5°	2471.0	2474.1	2444.8	2388.0	2260.2	2232.1	2094.3	1821.1	1731.3	1859.8	2156.0
40°	2807.2	2757.9	2643.1	2598.2	2522.1	2504.7	2347.5	2021.3	1888.5	2027.6	2324.4
42.5°	3170.8	3094.0	2914.4	2840.8	2810.3	2794.1	2558.3	2154.8	2035.7	2195.3	2489.7
45°	3463.9	3401.5	3225.6	3134.6	3138.3	3112.1	2742.3	2273.9	2195.3	2363.7	2674.3
47.5°	3752.6	3648.5	3451.4	3438.3	3482.0	3443.3	2918.2	2393.0	2361.9	2547.1	2858.9
50°	3771.4	3676.6	3596.7	3701.5	3776.3	3728.3	3077.8	2549.0	2534.6	2769.1	3097.2
52.5°	3543.7	3530.0	3651.6	3828.1	3952.2	3909.2	3208.2	2709.2	2711.1	3046.6	3387.2
55°	3460.8	3443.3	3589.2	3806.3	3974.0	3948.5	3305.5	2890.1	2906.9	3383.4	3698.4
57.5°	3600.5	3556.8	3585.5	3765.1	3922.9	3907.9	3406.5	3090.9	3121.5	3771.4	3985.9
60°	4033.9	3944.7	3792.6	3826.2	3924.8	3916.0	3551.2	3314.8	3366.0	4175.5	4168.0
62.5°	4683.2	4582.1	4272.2	4122.5	4100.7	4083.8	3790.1	3589.9	3615.4	4467.4	4062.0
65°	5395.4	5286.9	4918.3	4673.2	4544.7	4508.5	4175.5	3921.7	3761.4	4466.8	3649.1
67.5°	6195.0	6080.2	5712.9	5479.0	5339.9	5278.2	4801.0	4189.8	3714.0	4088.8	2920.0
70°	7013.8	6904.7	6736.3	6818.0	6879.1	6784.9	5786.4	4279.0	3373.5	3205.7	1960.8
72.5°	6579.1	6570.4	6698.3	7472.9	8651.0	8669.7	6770.6	4027.1	2606.3	1905.3	1045.3
73°	6175.6	6212.4	6449.4	7376.2	8802.5	8808.8	6789.9	3896.7	2393.0	1641.5	918.0
75°	3199.4	3448.9	4328.3	5981.0	8150.8	8180.1	5985.4	2950.0	1426.3	911.8	618.7
77.5°	856.9	845.7	1394.5	2913.8	5434.1	5395.4	3782.0	1428.2	683.5	571.9	434.1
80°	293.8	297.5	474.6	1065.9	2536.5	2626.9	1641.5	623.1	449.7	398.5	307.5
82.5°	149.7	154.7	248.2	453.4	1060.9	1038.4	528.3	366.7	301.2	242.0	172.1
85°	79.8	82.3	136.6	235.1	389.2	393.5	185.9	195.8	191.5	137.2	84.8
87.5°	39.3	40.5	65.5	103.5	144.1	139.1	64.9	84.8	94.2	77.3	46.8
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°	1486.8	1486.8	1486.8	1486.8	1486.8	1486.8	1486.8	1486.8	1486.8	1486.8	1486.8
2.5°	1476.9	1476.9	1485.0	1498.7	1508.7	1518.0	1524.3	1534.2	1539.9	1539.2	1538.6
5°	1466.9	1473.1	1489.3	1506.2	1517.4	1524.9	1524.9	1529.2	1529.2	1527.4	1524.9
7.5°	1443.8	1454.4	1478.1	1493.1	1496.2	1488.1	1471.9	1459.4	1443.8	1435.7	1432.6
10°	1407.0	1420.7	1450.7	1457.5	1441.3	1412.6	1373.3	1339.7	1309.7	1296.0	1291.6
12.5°	1370.8	1388.9	1417.0	1406.4	1367.7	1311.6	1251.1	1204.9	1171.3	1158.2	1153.8
