

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: P270278

Luminaire Tested: **NAV-AF-01-D-UNV-SL3-7027-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270278
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-SL3-7027-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 2700K, 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: 5815.3 lumens
Efficiency: N/A
Efficacy: 86.8 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

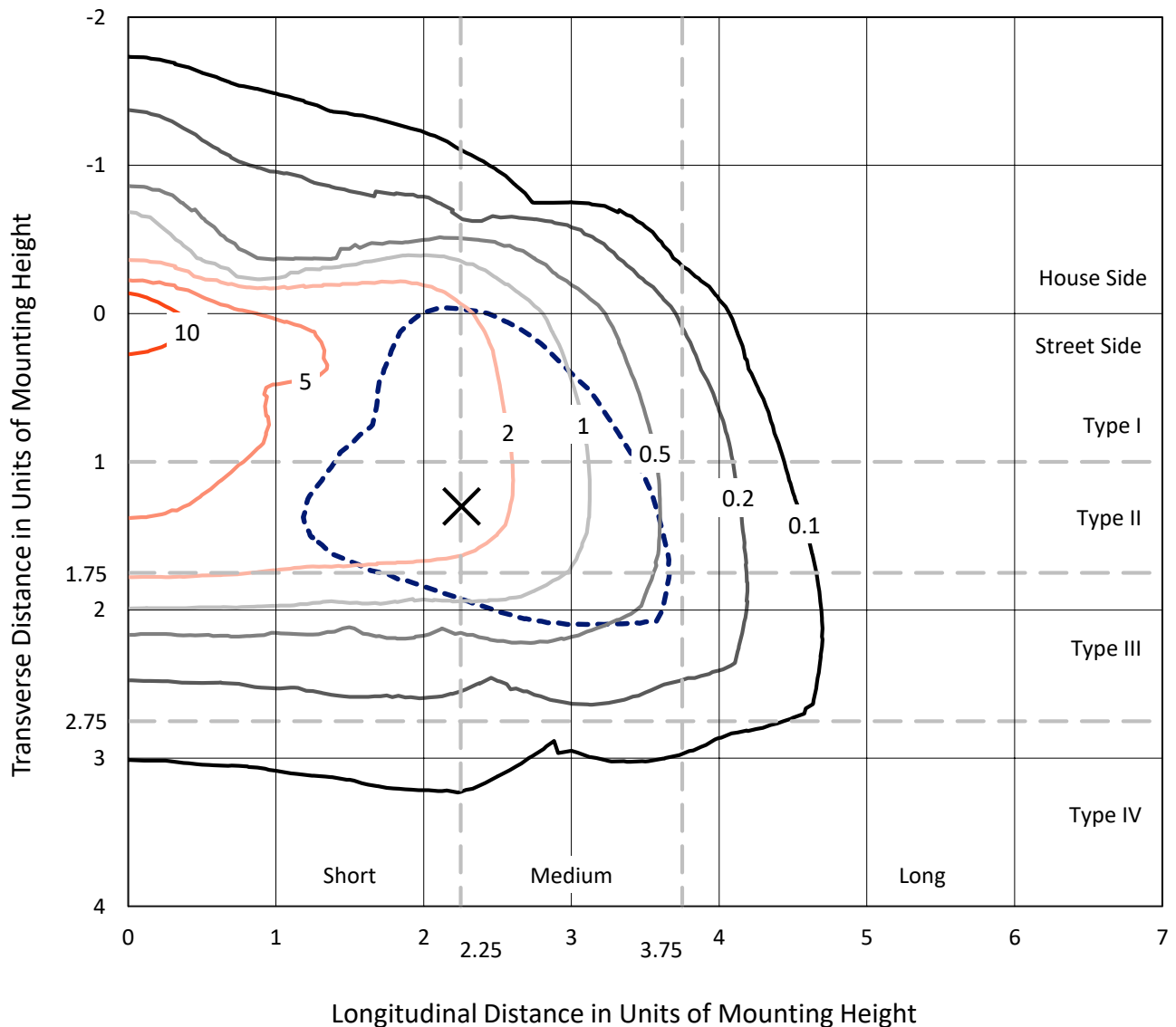
Input Watts (W): 67
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

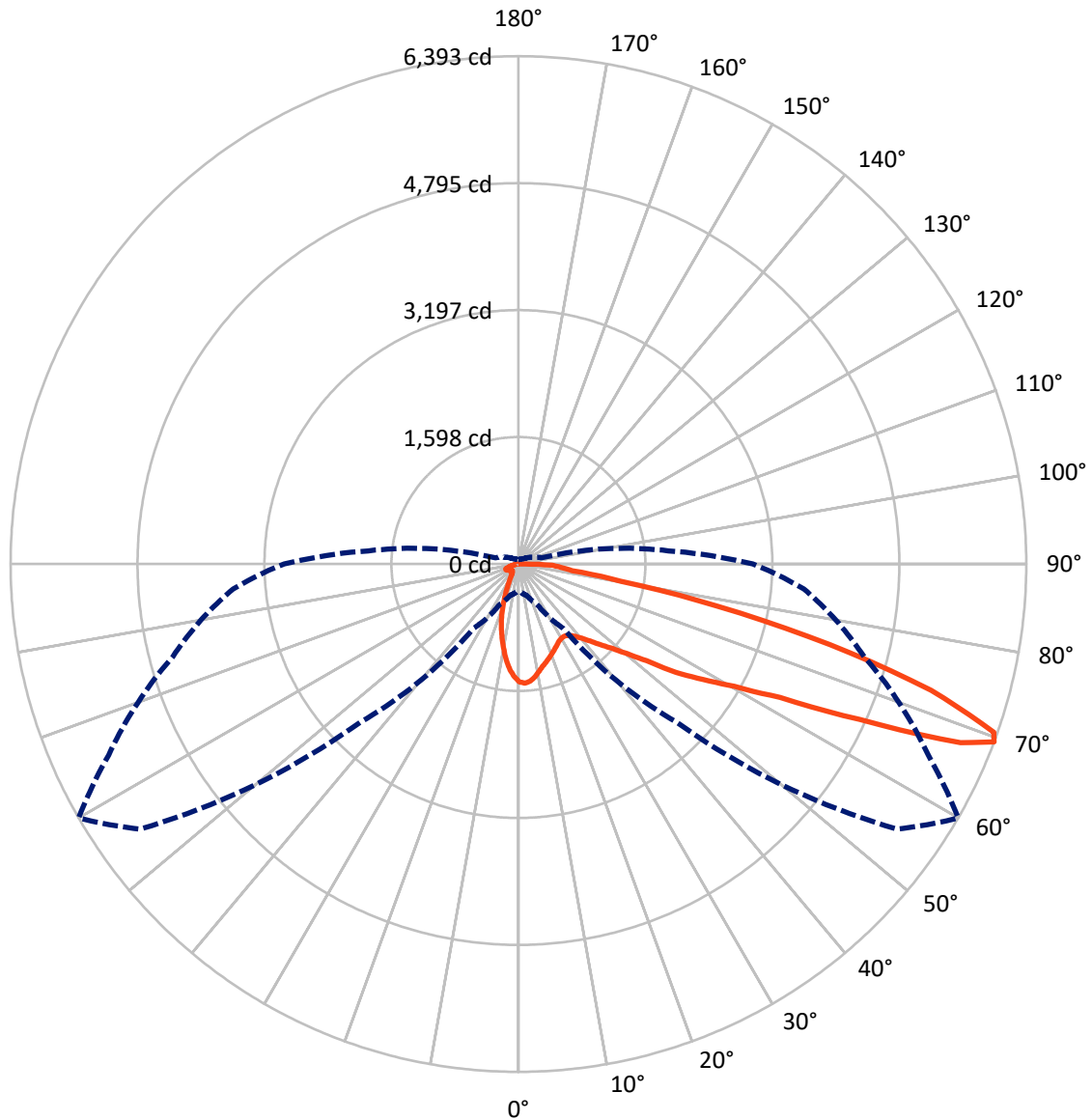
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 14.8 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	829.5	0.0	829.5
	% Fixture	14.3	0.0	14.3
Street Side	Lumens	4985.8	0.0	4985.8
	% Fixture	85.7	0.0	85.7
Total	Lumens	5815.3	0.0	5815.3
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	125.9	2.2
10°-20°	269.5	4.6
20°-30°	343.8	5.9
30°-40°	473.1	8.1
40°-50°	766.4	13.2
50°-60°	1202.8	20.7
60°-70°	1603.5	27.6
70°-80°	891.9	15.3
