

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: P197107

Luminaire Tested: **NAV-AF-01-D-UNV-SL3-8030-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197107
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-SL3-8030-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 80 CRI, 3000K, 1200mA 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: 5461 lumens
Efficiency: N/A
Efficacy: 81.5 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

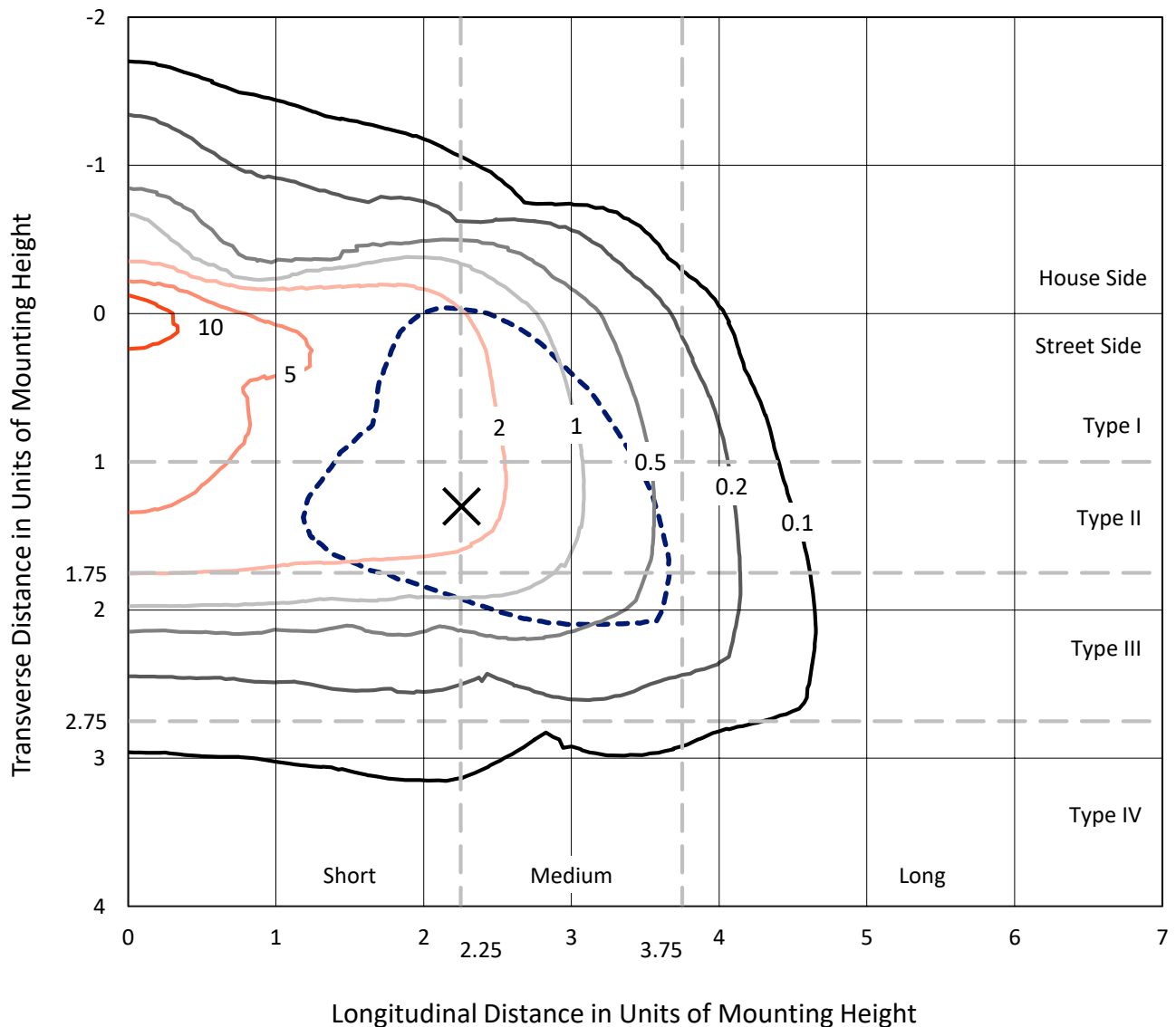
Input Watts (W): 67
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

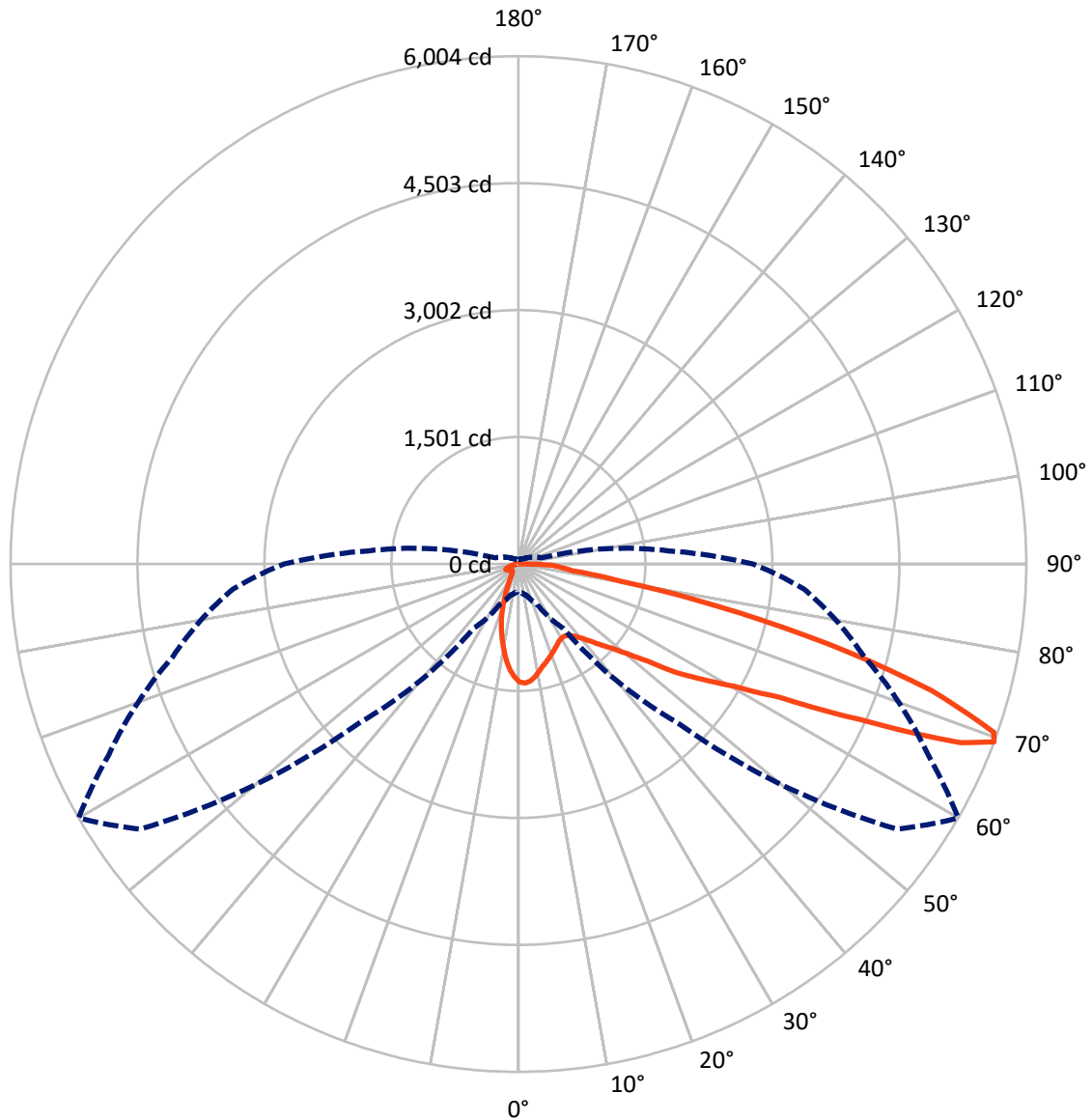
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 13.9 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	778.9	0.0	778.9
	% Fixture	14.3	0.0	14.3
Street Side	Lumens	4682.1	0.0	4682.1
	% Fixture	85.7	0.0	85.7
Total	Lumens	5461.0	0.0	5461.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	118.2	2.2
10°-20°	253.1	4.6
20°-30°	322.9	5.9
30°-40°	444.3	8.1
40°-50°	719.7	13.2
50°-60°	1129.5	20.7
60°-70°	1505.8	27.6
70°-80°	837.6	15.3
80°-90°	129.9	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°	5461.0	100.0
0°-180°	5461.0	100.0



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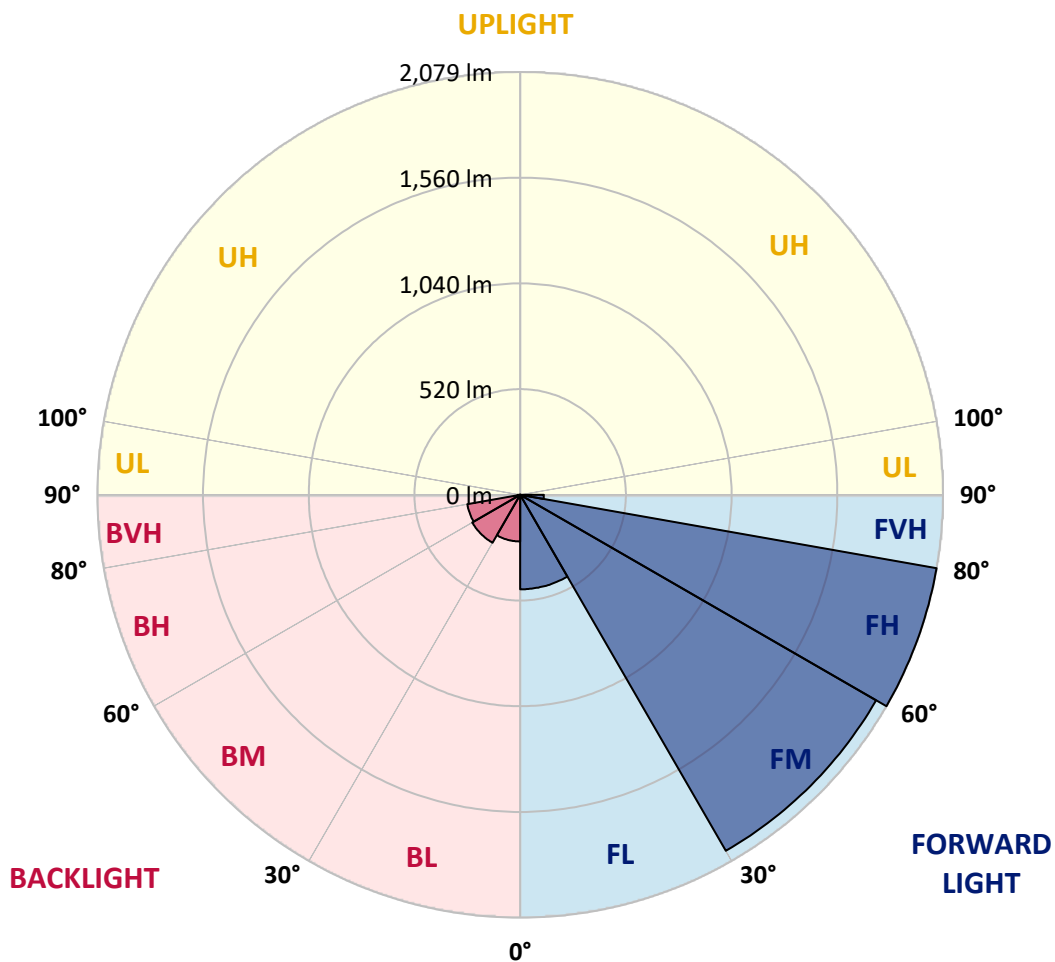
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	464.6	8.5			
FM (30°-60°)	2021.4	37.0			
FH (60°-80°)	2079.3	38.1			G2/5000
FVH (80°-90°)	116.7	2.1			G2/225
