

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: P270270

Luminaire Tested: **NAV-AF-01-D-UNV-SL2-7027-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270270
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24257)
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-SL2-7027-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 2700K, 1200mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE II SPILL
LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5708.3 lumens
Efficiency: N/A
Efficacy: 85.2 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type II - Medium - Semi-Cutoff
BUG Rating: B1 - U0 - G2

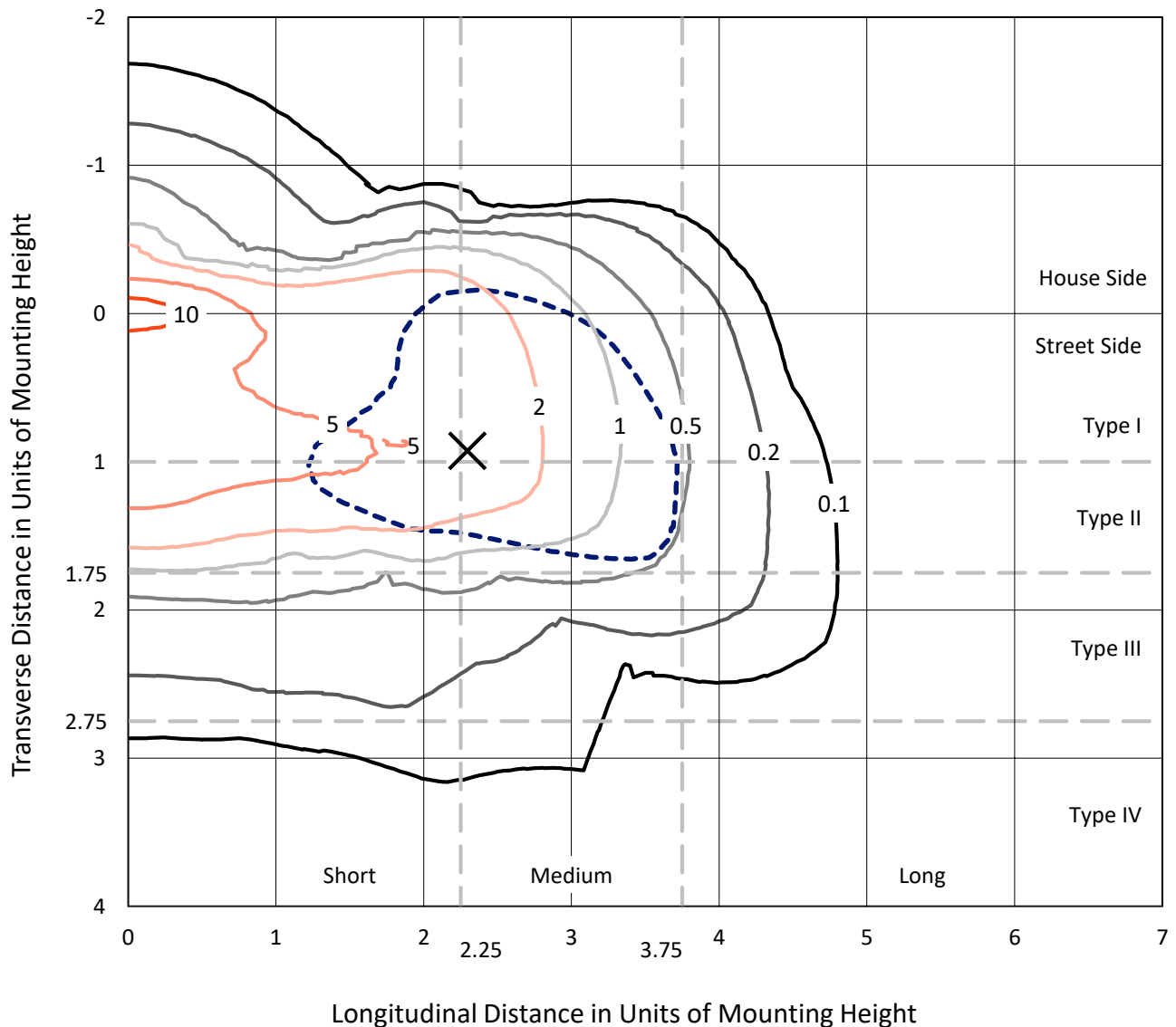
Input Watts (W): 67
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

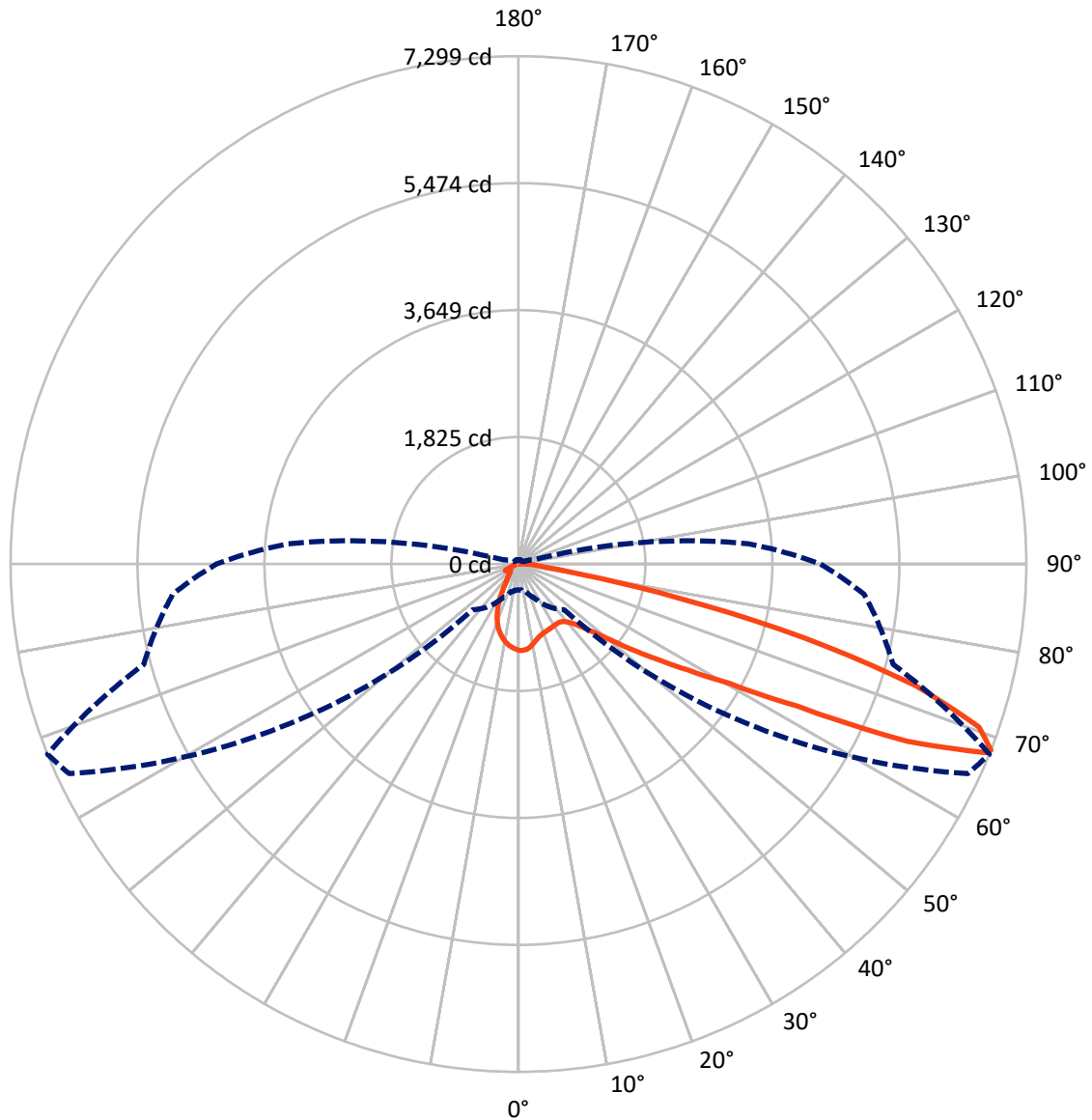
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 12.4 fc
 Type II - Medium - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 68-Deg Lateral - - - Horizontal Cone Through 68-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	933.9	0.0	933.9
	% Fixture	16.4	0.0	16.4
Street Side	Lumens	4774.4	0.0	4774.4
	% Fixture	83.6	0.0	83.6
Total	Lumens	5708.3	0.0	5708.3
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	106.4	1.9
10°-20°	246.8	4.3
20°-30°	333.8	5.8
30°-40°	470.7	8.2
40°-50°	774.0	13.6
50°-60°	1199.8	21.0
60°-70°	1555.6	27.3
70°-80°	892.7	15.6
80°-90°	128.4	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°	5708.3	100.0
0°-180°	5708.3	100.0