80°-90°	138.3	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°	5815.3	100.0
0°-180°	5815.3	100.0



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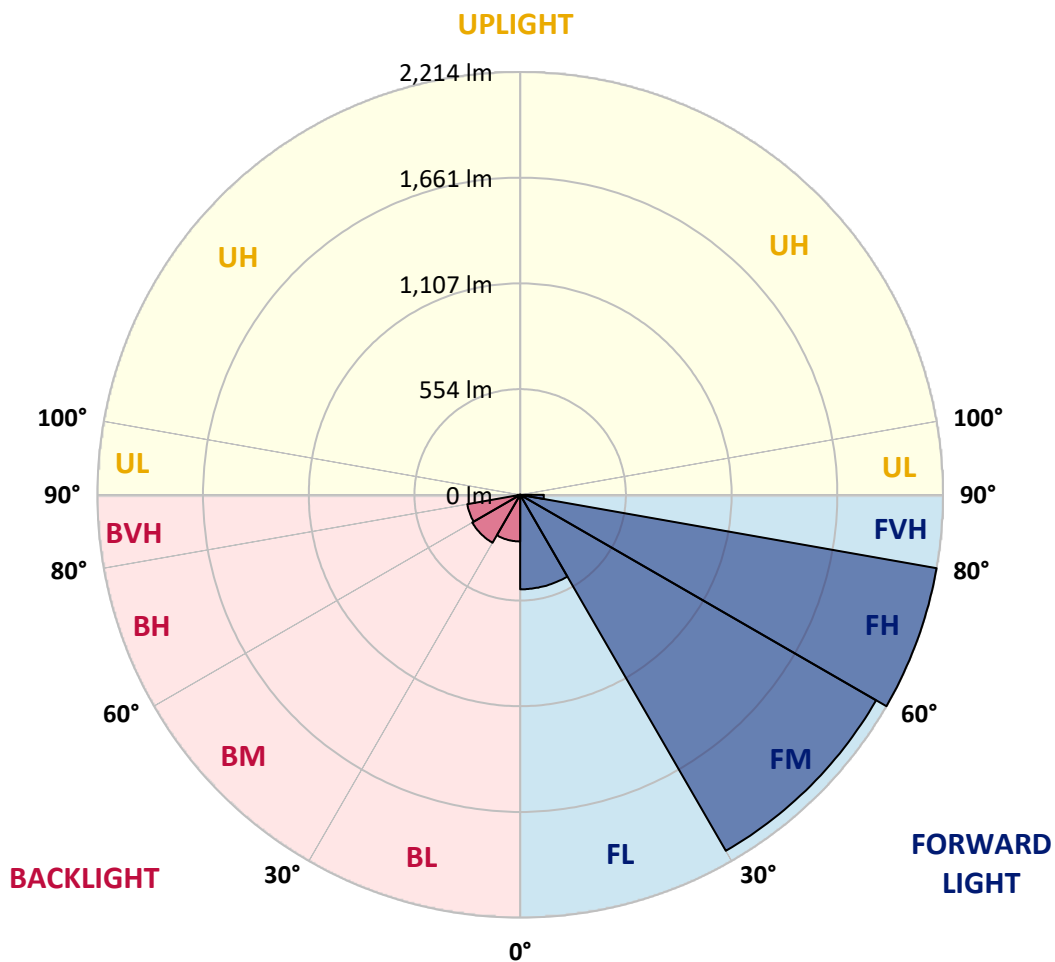
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	494.8	8.5			
FM	(30°-60°)	2152.5	37.0			
FH	(60°-80°)	2214.2	38.1			G2/5000
FVH	(80°-90°)	124.3	2.1			G2/225
BL	(0°-30°)	244.4	4.2	B1/500		
BM	(30°-60°)	289.8	5.0	B1/1000		
BH	(60°-80°)	281.2	4.8	B1/500		G1/500
BVH	(80°-90°)	14.0	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°	1483.8	1483.8	1483.8	1483.8	1483.8	1483.8	1483.8	1483.8	1483.8	1483.8	1483.8
2.5°	1523.3	1527.4	1527.4	1524.1	1522.2	1511.4	1505.0	1500.6	1492.8	1478.3	1465.1
5°	1468.9	1476.8	1480.0	1481.6	1491.2	1488.0	1488.2	1485.3	1478.6	1462.9	1441.6
7.5°	1368.9	1370.5	1376.5	1386.4	1410.0	1426.4	1439.8	1442.4	1440.9	1429.4	1399.5
10°	1270.6	1273.1	1280.2	1297.3	1319.7	1343.1	1372.3	1384.2	1393.2	1389.5	1351.8
12.5°	1188.7	1189.1	1197.0	1216.8	1241.7	1271.2	1310.7	1329.4	1350.6	1359.2	1317.0
15°	1110.1	1115.3	1122.8	1146.6	1177.7	1214.9	1260.4	1286.2	1314.1	1338.7	1290.2