BL (0°-30°)	229.5	4.2	B1/500		
BM (30°-60°)	272.1	5.0	B1/1000		
BH (60°-80°)	264.1	4.8	B1/500		G1/500
BVH (80°-90°)	13.2	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°	1393.4	1393.4	1393.4	1393.4	1393.4	1393.4	1393.4	1393.4	1393.4	1393.4	1393.4
2.5°	1430.5	1434.4	1434.4	1431.2	1429.5	1419.3	1413.4	1409.1	1401.8	1388.1	1375.9
5°	1379.4	1386.7	1389.9	1391.3	1400.4	1397.2	1397.6	1394.8	1388.5	1373.8	1353.8
7.5°	1285.5	1286.9	1292.5	1302.0	1324.1	1339.5	1352.1	1354.5	1353.1	1342.3	1314.2
10°	1193.1	1195.5	1202.2	1218.3	1239.3	1261.4	1288.7	1299.9	1308.3	1304.8	1269.4
12.5°	1116.4	1116.7	1124.1	1142.7	1166.1	1193.8	1230.9	1248.4	1268.4	1276.4	1236.9
15°	1042.5	1047.4	1054.4	1076.8	1105.9	1140.9	1183.6	1207.8	1234.1	1257.2	1211.6
17.5°	986.5	990.3	994.5	1013.1	1046.7	1090.5	1143.4	1169.3	1203.9	1239.3	1185.7
20°	955.7	957.1	953.9	963.0	991.4	1038.7	1099.9	1131.1	1172.4	1222.2	1159.1
22.5°	949.4	949.4	937.8	936.0	948.7	988.6	1055.1	1093.3	1143.7	1210.2	1135.3
25°	978.8	976.7	955.0	935.0	930.4	950.8	1012.4	1059.3	1119.2	1209.9	1117.4
27.5°	1034.5	1031.6	1004.7	971.1	942.0	933.2	979.5	1027.4	1099.9	1221.8	1108.3
30°	1103.8	1102.7	1075.4	1033.4	985.4	940.3	966.5	1011.0	1087.0	1243.9	1108.0
32.5°	1179.8	1174.9	1158.1	1116.0	1053.7	979.1	974.2	1011.7	1083.5	1276.1	1116.0
35°	1260.7	1257.2	1253.0	1210.6	1140.6	1047.8	1008.2	1035.9	1100.6	1320.9	1138.8
37.5°	1363.6	1359.8	1366.8	1320.6	1243.9	1137.8	1065.6	1084.2	1135.7	1386.0	1181.2
