

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: P270273

Luminaire Tested: **NAV-AF-01-D-UNV-SL3-7027**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270273
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-SL3-7027
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 2700K, 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: 5301 lumens
Efficiency: N/A
Efficacy: 89.8 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

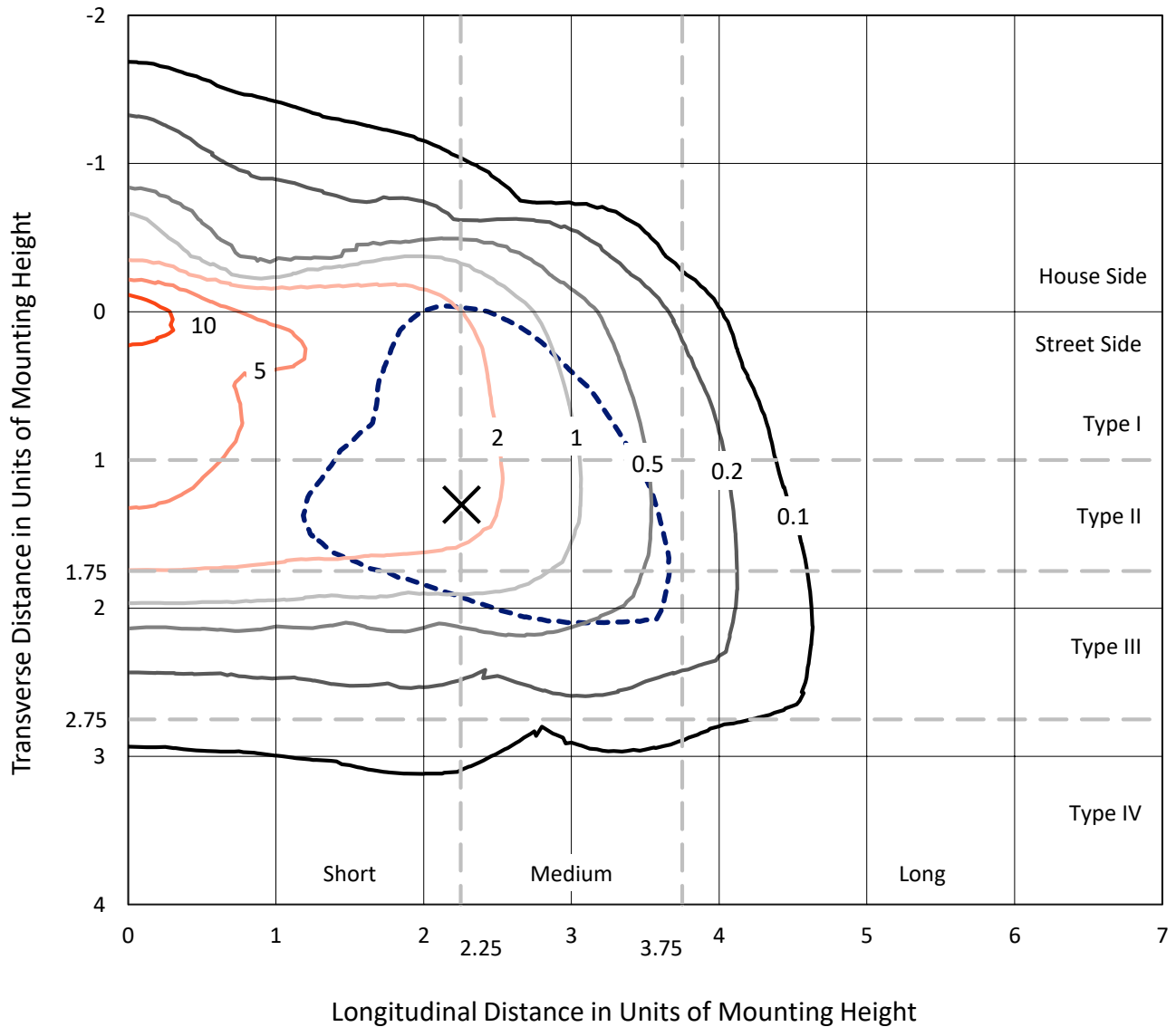
Input Watts (W): 59
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

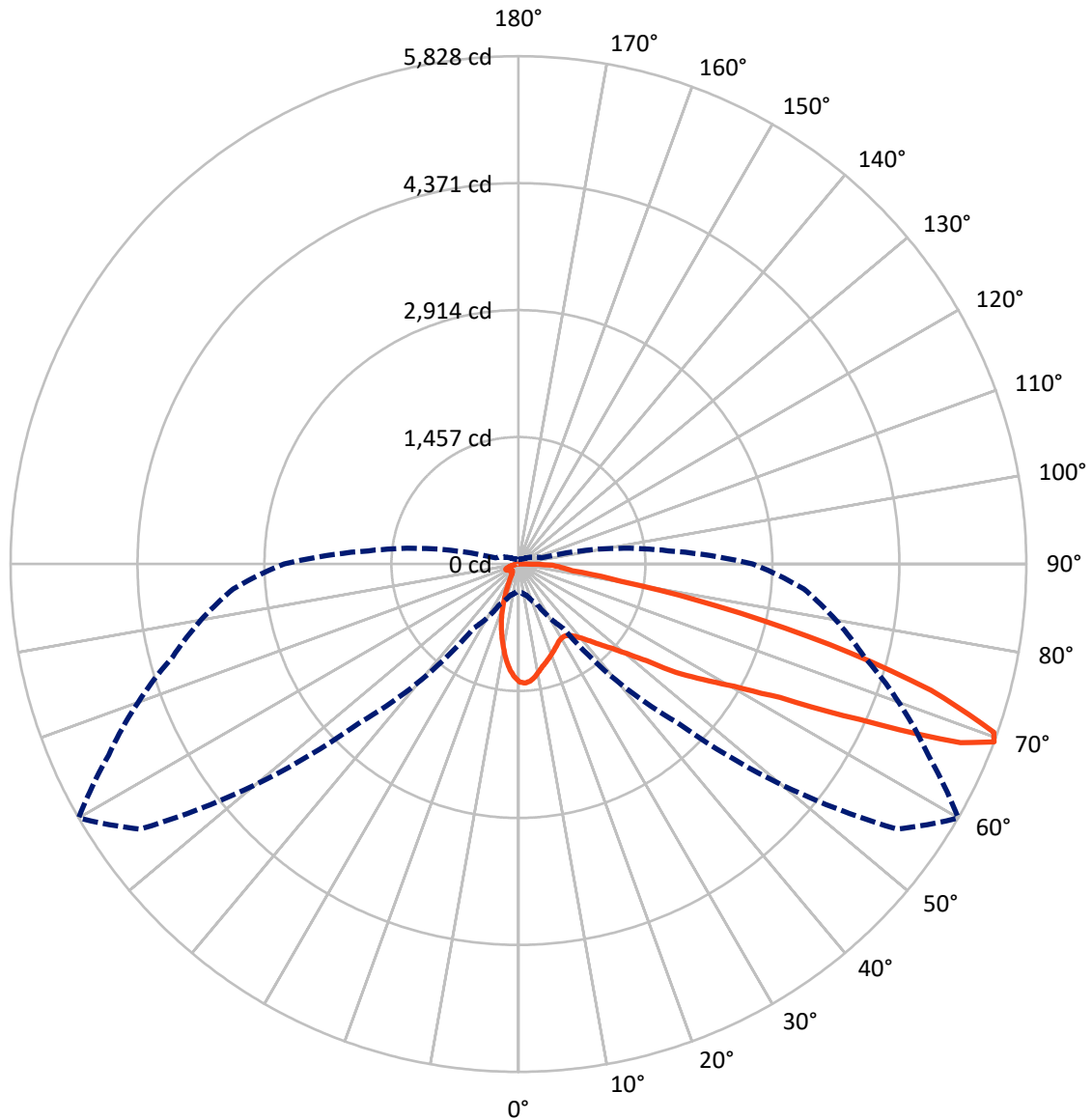
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 13.5 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	756.1	0.0	756.1
	% Fixture	14.3	0.0	14.3
Street Side	Lumens	4544.9	0.0	4544.9
	% Fixture	85.7	0.0	85.7
Total	Lumens	5301.0	0.0	5301.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	114.7	2.2
10°-20°	245.7	4.6
20°-30°	313.4	5.9
30°-40°	431.3	8.1
40°-50°	698.6	13.2
50°-60°	1096.4	20.7
60°-70°	1461.7	27.6
70°-80°	813.1	15.3
80°-90°	126.1	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°	5301.0	100.0
0°-180°	5301.0	100.0

Coefficient of Utilization



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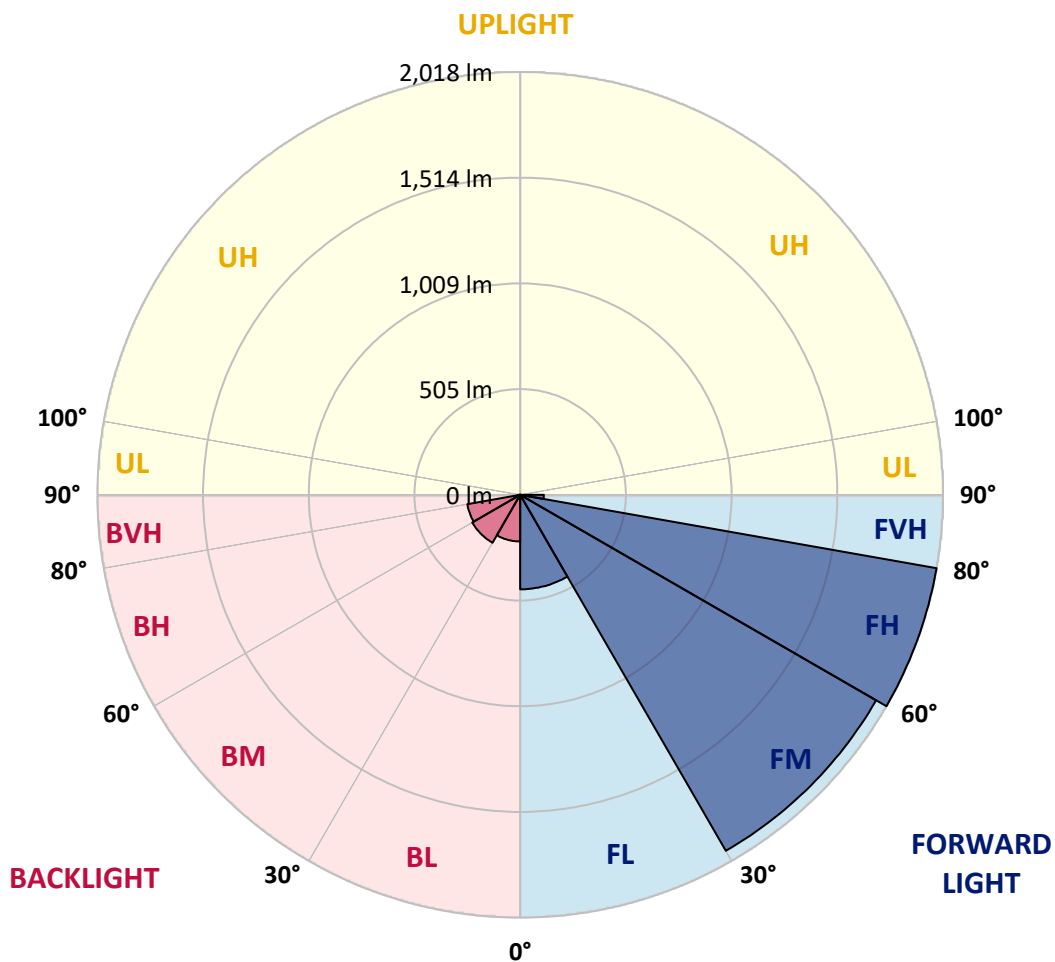
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	451.0	8.5			
FM	(30°-60°)	1962.1	37.0			
FH	(60°-80°)	2018.4	38.1			G2/5000
FVH	(80°-90°)	113.3	2.1			G2/225