17.5°	1050.5	1054.6	1059.0	1078.9	1114.5	1161.1	1217.6	1245.1	1282.1	1319.7	1262.7
20°	1017.7	1019.1	1015.9	1025.4	1055.7	1106.1	1171.3	1204.4	1248.5	1301.5	1234.4
22.5°	1011.0	1011.0	998.6	996.8	1010.2	1052.8	1123.6	1164.3	1217.9	1288.8	1208.9
25°	1042.3	1040.1	1016.9	995.6	990.8	1012.4	1078.1	1128.0	1191.8	1288.3	1190.0
27.5°	1101.5	1098.5	1069.8	1034.0	1003.0	993.7	1043.0	1094.0	1171.3	1301.0	1180.3
30°	1175.4	1174.3	1145.2	1100.5	1049.4	1001.3	1029.2	1076.6	1157.5	1324.6	1179.8
32.5°	1256.3	1251.1	1233.3	1188.5	1122.1	1042.7	1037.5	1077.2	1153.8	1358.9	1188.5
35°	1342.4	1338.7	1334.3	1289.2	1214.6	1115.8	1073.6	1103.1	1172.1	1406.6	1212.7
37.5°	1452.1	1448.0	1455.4	1406.2	1324.6	1211.5	1134.7	1154.5	1209.3	1475.9	1257.7
40°	1647.1	1635.2	1614.3	1538.5	1452.7	1329.0	1223.1	1226.0	1273.1	1568.8	1330.1
42.5°	1967.5	1929.0	1825.7	1686.7	1588.3	1465.6	1338.4	1324.2	1361.1	1691.5	1435.3
45°	2288.5	2245.3	2070.8	1848.2	1728.3	1612.1	1480.8	1446.9	1470.7	1834.2	1570.6
47.5°	2495.9	2474.7	2277.7	2009.6	1875.3	1771.6	1643.8	1587.8	1605.0	1996.2	1737.7