40°	1546.8	1535.6	1516.0	1444.9	1364.3	1248.1	1148.6	1151.4	1195.5	1473.2	1249.1
42.5°	1847.6	1811.5	1714.5	1583.9	1491.4	1376.2	1256.8	1243.5	1278.2	1588.4	1347.9
45°	2149.1	2108.5	1944.6	1735.5	1623.1	1513.9	1390.6	1358.7	1381.1	1722.6	1475.0
47.5°	2343.8	2323.8	2138.9	1887.2	1761.1	1663.7	1543.6	1491.1	1507.2	1874.5	1631.9
50°	2400.9	2383.7	2238.4	2005.9	1891.4	1844.8	1733.1	1663.4	1666.2	2052.1	1819.9
52.5°	2358.2	2351.2	2254.8	2079.4	2011.1	2035.6	1995.4	1898.4	1875.2	2246.8	2023.7
55°	2301.1	2303.5	2266.4	2153.3	2133.0	2213.5	2338.5	2260.5	2162.4	2449.6	2235.9
57.5°	2121.4	2123.2	2220.5	2294.1	2365.5	2462.9	2605.7	2572.8	2458.7	2668.4	2473.7
60°	1708.2	1721.9	1938.6	2265.0	2631.3	2954.2	2989.2	2932.5	2773.8	2920.6	2782.9
62.5°	1220.4	1232.7	1483.7	1966.3	2600.1	3510.3	3697.3	3471.7	3201.4	3297.7	3217.9
65°	641.2	639.1	833.4	1358.7	2190.1	3639.1	4813.0	4429.2	3921.7	3816.3	3638.1
67.5°	358.2	369.8	445.1	685.3	1427.4	3202.8	5525.6	5638.7	4923.3	4227.8	3619.9
69°	331.3	335.1	385.6	529.8	930.4	2642.5	5464.3	6003.9	5345.6	4229.6	3386.7
70°	321.8	326.0	371.9	488.2	781.6	2165.2	5241.2	5961.2	5448.2	4135.7	3174.4
72.5°	288.6	294.2	338.6	438.8	658.7	1116.0	4221.8	5102.2	4935.2	3614.6	2461.5
75°	246.2	255.6	322.9	435.6	624.0	709.5	2815.5	3801.3	3673.1	2585.1	1396.5
77.5°	101.9	103.0	141.1	319.0	654.8	679.0	1513.2	2407.9	2131.6	1133.6	420.6
80°	71.1	69.7	70.4	93.1	528.4	683.6	776.4	1224.6	951.8	299.1	196.8
