

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: P196621

Luminaire Tested: **NAV-AF-01-D-UNV-SL3-7030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196621
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-SL3-7030
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 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: 5901.1 lumens
Efficiency: N/A
Efficacy: 100.0 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

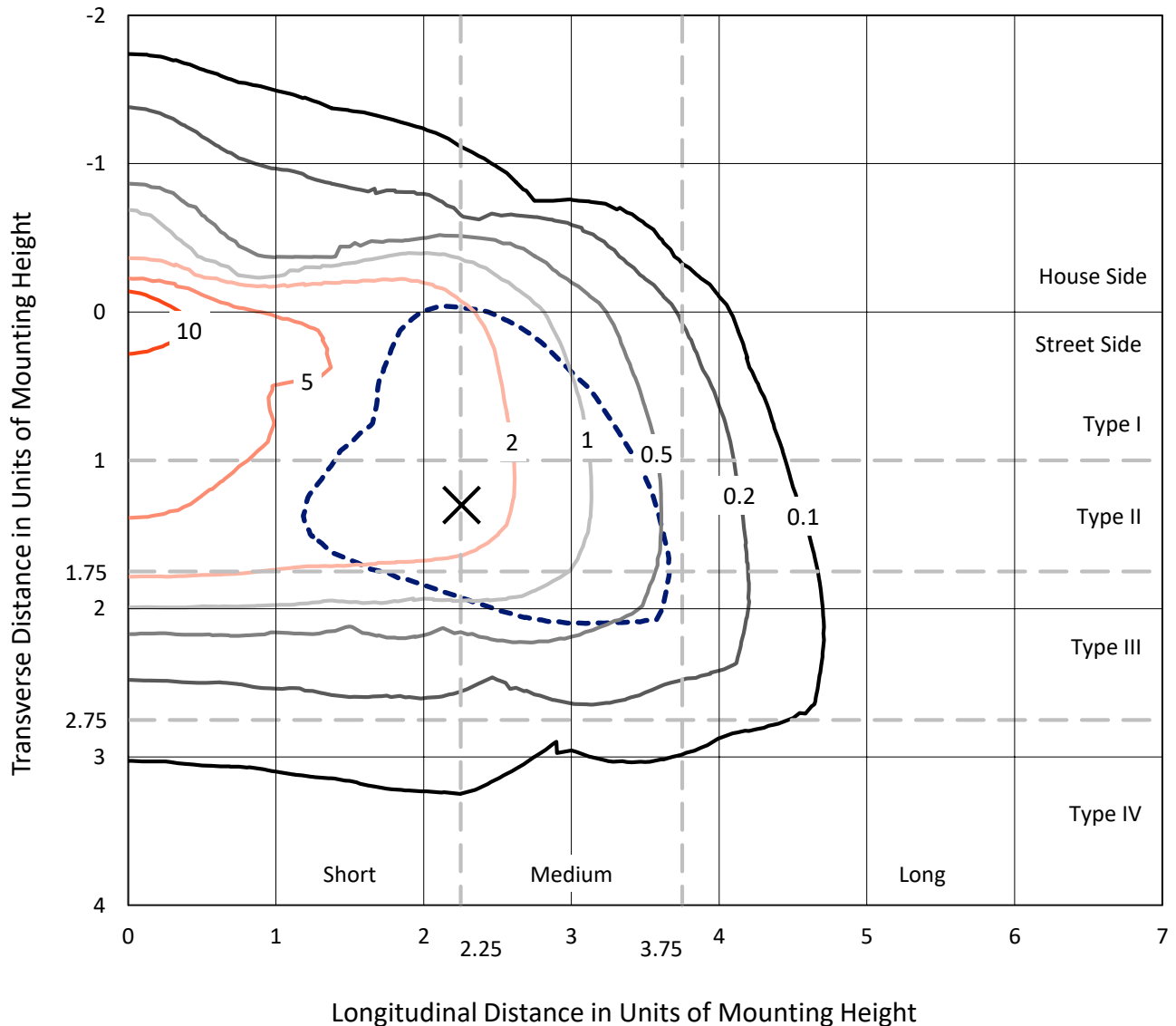
Input Watts (W): 59
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

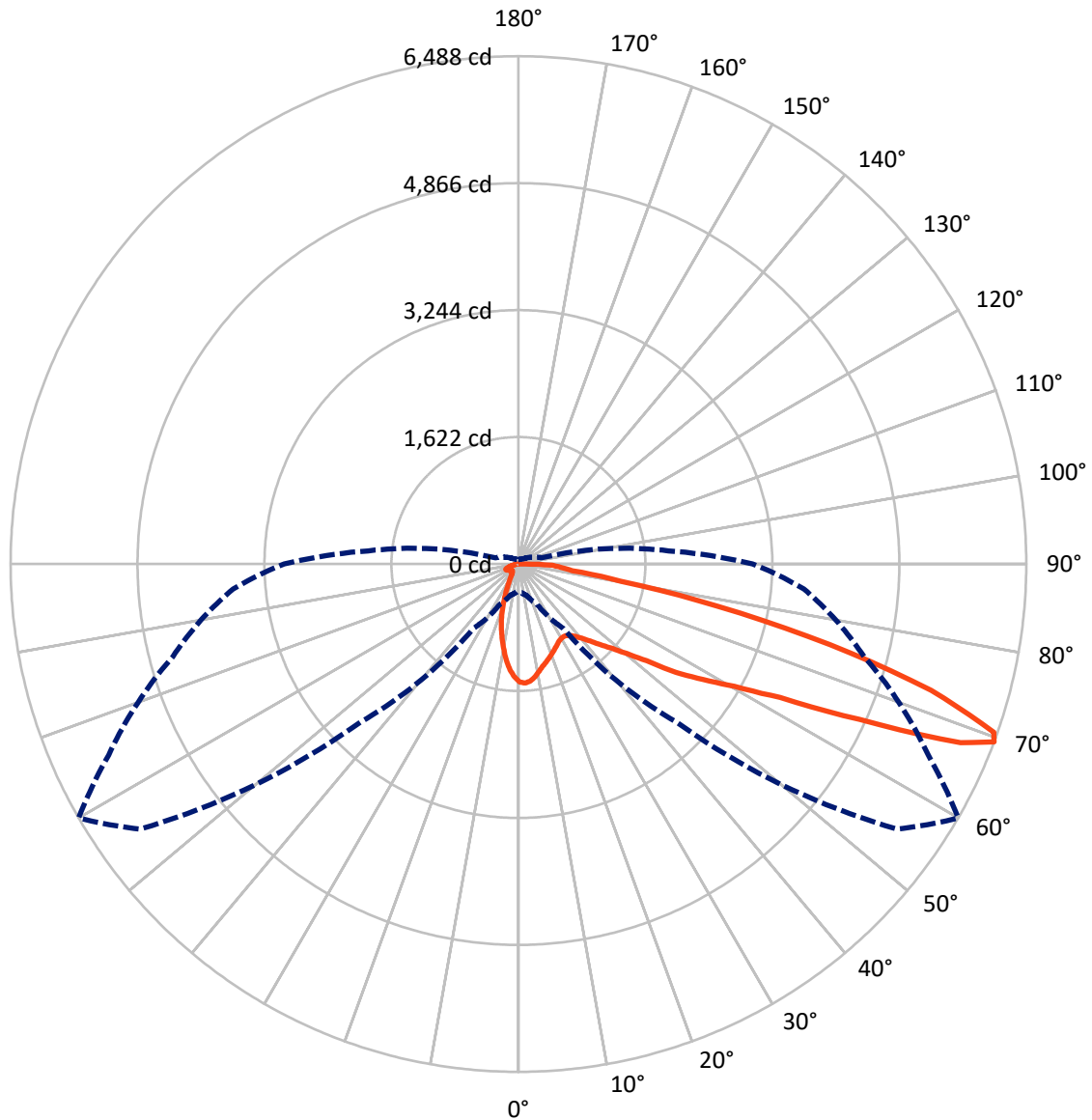
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 15.1 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	841.7	0.0	841.7
	% Fixture	14.3	0.0	14.3
Street Side	Lumens	5059.4	0.0	5059.4
	% Fixture	85.7	0.0	85.7
Total	Lumens	5901.1	0.0	5901.1
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	127.7	2.2
10°-20°	273.5	4.6
20°-30°	348.9	5.9
30°-40°	480.1	8.1
40°-50°	777.7	13.2
50°-60°	1220.5	20.7
60°-70°	1627.2	27.6
70°-80°	905.1	15.3
80°-90°	140.4	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°	5901.1	100.0
0°-180°	5901.1	100.0



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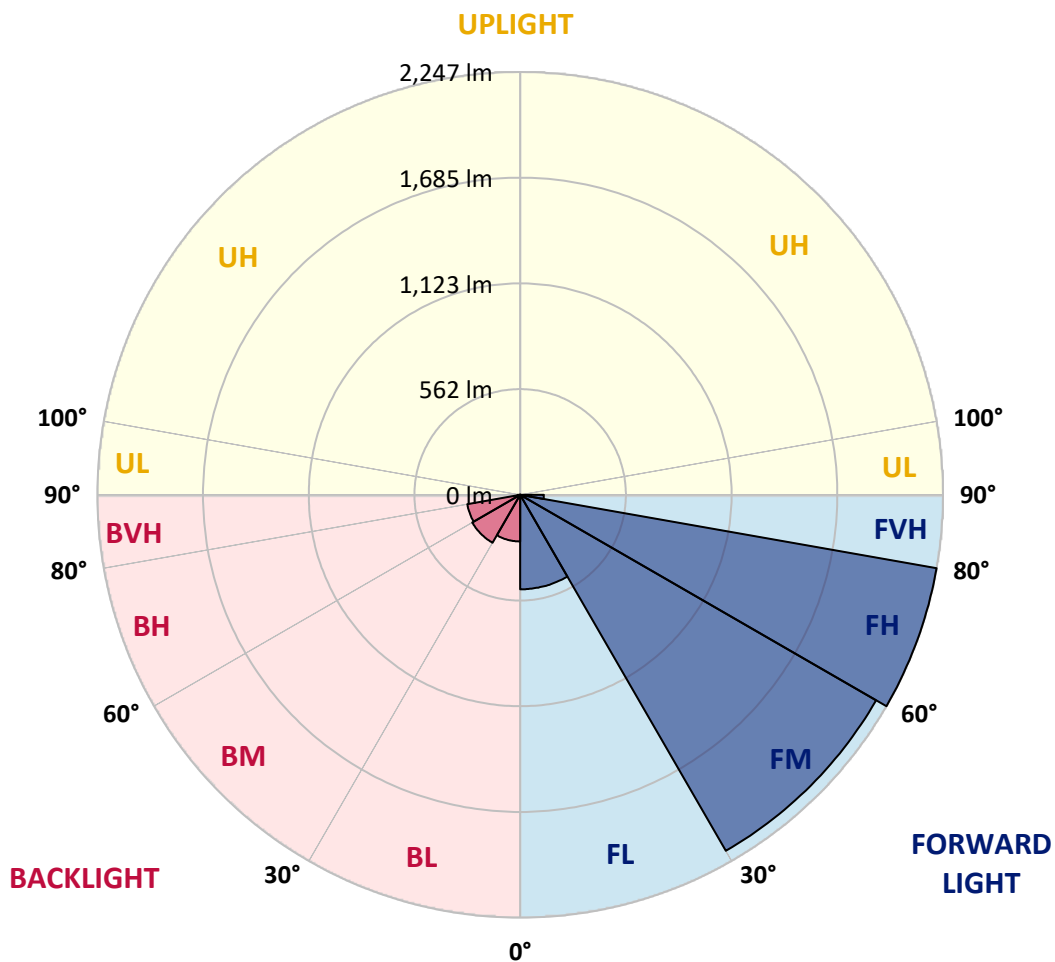
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	502.1	8.5			
FM	(30°-60°)	2184.3	37.0			
FH	(60°-80°)	2246.9	38.1			G2/5000
FVH	(80°-90°)	126.1	2.1			G2/225
BL	(0°-30°)	248.0	4.2	B1/500		