BL	(0°-30°)	222.8	4.2	B1/500		
BM	(30°-60°)	264.1	5.0	B1/1000		
BH	(60°-80°)	256.4	4.8	B1/500		G1/500
BVH	(80°-90°)	12.8	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°	1352.6	1352.6	1352.6	1352.6	1352.6	1352.6	1352.6	1352.6	1352.6	1352.6	1352.6
2.5°	1388.6	1392.4	1392.4	1389.3	1387.6	1377.7	1371.9	1367.8	1360.8	1347.5	1335.6
5°	1339.0	1346.1	1349.2	1350.5	1359.3	1356.4	1356.6	1353.9	1347.7	1333.5	1314.1
7.5°	1247.8	1249.3	1254.7	1263.8	1285.3	1300.1	1312.5	1314.8	1313.5	1302.9	1275.8
10°	1158.2	1160.5	1167.0	1182.6	1203.0	1224.4	1250.9	1261.8	1269.9	1266.6	1232.3
12.5°	1083.6	1084.1	1091.1	1109.1	1132.0	1158.9	1194.8	1211.9	1231.1	1239.0	1200.7
15°	1012.0	1016.7	1023.4	1045.3	1073.5	1107.5	1148.9	1172.4	1197.9	1220.3	1176.2
17.5°	957.6	961.2	965.4	983.5	1016.1	1058.6	1109.9	1135.0	1168.7	1203.0	1151.0
20°	927.7	928.9	926.0	934.7	962.4	1008.2	1067.7	1098.0	1138.1	1186.3	1125.1
22.5°	921.5	921.5	910.3	908.6	920.9	959.6	1024.2	1061.3	1110.1	1174.8	1102.0
25°	950.0	948.0	927.1	907.6	903.2	922.9	982.7	1028.3	1086.4	1174.4	1084.8
27.5°	1004.1	1001.4	975.2	942.6	914.5	905.9	950.8	997.4	1067.7	1186.0	1075.9
30°	1071.5	1070.4	1043.9	1003.0	956.5	912.7	938.2	981.4	1055.1	1207.4	1075.5
32.5°	1145.2	1140.5	1124.0	1083.4	1022.8	950.4	945.6	982.0	1051.7	1238.8	1083.4
35°	1223.8	1220.3	1216.2	1175.2	1107.2	1017.1	978.7	1005.6	1068.4	1282.2	1105.5
37.5°	1323.7	1319.9	1326.7	1281.8	1207.4	1104.5	1034.4	1052.5	1102.4	1345.4	1146.5
