

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: P197101

Luminaire Tested: **NAV-AF-01-D-UNV-SL3-8030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197101
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24262)
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-SL3-8030
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 80 CRI, 3000K, 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE III
SPILL LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4979 lumens
Efficiency: N/A
Efficacy: 84.4 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Medium - Non-Cutoff
BUG Rating: B1 - U0 - G2

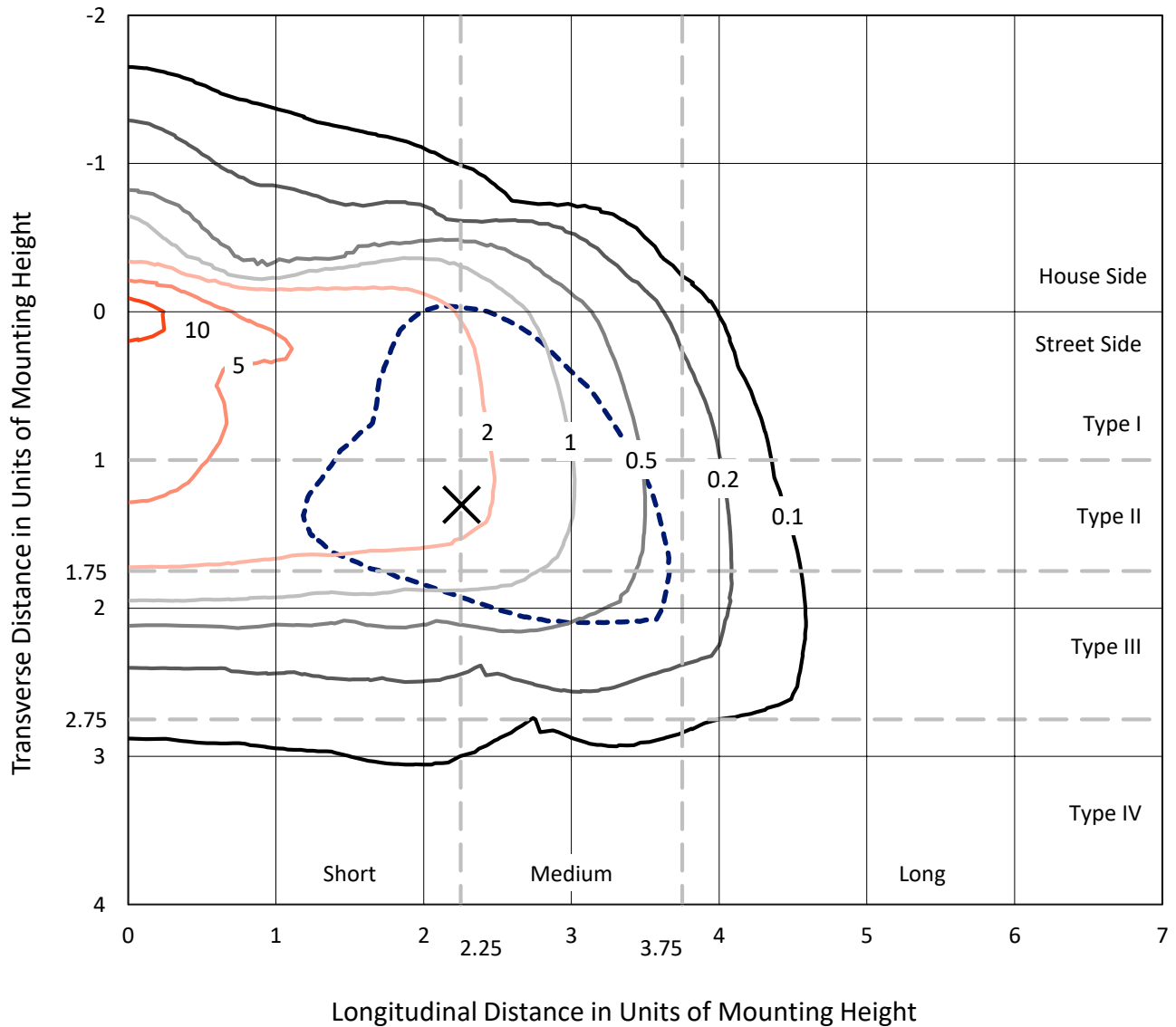
Input Watts (W): 59
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

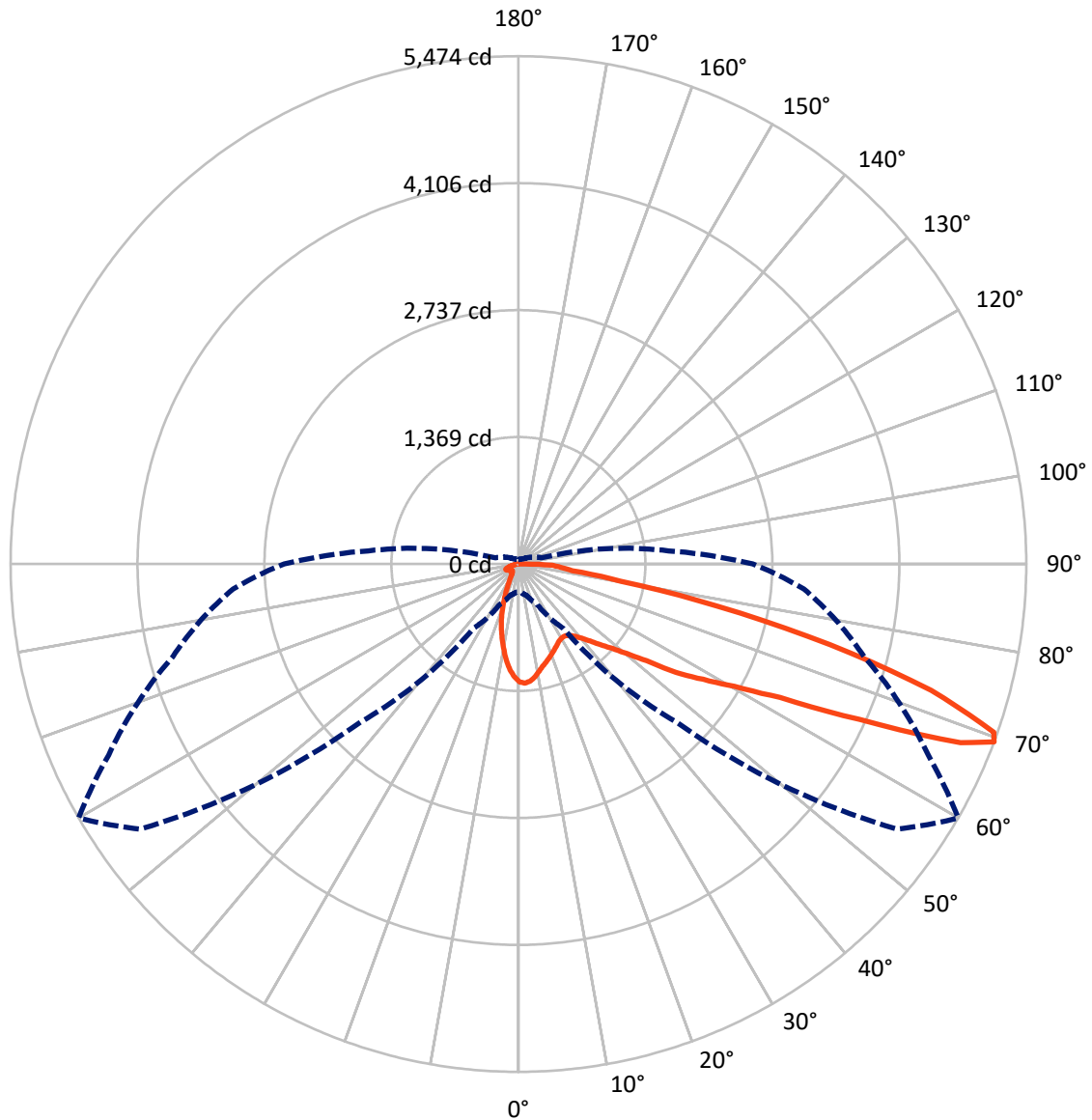
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 12.7 fc
 Type III - Medium - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 60-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	710.2	0.0	710.2
	% Fixture	14.3	0.0	14.3
Street Side	Lumens	4268.8	0.0	4268.8
	% Fixture	85.7	0.0	85.7
Total	Lumens	4979.0	0.0	4979.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	107.8	2.2
10°-20°	230.8	4.6
20°-30°	294.4	5.9
30°-40°	405.1	8.1
40°-50°	656.2	13.2
50°-60°	1029.8	20.7
60°-70°	1372.9	27.6
70°-80°	763.7	15.3
80°-90°	118.4	2.4
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°	4979.0	100.0
0°-180°	4979.0	100.0



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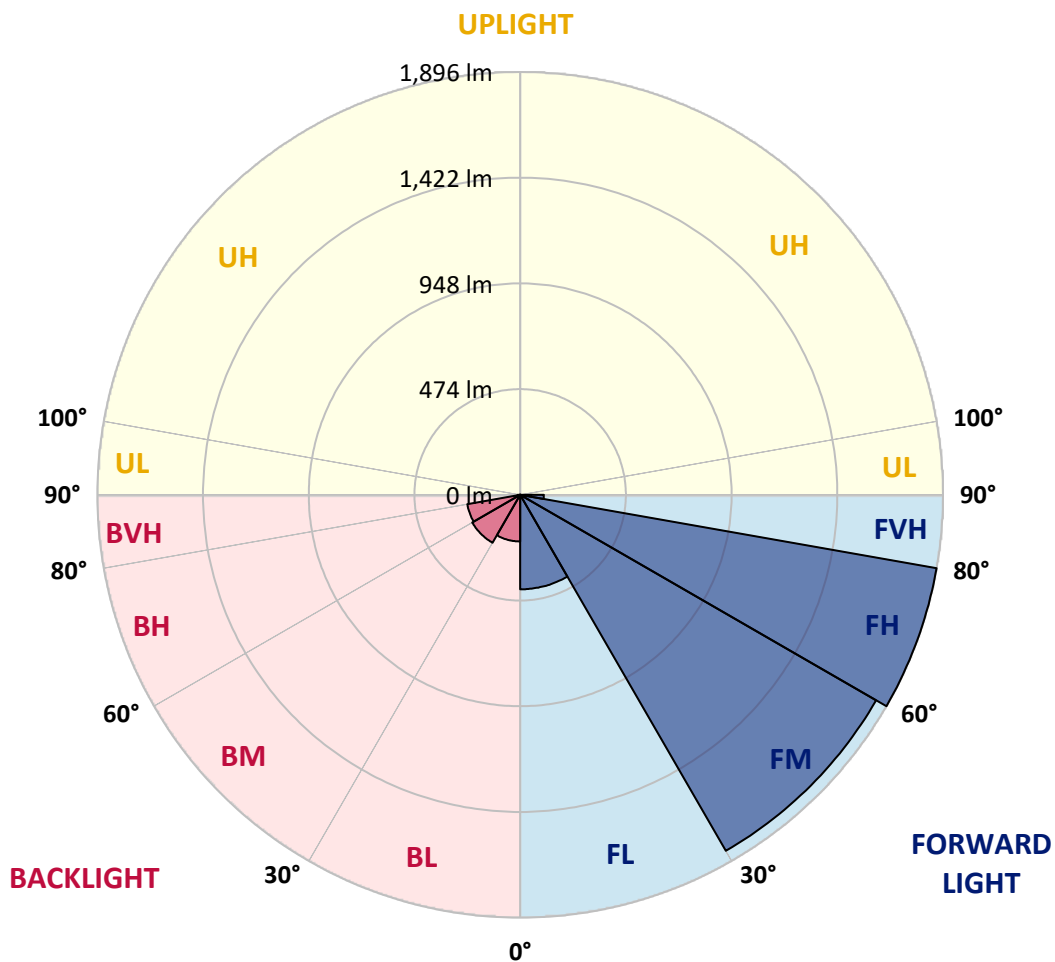