50°	2556.7	2538.4	2383.7	2136.0	2014.1	1964.5	1845.5	1771.3	1774.3	2185.2	1938.0
52.5°	2511.1	2503.7	2401.1	2214.3	2141.6	2167.7	2124.9	2021.5	1996.9	2392.5	2155.0
55°	2450.3	2452.9	2413.4	2293.1	2271.4	2357.2	2490.2	2407.1	2302.6	2608.5	2381.0
57.5°	2259.1	2260.9	2364.6	2442.9	2518.9	2622.6	2774.8	2739.7	2618.2	2841.5	2634.2
60°	1819.0	1833.6	2064.3	2411.9	2802.1	3145.9	3183.1	3122.7	2953.7	3110.0	2963.5
62.5°	1299.6	1312.7	1579.9	2093.9	2768.8	3737.9	3937.1	3697.0	3409.1	3511.7	3426.7
65°	682.8	680.6	887.5	1446.9	2332.1	3875.2	5125.2	4716.6	4176.2	4063.9	3874.1
67.5°	381.5	393.7	473.9	729.8	1519.9	3410.5	5884.1	6004.5	5242.7	4502.0	3854.6
69°	352.8	356.8	410.5	564.1	990.8	2813.9	5818.9	6393.4	5692.4	4503.9	3606.3
70°	342.8	347.1	396.1	519.8	832.3	2305.7	5581.3	6348.0	5801.7	4404.0	3380.4
72.5°	307.3	313.1	360.6	467.3	701.4	1188.5	4495.7	5433.2	5255.4	3849.1	2621.2
75°	262.1	272.2	343.8	463.9	664.6	755.6	2998.2	4047.9	3911.4	2752.8	1487.1
77.5°	108.5	109.7	150.2	339.6	697.4	723.0	1611.3	2564.1	2269.8	1207.1	447.9
80°	75.6	74.2	75.0	99.3	562.7	727.8	826.7	1304.1	1013.6	318.4	209.6