BM	(30°-60°)	294.0	5.0	B1/1000		
BH	(60°-80°)	285.4	4.8	B1/500		G1/500
BVH	(80°-90°)	14.2	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°	1505.7	1505.7	1505.7	1505.7	1505.7	1505.7	1505.7	1505.7	1505.7	1505.7	1505.7
2.5°	1545.8	1550.0	1550.0	1546.6	1544.7	1533.7	1527.2	1522.7	1514.8	1500.0	1486.8
5°	1490.6	1498.5	1501.9	1503.4	1513.2	1509.9	1510.2	1507.2	1500.3	1484.5	1462.9
7.5°	1389.1	1390.7	1396.7	1406.9	1430.8	1447.3	1461.1	1463.6	1462.2	1450.4	1420.2
10°	1289.3	1291.9	1299.1	1316.5	1339.2	1363.0	1392.5	1404.6	1413.7	1410.0	1371.8
12.5°	1206.3	1206.8	1214.6	1234.7	1260.1	1290.1	1330.1	1349.1	1370.5	1379.3	1336.6
15°	1126.6	1131.8	1139.3	1163.6	1195.0	1232.9	1279.0	1305.1	1333.5	1358.5	1309.3
17.5°	1066.0	1070.0	1074.7	1094.8	1131.1	1178.4	1235.5	1263.5	1301.0	1339.2	1281.3
20°	1032.7	1034.1	1030.8	1040.5	1071.3	1122.3	1188.6	1222.3	1266.9	1320.6	1252.5
22.5°	1025.8	1025.8	1013.4	1011.5	1025.1	1068.2	1140.1	1181.4	1235.8	1307.8	1226.8
25°	1057.6	1055.3	1032.0	1010.3	1005.4	1027.4	1094.0	1144.7	1209.4	1307.4	1207.6
27.5°	1117.8	1114.8	1085.6	1049.3	1018.0	1008.5	1058.4	1110.3	1188.6	1320.3	1197.7
30°	1192.8	1191.6	1162.1	1116.6	1064.8	1016.0	1044.4	1092.5	1174.5	1344.1	1197.3
32.5°	1274.8	1269.6	1251.3	1206.0	1138.6	1058.0	1052.7	1093.2	1170.8	1379.0	1206.0
35°	1362.3	1358.5	1353.9	1308.2	1232.5	1132.2	1089.5	1119.4	1189.3	1427.4	1230.6
37.5°	1473.5	1469.3	1476.9	1426.9	1344.1	1229.5	1151.5	1171.6	1227.2	1497.7	1276.3