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	423.6	8.5			
FM	(30°-60°)	1843.0	37.0			
FH	(60°-80°)	1895.8	38.1			G2/5000
FVH	(80°-90°)	106.4	2.1			G2/225
BL	(0°-30°)	209.3	4.2	B1/500		
BM	(30°-60°)	248.1	5.0	B1/1000		
BH	(60°-80°)	240.8	4.8	B1/500		G1/500
BVH	(80°-90°)	12.0	0.2			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 III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	60°	65°	75°	85°
0°	1270.4	1270.4	1270.4	1270.4	1270.4	1270.4	1270.4	1270.4	1270.4	1270.4	1270.4
2.5°	1304.3	1307.8	1307.8	1304.9	1303.3	1294.0	1288.6	1284.8	1278.1	1265.6	1254.4
5°	1257.6	1264.3	1267.2	1268.5	1276.8	1273.9	1274.2	1271.7	1265.9	1252.5	1234.3
7.5°	1172.1	1173.3	1178.5	1187.1	1207.2	1221.2	1232.7	1235.0	1233.7	1223.8	1198.3
10°	1087.8	1090.0	1096.1	1110.8	1129.9	1150.0	1174.9	1185.2	1192.8	1189.6	1157.4
12.5°	1017.9	1018.2	1024.9	1041.8	1063.2	1088.4	1122.3	1138.2	1156.4	1163.8	1127.7
15°	950.5	955.0	961.3	981.8	1008.3	1040.2	1079.2	1101.2	1125.1	1146.2	1104.7
17.5°	899.4	902.9	906.7	923.7	954.3	994.2	1042.4	1066.1	1097.7	1129.9	1081.1
20°	871.3	872.6	869.7	878.0	903.9	947.0	1002.9	1031.3	1068.9	1114.3	1056.8
22.5°	865.6	865.6	855.0	853.4	864.9	901.3	962.0	996.8	1042.8	1103.4	1035.1
25°	892.4	890.5	870.7	852.5	848.3	866.8	923.0	965.8	1020.4	1103.1	1018.8
27.5°	943.1	940.6	916.0	885.4	858.9	850.9	893.0	936.8	1002.9	1114.0	1010.5
30°	1006.4	1005.4	980.5	942.2	898.4	857.3	881.2	921.8	991.0	1134.1	1010.2