40°	1501.4	1490.6	1471.6	1402.6	1324.3	1211.5	1114.9	1117.8	1160.5	1430.0	1212.5
42.5°	1793.5	1758.4	1664.3	1537.4	1447.8	1335.9	1220.0	1207.1	1240.6	1541.9	1308.4
45°	2086.1	2046.7	1887.6	1684.7	1575.5	1469.4	1349.9	1318.9	1340.7	1672.0	1431.8
47.5°	2275.0	2255.7	2076.3	1831.9	1709.5	1615.1	1498.5	1447.3	1463.0	1819.6	1584.0
50°	2330.6	2313.9	2172.8	1947.0	1836.0	1790.7	1682.3	1614.7	1617.4	1991.9	1766.5
52.5°	2289.1	2282.2	2188.8	2018.5	1952.1	1976.0	1936.8	1842.8	1820.2	2180.9	1964.5
55°	2233.6	2236.1	2199.9	2090.1	2070.5	2148.7	2270.0	2194.2	2099.0	2377.8	2170.5
57.5°	2059.3	2061.0	2155.5	2226.9	2296.2	2390.7	2529.4	2497.5	2386.5	2590.3	2401.2
60°	1658.1	1671.3	1881.8	2198.6	2554.2	2867.6	2901.5	2846.5	2692.5	2835.1	2701.5
62.5°	1184.7	1196.5	1440.3	1908.7	2524.0	3407.5	3588.9	3370.0	3107.5	3201.1	3123.5
65°	622.3	620.4	809.1	1318.9	2125.8	3532.6	4671.9	4299.4	3806.7	3704.5	3531.4
67.5°	347.7	359.0	432.1	665.3	1385.5	3108.9	5363.7	5473.5	4779.1	4103.8	3513.8
69°	321.6	325.2	374.2	514.3	903.2	2565.1	5304.2	5828.1	5189.0	4105.7	3287.3
70°	312.4	316.5	360.9	473.9	758.7	2101.8	5087.7	5786.5	5288.5	4014.5	3081.5
72.5°	280.1	285.5	328.7	425.9	639.5	1083.4	4098.2	4952.7	4790.7	3508.7	2389.3
75°	238.9	248.1	313.4	422.8	605.7	688.7	2733.1	3689.9	3565.5	2509.3	1355.6
77.5°	99.0	99.9	137.0	309.6	635.7	659.1	1468.8	2337.3	2069.2	1100.3	408.3
80°	69.0	67.6	68.4	90.4	512.9	663.6	753.6	1188.6	923.8	290.3	191.0