40°	1671.4	1659.3	1638.2	1561.4	1474.2	1348.7	1241.1	1244.3	1291.9	1591.9	1349.8
42.5°	1996.5	1957.5	1852.7	1711.5	1611.7	1487.1	1358.1	1343.7	1381.1	1716.5	1456.5
45°	2322.3	2278.4	2101.3	1875.4	1753.9	1635.8	1502.7	1468.2	1492.5	1861.3	1593.9
47.5°	2532.6	2511.1	2311.3	2039.3	1903.0	1797.9	1668.1	1611.2	1628.6	2025.6	1763.3
50°	2594.4	2575.8	2418.8	2167.4	2043.8	1993.4	1872.7	1797.5	1800.5	2217.4	1966.5
52.5°	2548.2	2540.6	2436.6	2247.0	2173.1	2199.7	2156.1	2051.4	2026.3	2427.8	2186.9
55°	2486.5	2489.2	2449.0	2326.7	2304.9	2391.9	2527.0	2442.6	2336.6	2647.0	2416.2
57.5°	2292.4	2294.3	2399.5	2479.0	2556.1	2661.3	2815.7	2780.2	2656.7	2883.5	2673.0
60°	1845.8	1860.5	2094.8	2447.5	2843.4	3192.2	3230.0	3168.7	2997.3	3156.0	3007.3
62.5°	1318.8	1332.0	1603.3	2124.8	2809.7	3793.2	3995.2	3751.5	3459.3	3563.5	3477.1
65°	692.8	690.6	900.7	1468.2	2366.5	3932.5	5200.8	4786.1	4237.7	4123.9	3931.2
67.5°	387.1	399.6	481.0	740.6	1542.4	3460.9	5970.9	6093.1	5320.1	4568.4	3911.6
69°	358.0	362.0	416.6	572.5	1005.4	2855.5	5904.7	6487.9	5776.4	4570.5	3659.5
70°	347.8	352.3	401.8	527.5	844.6	2339.7	5663.7	6441.6	5887.2	4469.0	3430.3
72.5°	311.8	317.8	365.9	474.1	711.9	1206.0	4562.1	5513.4	5333.0	3905.9	2659.8
75°	266.0	276.2	348.9	470.7	674.3	766.7	3042.5	4107.6	3969.1	2793.4	1509.1
77.5°	110.2	111.2	152.5	344.7	707.7	733.7	1635.1	2601.9	2303.4	1224.9	454.5
80°	76.8	75.3	76.1	100.6	571.0	738.7	838.9	1323.2	1028.4	323.2	212.6