32.5°	1075.6	1071.2	1055.9	1017.5	960.7	892.7	888.2	922.4	987.8	1163.4	1017.5
35°	1149.4	1146.2	1142.4	1103.7	1039.9	955.3	919.2	944.4	1003.5	1204.3	1038.3
37.5°	1243.3	1239.8	1246.1	1204.0	1134.1	1037.3	971.6	988.5	1035.4	1263.7	1076.9
40°	1410.3	1400.0	1382.2	1317.3	1243.9	1137.9	1047.2	1049.8	1090.0	1343.2	1138.9
42.5°	1684.5	1651.6	1563.2	1444.1	1359.8	1254.8	1145.9	1133.8	1165.4	1448.2	1228.9
45°	1959.4	1922.4	1773.0	1582.3	1479.9	1380.2	1267.9	1238.8	1259.2	1570.5	1344.8
47.5°	2136.9	2118.7	1950.2	1720.6	1605.6	1516.9	1407.4	1359.5	1374.2	1709.1	1487.8
50°	2189.0	2173.3	2040.8	1828.8	1724.4	1682.0	1580.1	1516.6	1519.1	1871.0	1659.3
52.5°	2150.0	2143.6	2055.8	1895.9	1833.6	1856.0	1819.2	1730.8	1709.7	2048.5	1845.1
55°	2098.0	2100.2	2066.4	1963.2	1944.7	2018.2	2132.1	2060.9	1971.5	2233.4	2038.6
57.5°	1934.2	1935.8	2024.5	2091.6	2156.7	2245.5	2375.7	2345.7	2241.7	2432.9	2255.4
60°	1557.4	1569.9	1767.5	2065.1	2399.1	2693.4	2725.4	2673.6	2529.0	2662.8	2537.3
62.5°	1112.7	1123.9	1352.8	1792.7	2370.6	3200.4	3370.9	3165.3	2918.8	3006.6	2933.8
65°	584.6	582.7	759.9	1238.8	1996.8	3317.9	4388.2	4038.2	3575.6	3479.5	3317.0
67.5°	326.6	337.2	405.8	624.8	1301.4	2920.1	5037.9	5141.0	4488.7	3854.6	3300.4
69°	302.0	305.5	351.5	483.1	848.3	2409.3	4982.0	5474.0	4873.8	3856.2	3087.7
70°	293.4	297.2	339.1	445.1	712.6	1974.1	4778.6	5435.1	4967.3	3770.7	2894.3
72.5°	263.1	268.2	308.7	400.1	600.6	1017.5	3849.2	4651.9	4499.6	3295.6	2244.2
75°	224.5	233.1	294.4	397.2	569.0	646.9	2567.0	3465.8	3348.9	2356.9	1273.3