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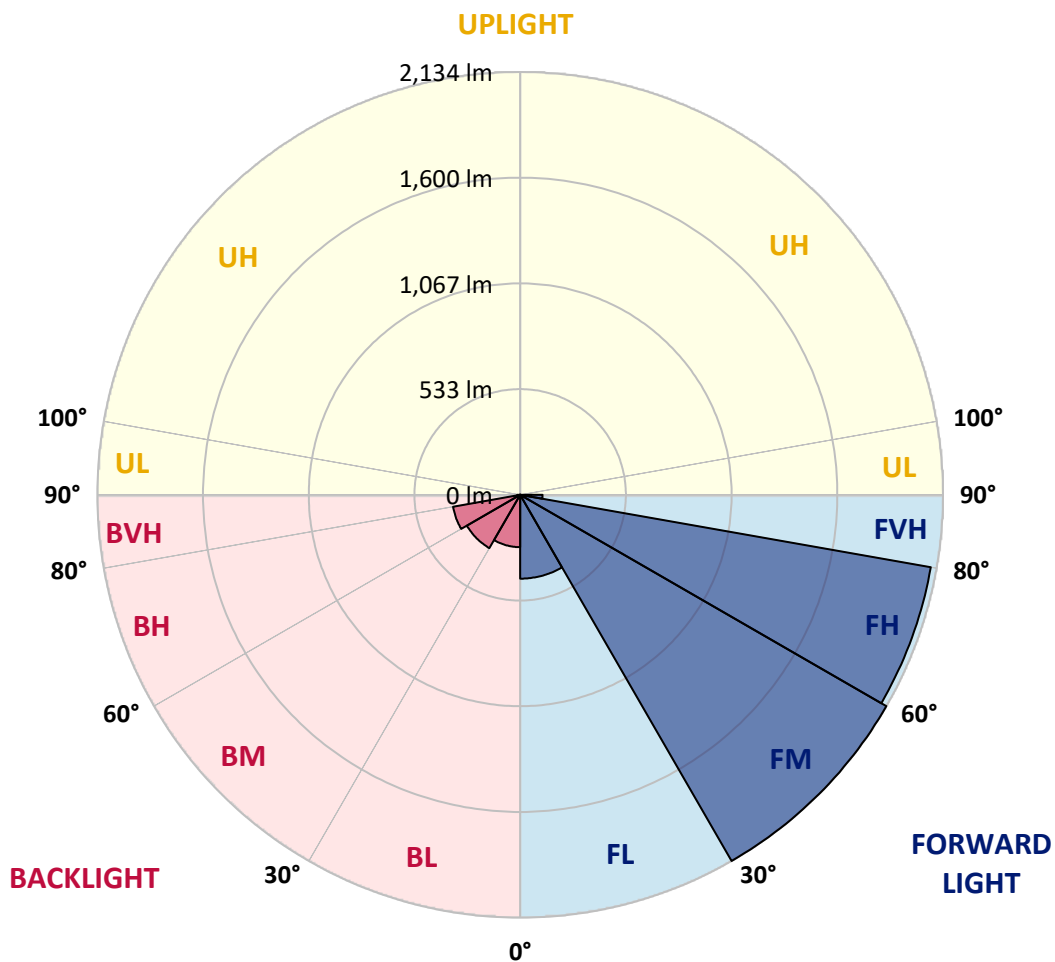
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	423.1	7.4			
FM (30°-60°)	2133.9	37.4			
FH (60°-80°)	2104.3	36.9			G2/5000
FVH (80°-90°)	113.1	2.0			G2/225
BL (0°-30°)	264.0	4.6	B1/500		
BM (30°-60°)	310.6	5.4	B1/1000		
BH (60°-80°)	343.9	6.0	B1/500		G1/500
BVH (80°-90°)	15.3	0.3			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 II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	68°	75°	85°
0°	1242.0	1242.0	1242.0	1242.0	1242.0	1242.0	1242.0	1242.0	1242.0	1242.0	1242.0
2.5°	1208.8	1218.6	1218.6	1225.6	1232.0	1237.2	1241.6	1241.6	1241.6	1238.8	1236.1
5°	1081.6	1094.8	1096.7	1114.5	1138.1	1166.8	1198.8	1227.2	1232.7	1243.2	1247.2
7.5°	993.3	997.5	1004.6	1016.8	1040.7	1076.1	1126.5	1189.8	1205.2	1238.0	1255.1
10°	930.7	934.1	940.0	952.4	973.9	1006.0	1055.7	1138.1	1163.3	1221.5	1255.6
12.5°	884.8	887.4	893.0	904.2	926.2	955.0	1005.7	1091.4	1122.7	1205.2	1260.7
15°	849.1	853.5	858.1	868.8	891.2	918.7	970.2	1057.5	1091.4	1192.1	1270.5
17.5°	834.9	837.1	837.8	843.5	863.6	891.6	943.0	1033.6	1068.7	1181.7	1277.8
20°	843.9	844.1	836.7	833.0	844.5	870.3	920.3	1015.8	1051.6	1172.4	1280.9
22.5°	882.9	882.9	863.6	847.2	839.3	855.4	905.0	1003.4	1042.3	1165.2	1280.9
25°	957.6	954.2	923.9	891.6	857.0	850.2	895.3	995.6	1035.1	1161.5	1276.0
27.5°	1055.7	1052.6	1014.2	966.1	903.4	861.4	891.9	989.3	1028.0	1155.8	1265.5
30°	1175.0	1172.4	1128.7	1065.7	973.3	896.8	899.7	984.8	1022.5	1146.6	1248.0