82.5°	58.1	57.4	60.1	56.8	173.7	752.9	630.3	619.7	435.0	156.3	91.1
85°	38.4	37.4	49.2	51.7	82.6	597.9	677.9	487.2	324.3	83.6	38.7
87.5°	18.7	19.0	28.1	35.0	43.8	189.4	649.3	385.2	250.5	36.4	15.6
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°	1352.6	1352.6	1352.6	1352.6	1352.6	1352.6	1352.6	1352.6	1352.6	1352.6	1352.6
2.5°	1330.7	1320.6	1311.4	1299.8	1291.0	1283.6	1273.3	1273.0	1271.3	1273.6	1274.3
5°	1301.3	1284.2	1258.3	1229.5	1209.1	1182.3	1156.1	1147.2	1137.3	1136.4	1139.4
7.5°	1256.6	1230.1	1186.0	1141.8	1097.5	1052.5	1009.5	987.9	966.8	960.3	963.3
10°	1207.1	1173.5	1105.8	1033.7	971.4	904.2	838.9	796.7	758.3	742.1	746.1
12.5°	1168.3	1125.4	1030.4	936.8	843.7	747.2	661.2	577.9	515.0	486.8	488.5
15°	1135.0	1080.3	959.6	835.2	718.6	586.4	467.1	370.6	315.5	295.1	294.4
17.5°	1098.9	1032.7	885.9	740.7	589.5	425.9	312.7	255.6	233.9	227.1	227.1
20°	1060.5	983.7	808.7	637.6	453.5	297.3	235.3	213.2	205.0	202.9	202.6
22.5°	1024.8	935.9	731.2	527.9	328.1	225.7	200.2	191.7	190.4	192.1	192.1
25°	996.7	893.6	652.7	412.3	238.6	189.1	178.1	177.1	182.1	188.4	189.4
27.5°	975.6	855.9	575.2	301.2	187.7	164.5	160.7	165.2	177.1	189.4	191.7
30°	960.9	823.7	482.4	216.5	156.3	144.1	145.9	153.6	171.7	190.4	195.4
32.5°	954.4	797.4	388.8	166.2	133.6	126.8	131.2	141.5	160.1	178.9	185.0
35°	960.6	778.4	302.5	138.0	116.9	111.7	116.9	127.5	139.6	148.8	152.6
37.5°	982.7	771.6	227.7	122.3	106.1	101.0	105.0	112.2	117.6	121.0	122.7