77.5°	92.9	93.9	128.7	290.9	597.1	619.1	1379.6	2195.4	1943.4	1033.5	383.5
80°	64.8	63.5	64.2	84.9	481.8	623.2	707.8	1116.5	867.8	272.7	179.4
82.5°	54.6	54.0	56.5	53.3	163.2	707.2	591.9	582.0	408.7	146.9	85.6
85°	36.1	35.1	46.3	48.5	77.6	561.6	636.6	457.5	304.6	78.5	36.4
87.5°	17.6	17.9	26.5	32.9	41.2	177.8	609.8	361.7	235.3	34.2	14.7
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°	1270.4	1270.4	1270.4	1270.4	1270.4	1270.4	1270.4	1270.4	1270.4	1270.4	1270.4
2.5°	1250.0	1240.4	1231.8	1220.9	1212.6	1205.6	1196.0	1195.7	1194.1	1196.3	1197.0
5°	1222.2	1206.2	1182.0	1154.8	1135.7	1110.4	1085.9	1077.6	1068.3	1067.3	1070.2
7.5°	1180.4	1155.5	1114.0	1072.5	1030.9	988.5	948.3	927.8	908.0	902.0	904.8
10°	1133.8	1102.1	1038.6	970.9	912.5	849.3	788.0	748.4	712.3	697.0	700.8
12.5°	1097.4	1057.1	967.7	879.9	792.4	701.8	621.0	542.8	483.7	457.2	458.8
15°	1066.1	1014.7	901.3	784.5	675.0	550.8	438.7	348.0	296.3	277.1	276.5
17.5°	1032.2	970.0	832.0	695.7	553.6	400.1	293.7	240.1	219.7	213.3	213.3
20°	996.1	924.0	759.6	599.0	425.9	279.4	220.9	200.2	192.5	190.6	190.3
22.5°	962.6	879.0	686.8	495.8	308.1	212.0	188.1	180.1	178.8	180.4	180.4
25°	936.1	839.4	613.0	387.3	224.1	177.5	167.3	166.3	171.1	176.9	177.8
27.5°	916.3	803.9	540.2	282.9	176.2	154.5	151.0	155.2	166.3	177.8	180.1
30°	902.6	773.6	453.1	203.4	146.9	135.4	137.0	144.3	161.2	178.8	183.6
32.5°	896.5	749.0	365.3	156.1	125.5	119.1	123.2	132.8	150.4	167.9	173.7
35°	902.3	731.1	284.2	129.6	109.8	105.0	109.8	119.7	131.2	139.8	143.4