32.5°	1293.9	1292.4	1257.7	1193.2	1069.4	956.9	920.3	984.1	1019.4	1135.5	1226.7
35°	1413.7	1413.7	1392.4	1337.8	1198.8	1047.1	963.2	997.8	1025.1	1129.4	1208.5
37.5°	1590.4	1583.3	1543.7	1487.5	1361.8	1164.2	1032.5	1026.9	1046.6	1139.5	1202.6
40°	1864.1	1843.5	1744.7	1649.9	1539.7	1314.0	1133.9	1083.3	1095.2	1173.8	1216.8
42.5°	2150.5	2117.9	1987.1	1835.6	1723.5	1499.0	1267.1	1174.5	1174.3	1240.2	1261.8
45°	2396.1	2379.4	2237.7	2045.6	1933.4	1707.0	1435.2	1310.3	1297.0	1343.1	1348.7
47.5°	2539.0	2527.8	2442.4	2268.0	2182.5	1952.7	1648.5	1498.6	1473.3	1500.9	1492.3
50°	2499.4	2510.3	2485.6	2396.5	2450.1	2298.0	1920.3	1756.6	1708.5	1736.2	1715.3
52.5°	2291.3	2320.4	2342.5	2359.6	2604.2	2760.1	2261.9	2078.8	2039.0	2034.1	2013.9
55°	1916.7	1962.8	2032.2	2158.3	2562.9	3131.1	2858.5	2468.5	2410.3	2379.7	2387.5
57.5°	1304.3	1374.4	1524.0	1763.7	2347.7	3289.2	3740.7	2972.0	2873.5	2764.5	2790.0
60°	718.6	777.2	955.0	1196.6	1856.5	3265.7	4522.6	3789.9	3480.2	3191.5	3243.7
62.5°	465.1	477.7	609.9	817.4	1139.5	2883.1	4957.0	5157.3	4500.7	3754.6	3827.9
65°	373.6	382.6	447.4	659.3	793.8	1854.7	4976.5	6575.9	6142.9	4519.7	4522.0
67.5°	365.0	369.2	406.8	554.4	744.7	1009.8	4301.5	7135.1	7235.4	5422.9	4986.2
68°	370.3	375.1	413.2	537.4	744.2	930.7	3975.7	7126.6	7298.5	5573.9	4986.2
70°	326.7	332.6	421.3	556.1	712.5	800.2	2722.5	6748.1	7024.7	5921.0	4731.2
72.5°	170.8	165.9	208.4	438.9	802.0	833.7	1438.1	5637.7	5960.6	5483.7	4087.6
75°	133.0	121.2	116.7	173.5	705.4	864.7	835.2	4007.0	4250.9	3952.9	2732.1