15°	1340.9	1362.7	1384.6	1351.5	1284.1	1206.2	1139.5	1096.4	1070.8	1060.9	1058.4
17.5°	1320.9	1346.5	1354.0	1292.3	1198.7	1111.4	1052.1	1024.1	1012.8	1008.5	1007.2
20°	1322.2	1350.9	1332.8	1234.9	1116.4	1028.4	989.1	981.0	981.0	981.0	980.4
22.5°	1356.5	1381.4	1324.1	1181.2	1037.2	958.6	941.7	948.6	953.6	953.6	953.0
25°	1427.6	1441.3	1330.3	1129.5	963.0	898.1	898.7	911.8	916.2	916.2	914.9
27.5°	1536.1	1524.9	1341.5	1072.1	890.0	843.2	851.9	863.8	866.9	865.0	864.4
30°	1672.1	1627.2	1350.9	1004.7	821.4	792.1	799.5	806.4	803.9	799.5	798.9
32.5°	1824.2	1731.3	1345.3	929.3	760.9	739.1	743.4	747.2	743.4	732.8	732.8
35°	1975.2	1825.5	1314.7	846.9	712.9	687.9	687.3	699.1	698.5	686.0	686.7
37.5°	2107.4	1899.7	1255.5	771.5	671.7	650.5	653.0	660.5	664.2	647.4	645.5
40°	2222.8	1950.9	1171.9	707.2	638.6	639.9	633.0	621.2	616.8	609.3	608.1
42.5°	2331.3	1986.4	1083.3	653.6	621.8	636.1	613.1	585.0	573.2	580.0	584.4
45°	2437.9	2026.3	997.9	609.3	600.6	624.9	593.1	561.9	548.2	551.3	555.7
47.5°	2568.3	2081.8	895.0	561.9	568.2	604.3	580.6	547.0	526.4	513.9	510.2
50°	2739.8	2162.3	761.5	510.8	533.9	581.9	570.0	525.1	502.7	477.7	471.5
52.5°	2954.3	2238.4	626.8	469.6	505.8	562.6	552.6	506.4	479.0	449.0	444.1
55°	3168.3	2249.0	510.8	434.1	474.0	536.4	531.4	491.5	452.8	428.5	423.5
57.5°	3317.9	2148.6	432.8	404.1	443.4	503.9	512.0	473.4	431.0	412.2	409.1
60°	3320.4	1908.4	385.4	384.2	420.4	475.9	492.1	452.2	417.2	404.8	402.3
62.5°	3056.6	1538.0	354.9	369.2	403.5	452.8	477.1	440.3	414.1	409.1	406.6
65°	2562.1	1136.3	330.5	355.5	387.9	433.5	464.6	436.6	412.9	411.0	409.1
67.5°	1891.6	779.0	310.0	338.0	370.5	413.5	452.8	431.0	405.4	412.9	410.4
70°	1190.0	520.1	290.6	318.1	347.4	390.4	437.2	421.0	396.0	391.7	383.6
72.5°	671.7	376.1	267.6	292.5	317.5	359.9	416.0	404.1	374.8	357.4	349.3
73°	606.8	356.1	261.9	286.3	310.6	353.6	411.0	399.2	368.6	349.3	341.8
75°	444.1	291.3	236.4	260.7	281.9	324.9	387.3	374.2	341.1	318.1	313.1
77.5°	321.8	224.5	203.3	225.1	243.9	285.0	351.8	336.8	304.4	291.9	286.9
80°	232.0	170.3	168.4	189.6	205.8	247.6	313.7	298.1	266.9	303.7	295.6
82.5°	138.5	109.1	123.5	147.2	164.0	207.7	272.5	254.5	224.5	227.0	193.3
85°	66.1	61.7	76.7	96.7	108.5	142.2	227.0	212.7	179.6	147.2	144.1
87.5°	29.3	28.1	36.8	43.0	58.0	85.4	155.3	137.8	130.3	78.0	61.1
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)