82.5°	59.9	59.2	62.0	58.5	178.9	775.7	649.2	638.4	448.2	161.1	93.8
85°	39.6	38.5	50.8	53.2	85.1	616.0	698.3	501.8	334.1	86.1	39.9
87.5°	19.3	19.6	29.1	36.1	45.2	195.1	668.9	396.8	258.1	37.5	16.1
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°	1393.4	1393.4	1393.4	1393.4	1393.4	1393.4	1393.4	1393.4	1393.4	1393.4	1393.4
2.5°	1371.0	1360.5	1351.0	1339.1	1330.0	1322.3	1311.8	1311.4	1309.7	1312.1	1312.8
5°	1340.5	1323.0	1296.4	1266.6	1245.6	1217.9	1191.0	1181.9	1171.7	1170.7	1173.8
7.5°	1294.6	1267.3	1221.8	1176.3	1130.8	1084.2	1040.1	1017.6	995.9	989.3	992.4
10°	1243.5	1208.8	1139.2	1064.9	1000.8	931.5	864.3	820.8	781.3	764.5	768.7
12.5°	1203.6	1159.5	1061.4	965.1	869.2	769.7	681.1	595.3	530.5	501.5	503.2
15°	1169.3	1112.9	988.6	860.4	740.3	604.1	481.2	381.7	325.0	304.0	303.3
17.5°	1132.2	1063.9	912.6	763.1	607.2	438.8	322.2	263.3	240.9	233.9	233.9
20°	1092.6	1013.4	833.1	656.9	467.1	306.4	242.3	219.6	211.2	209.1	208.7
22.5°	1055.8	964.1	753.3	543.8	337.9	232.5	206.3	197.5	196.1	197.9	197.9
25°	1026.7	920.6	672.4	424.8	245.8	194.7	183.5	182.4	187.7	194.0	195.1
27.5°	1005.0	881.8	592.5	310.3	193.3	169.5	165.6	170.2	182.4	195.1	197.5
30°	990.0	848.5	496.9	223.1	161.1	148.5	150.2	158.3	176.8	196.1	201.4
32.5°	983.3	821.5	400.6	171.2	137.6	130.6	135.2	145.7	164.9	184.2	190.5
35°	989.6	801.9	311.7	142.2	120.5	115.2	120.5	131.3	143.9	153.4	157.2
37.5°	1012.4	794.9	234.6	126.1	109.3	104.0	108.2	115.6	121.2	124.7	126.4