77.5°	125.4	110.8	102.1	102.5	310.6	899.7	675.6	2358.1	2358.1	1885.6	871.9
80°	100.7	87.2	81.7	93.2	149.8	829.2	705.1	1074.6	916.5	487.4	240.1
82.5°	66.4	59.3	59.6	75.6	113.7	553.7	816.6	530.5	398.6	216.0	141.4
85°	42.1	36.2	40.2	52.9	85.0	246.9	808.5	368.8	264.0	121.2	70.4
87.5°	21.3	16.3	20.1	27.6	51.8	70.8	665.6	329.3	195.8	50.3	38.4
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°	1242.0	1242.0	1242.0	1242.0	1242.0	1242.0	1242.0	1242.0	1242.0	1242.0	1242.0
2.5°	1236.1	1228.0	1223.9	1217.2	1208.8	1200.7	1195.0	1192.5	1191.1	1191.7	1191.3
5°	1245.1	1234.2	1216.8	1191.7	1166.0	1138.8	1117.9	1102.0	1091.8	1088.8	1088.0
7.5°	1251.8	1236.1	1203.3	1157.7	1113.8	1066.1	1025.4	992.9	971.0	960.9	960.6
10°	1250.6	1230.5	1178.7	1111.6	1047.1	976.9	913.1	858.8	819.3	800.2	799.4
12.5°	1251.8	1224.2	1148.6	1057.5	965.0	864.7	769.9	685.3	626.5	598.5	597.4
15°	1256.2	1217.5	1117.5	997.1	869.2	727.4	592.2	485.9	432.2	413.8	413.8
17.5°	1255.9	1206.2	1081.6	927.1	755.5	565.7	404.1	338.7	333.4	350.1	352.8
20°	1248.5	1188.4	1035.4	843.9	621.9	391.5	274.1	264.7	306.5	352.8	358.0
22.5°	1236.8	1165.2	982.1	747.3	466.5	255.1	211.5	225.7	282.2	339.6	348.0
25°	1220.8	1137.3	921.0	635.0	310.3	183.4	176.3	193.9	233.7	272.1	278.1
27.5°	1197.4	1102.0	854.3	513.4	197.9	151.1	153.6	165.9	183.1	199.6	202.8
30°	1167.8	1060.4	781.5	378.8	150.2	134.9	139.4	147.0	154.4	164.7	167.1
32.5°	1138.1	1018.4	705.9	260.2	131.2	126.4	131.0	134.9	141.4	148.4	149.8
35°	1111.3	979.2	627.9	181.5	123.1	120.8	123.1	125.7	132.1	139.1	139.9