82.5°	64.7	63.9	66.9	63.2	193.4	838.1	701.6	689.9	484.3	174.0	101.4
85°	42.7	41.6	54.8	57.5	92.0	665.6	754.6	542.3	361.0	93.1	43.1
87.5°	20.8	21.2	31.3	39.0	48.8	210.8	722.8	428.8	278.9	40.5	17.4
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°	1505.7	1505.7	1505.7	1505.7	1505.7	1505.7	1505.7	1505.7	1505.7	1505.7	1505.7
2.5°	1481.4	1470.1	1459.9	1447.0	1437.2	1428.9	1417.5	1417.1	1415.2	1417.8	1418.6
5°	1448.6	1429.6	1400.8	1368.7	1346.0	1316.1	1287.0	1277.1	1266.1	1265.0	1268.4
7.5°	1398.9	1369.4	1320.3	1271.1	1221.8	1171.6	1123.8	1099.7	1076.2	1069.0	1072.4
10°	1343.7	1306.3	1231.0	1150.7	1081.4	1006.6	933.9	886.9	844.2	826.1	830.6
12.5°	1300.6	1252.8	1147.0	1042.9	939.2	831.8	736.0	643.3	573.3	541.9	543.8
15°	1263.5	1202.6	1068.2	929.8	800.0	652.8	520.0	412.5	351.2	328.5	327.7
17.5°	1223.3	1149.6	986.2	824.6	656.2	474.1	348.1	284.5	260.4	252.8	252.8
20°	1180.6	1095.1	900.2	709.8	504.8	331.0	261.9	237.3	228.2	225.9	225.5
22.5°	1140.8	1041.8	814.0	587.7	365.2	251.3	222.9	213.4	211.9	213.8	213.8
25°	1109.5	994.8	726.6	459.0	265.6	210.5	198.3	197.1	202.7	209.7	210.8
27.5°	1086.0	952.8	640.3	335.3	208.9	183.1	178.9	183.9	197.1	210.8	213.4
30°	1069.7	916.9	537.0	241.0	174.0	160.4	162.4	171.0	191.1	211.9	217.5
32.5°	1062.5	887.7	432.8	185.0	148.7	141.2	146.1	157.5	178.2	199.1	205.9
35°	1069.4	866.5	336.7	153.6	130.1	124.4	130.1	141.9	155.4	165.7	169.9
37.5°	1094.0	859.0	253.5	136.2	118.1	112.4	116.9	124.9	130.9	134.7	136.6