40°	1060.4	802.3	183.8	117.7	103.0	97.0	98.1	101.6	105.4	108.2	108.6
42.5°	1136.7	826.4	163.5	114.5	99.1	91.4	89.6	92.1	96.3	100.2	100.9
45°	1238.3	866.7	161.4	115.6	97.4	86.8	83.3	85.8	91.4	97.7	98.8
47.5°	1369.6	930.4	171.2	121.2	98.4	84.4	79.1	81.6	88.9	97.4	98.8
50°	1525.1	1018.7	189.5	129.6	103.3	84.4	77.4	79.5	87.2	96.7	98.1
52.5°	1708.2	1141.6	208.4	138.0	110.3	87.5	78.1	77.7	84.7	93.5	95.3
55°	1910.3	1294.3	226.6	145.3	114.2	91.7	79.8	75.6	81.2	88.2	89.6
57.5°	2148.0	1503.3	258.4	152.3	116.3	94.9	81.9	73.5	76.7	81.6	82.6
60°	2470.6	1810.5	320.4	164.2	120.1	96.3	82.3	71.4	71.1	74.6	74.9
62.5°	2891.1	2170.1	379.6	178.2	127.8	96.7	80.9	70.0	66.5	67.6	67.6
65°	3190.2	2302.5	362.4	190.2	134.8	96.3	79.5	69.0	63.0	61.3	61.3
67.5°	3020.0	2033.9	307.8	193.3	135.5	92.4	76.3	66.5	59.9	55.7	55.7
69°	2770.0	1782.8	282.6	187.7	129.9	87.9	72.8	64.1	57.8	52.9	52.9
70°	2566.2	1592.6	267.2	181.0	123.3	84.0	69.7	61.6	55.7	51.5	51.1
72.5°	1915.9	1062.8	228.3	156.2	101.2	71.1	60.9	55.0	50.1	47.3	47.3
75°	1011.0	532.6	187.0	127.5	78.1	56.7	50.1	46.2	43.4	43.1	42.7
77.5°	331.3	240.9	134.5	96.0	57.4	44.1	39.9	37.5	37.1	38.5	38.5
80°	178.9	143.9	86.5	64.8	39.9	32.9	30.8	30.5	31.5	33.6	33.6
82.5°	86.8	71.1	51.5	39.9	27.3	24.2	24.2	24.5	25.9	28.4	28.4
85°	37.5	33.6	29.8	22.4	16.8	15.1	17.2	18.9	20.0	21.7	22.4
87.5°	17.9	15.8	13.7	8.8	7.4	7.7	9.1	11.2	13.3	14.7	15.1
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)