37.5°	1091.8	947.2	546.7	143.5	118.1	116.1	117.0	118.1	125.7	136.2	137.3
40°	1089.1	925.9	464.2	129.0	114.4	111.5	110.8	111.5	121.2	133.0	134.2
42.5°	1114.5	927.1	383.7	123.1	111.5	108.2	105.1	106.7	115.3	124.5	125.4
45°	1174.5	953.1	314.0	120.5	108.9	106.3	101.8	102.5	106.7	111.5	112.3
47.5°	1280.4	1010.1	260.7	118.9	106.7	104.5	98.9	96.6	96.9	99.5	99.5
50°	1449.8	1105.6	228.2	117.5	104.8	100.7	94.3	89.9	88.8	90.2	90.5
52.5°	1702.2	1269.2	212.5	114.4	101.4	95.8	88.8	84.4	82.5	83.9	83.9
55°	2043.5	1530.7	205.2	110.4	97.3	89.9	83.5	79.8	78.3	79.4	79.4
57.5°	2432.3	1870.5	217.7	104.8	92.0	83.5	79.1	76.4	75.3	76.4	76.8
60°	2894.2	2314.8	305.1	97.6	86.4	78.0	75.3	73.8	73.1	74.2	74.2
62.5°	3508.5	2906.2	472.1	92.0	80.6	72.8	72.0	71.2	70.4	71.5	71.5
65°	4171.5	3444.3	485.9	88.8	75.3	68.2	68.6	68.6	67.8	69.0	69.0
67.5°	4382.6	3397.7	271.5	84.6	69.0	63.8	65.2	65.2	64.9	65.9	65.7
68°	4337.7	3323.9	236.4	83.5	67.8	62.6	64.0	64.5	64.0	65.2	64.9
70°	4004.4	2918.1	155.4	77.2	63.1	58.8	61.2	61.5	61.2	62.6	62.3
72.5°	3305.7	2188.8	114.9	67.6	57.0	54.1	56.4	56.7	57.0	58.5	58.2
75°	2099.2	1208.8	90.5	57.4	51.1	48.5	50.8	51.8	52.6	54.7	53.7
77.5°	574.9	366.9	73.4	48.9	43.9	42.8	44.3	45.9	46.6	49.1	47.3
80°	201.4	162.2	61.2	41.4	36.6	36.2	37.6	39.2	40.0	42.1	40.0
82.5°	122.3	105.9	48.9	32.5	28.7	28.3	30.3	31.7	32.5	32.5	30.9
85°	63.8	56.0	35.8	22.7	19.8	18.7	22.0	23.9	24.3	23.9	22.7
87.5°	35.8	31.7	19.0	10.8	9.0	9.3	11.6	14.2	15.4	14.9	14.2
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)