37.5°	923.0	724.8	213.9	114.9	99.6	94.8	98.7	105.4	110.5	113.7	115.3
40°	966.8	731.5	167.6	107.3	93.9	88.4	89.4	92.6	96.1	98.7	99.0
42.5°	1036.4	753.5	149.1	104.4	90.4	83.3	81.7	84.0	87.8	91.3	92.0
45°	1129.0	790.2	147.2	105.4	88.8	79.2	76.0	78.2	83.3	89.1	90.0
47.5°	1248.7	848.3	156.1	110.5	89.7	76.9	72.2	74.4	81.1	88.8	90.0
50°	1390.5	928.8	172.7	118.1	94.2	76.9	70.6	72.5	79.5	88.1	89.4
52.5°	1557.4	1040.8	190.0	125.8	100.6	79.8	71.2	70.9	77.3	85.2	86.8
55°	1741.7	1180.1	206.6	132.5	104.1	83.7	72.8	69.0	74.1	80.5	81.7
57.5°	1958.5	1370.7	235.6	138.9	106.0	86.5	74.7	67.0	69.9	74.4	75.3
60°	2252.5	1650.7	292.1	149.7	109.5	87.8	75.0	65.1	64.8	68.0	68.3
62.5°	2636.0	1978.6	346.1	162.5	116.5	88.1	73.8	63.9	60.7	61.6	61.6
65°	2908.6	2099.3	330.5	173.4	122.9	87.8	72.5	62.9	57.5	55.9	55.9
67.5°	2753.5	1854.4	280.6	176.2	123.6	84.3	69.6	60.7	54.6	50.8	50.8
69°	2525.5	1625.4	257.7	171.1	118.5	80.1	66.4	58.4	52.7	48.2	48.2
70°	2339.7	1452.1	243.6	165.1	112.4	76.6	63.5	56.2	50.8	46.9	46.6
72.5°	1746.8	969.0	208.2	142.4	92.3	64.8	55.6	50.1	45.7	43.1	43.1
75°	921.8	485.6	170.5	116.2	71.2	51.7	45.7	42.1	39.6	39.3	39.0
77.5°	302.0	219.7	122.6	87.5	52.4	40.2	36.4	34.2	33.8	35.1	35.1
80°	163.2	131.2	78.9	59.1	36.4	30.0	28.1	27.8	28.7	30.7	30.7
82.5°	79.2	64.8	46.9	36.4	24.9	22.0	22.0	22.3	23.6	25.9	25.9
85°	34.2	30.7	27.1	20.4	15.3	13.7	15.6	17.2	18.2	19.8	20.4
87.5°	16.3	14.4	12.5	8.0	6.7	7.0	8.3	10.2	12.1	13.4	13.7
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)