40°	1029.3	778.8	178.5	114.3	99.9	94.1	95.2	98.5	102.2	105.0	105.5
42.5°	1103.4	802.2	158.7	111.2	96.2	88.8	87.0	89.4	93.5	97.2	97.8
45°	1202.0	841.4	156.8	112.2	94.5	84.4	80.8	83.4	88.8	94.9	95.8
47.5°	1329.4	903.2	166.2	117.6	95.5	81.9	76.8	79.2	86.3	94.5	95.8
50°	1480.3	988.9	184.0	125.8	100.3	81.9	75.1	77.2	84.6	93.9	95.2
52.5°	1658.1	1108.1	202.3	133.9	107.1	85.0	75.7	75.5	82.3	90.8	92.4
55°	1854.3	1256.4	219.9	141.0	110.9	89.0	77.6	73.4	79.0	85.7	87.0
57.5°	2085.1	1459.2	250.8	148.0	112.8	92.2	79.5	71.3	74.4	79.2	80.2
60°	2398.1	1757.4	311.1	159.4	116.6	93.5	79.9	69.3	69.0	72.5	72.8
62.5°	2806.5	2106.5	368.5	173.1	124.1	93.9	78.5	68.0	64.6	65.5	65.5
65°	3096.6	2235.1	351.9	184.6	130.9	93.5	77.2	67.0	61.2	59.5	59.5
67.5°	2931.4	1974.3	298.7	187.7	131.5	89.7	74.1	64.6	58.1	54.1	54.1
69°	2688.7	1730.6	274.3	182.1	126.1	85.2	70.6	62.3	56.1	51.4	51.4
70°	2491.0	1546.0	259.4	175.8	119.7	81.6	67.6	59.8	54.1	49.9	49.6
72.5°	1859.8	1031.7	221.6	151.6	98.3	69.0	59.2	53.4	48.6	46.0	46.0
75°	981.4	517.1	181.5	123.7	75.7	55.1	48.6	44.8	42.1	41.9	41.5
77.5°	321.6	233.9	130.6	93.2	55.8	42.8	38.7	36.4	36.0	37.4	37.4
80°	173.7	139.6	83.9	62.9	38.7	32.0	30.0	29.6	30.6	32.6	32.6
82.5°	84.4	69.0	49.9	38.7	26.5	23.4	23.4	23.7	25.2	27.6	27.6
85°	36.4	32.6	28.8	21.7	16.3	14.6	16.7	18.3	19.4	21.1	21.7
87.5°	17.3	15.4	13.2	8.5	7.1	7.5	8.9	10.9	12.9	14.3	14.6
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)