40°	1145.8	867.0	198.7	127.2	111.2	104.8	106.0	109.7	113.8	116.9	117.4
42.5°	1228.3	893.0	176.7	123.8	107.1	98.8	96.9	99.5	104.1	108.2	108.9
45°	1338.1	936.6	174.5	124.9	105.2	93.9	90.0	92.8	98.8	105.6	106.7
47.5°	1479.9	1005.4	185.0	130.9	106.3	91.2	85.5	88.2	96.1	105.2	106.7
50°	1647.9	1100.8	204.8	140.0	111.7	91.2	83.6	85.9	94.2	104.5	106.0
52.5°	1845.8	1233.6	225.2	149.1	119.2	94.6	84.3	84.0	91.6	101.1	102.9
55°	2064.2	1398.6	244.8	157.0	123.4	99.1	86.4	81.7	87.9	95.4	96.9
57.5°	2321.1	1624.4	279.2	164.7	125.6	102.6	88.5	79.4	82.8	88.2	89.3
60°	2669.6	1956.4	346.3	177.4	129.8	104.1	88.9	77.2	76.8	80.7	81.0
62.5°	3124.2	2345.0	410.2	192.7	138.1	104.5	87.4	75.7	71.9	72.9	72.9
65°	3447.2	2488.1	391.7	205.5	145.7	104.1	85.9	74.6	68.1	66.2	66.2
67.5°	3263.3	2197.8	332.5	208.9	146.4	99.9	82.5	71.9	64.7	60.2	60.2
69°	2993.1	1926.5	305.4	202.7	140.4	94.9	78.6	69.3	62.4	57.2	57.2
70°	2773.0	1721.0	288.8	195.7	133.2	90.8	75.3	66.6	60.2	55.6	55.2
72.5°	2070.3	1148.5	246.7	168.8	109.4	76.8	65.9	59.4	54.1	51.2	51.2
75°	1092.5	575.6	202.0	137.7	84.3	61.3	54.1	49.9	46.9	46.6	46.2
77.5°	358.0	260.4	145.4	103.7	62.1	47.6	43.1	40.5	40.1	41.6	41.6
80°	193.4	155.4	93.4	70.0	43.1	35.6	33.4	32.9	34.1	36.3	36.3
82.5°	93.9	76.8	55.6	43.1	29.5	26.1	26.1	26.4	28.0	30.7	30.7
85°	40.5	36.3	32.1	24.2	18.1	16.3	18.6	20.4	21.6	23.5	24.2
87.5°	19.3	17.1	14.7	9.5	7.9	8.3	9.9	12.1	14.4	15.9	16.3
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)