82.5°	63.8	63.1	65.9	62.3	190.5	826.0	691.3	679.7	477.3	171.5	99.9
85°	42.1	41.1	54.1	56.8	90.5	655.9	743.5	534.4	355.8	91.7	42.5
87.5°	20.5	20.9	30.9	38.4	48.1	207.7	712.3	422.6	274.8	40.0	17.2
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°	1483.8	1483.8	1483.8	1483.8	1483.8	1483.8	1483.8	1483.8	1483.8	1483.8	1483.8
2.5°	1459.9	1448.7	1438.6	1426.0	1416.3	1408.2	1397.0	1396.5	1394.7	1397.3	1398.0
5°	1427.4	1408.8	1380.4	1348.7	1326.3	1297.0	1268.2	1258.5	1247.7	1246.6	1250.0
7.5°	1378.5	1349.6	1301.0	1252.5	1204.1	1154.5	1107.5	1083.6	1060.5	1053.4	1056.9
10°	1324.2	1287.4	1213.0	1134.0	1065.7	991.9	920.4	874.1	831.9	814.0	818.5
12.5°	1281.7	1234.7	1130.2	1027.8	925.6	819.7	725.3	633.9	564.9	534.0	535.8
15°	1245.1	1185.1	1052.8	916.2	788.4	643.2	512.4	406.5	346.0	323.7	322.9
17.5°	1205.5	1132.9	971.7	812.5	646.6	467.3	343.1	280.5	256.6	249.1	249.1
20°	1163.5	1079.1	887.2	699.6	497.4	326.3	258.1	233.7	224.8	222.6	222.2
22.5°	1124.3	1026.7	802.1	579.0	359.9	247.7	219.6	210.4	208.9	210.7	210.7
25°	1093.3	980.4	715.9	452.3	261.8	207.2	195.4	194.3	199.9	206.6	207.7
27.5°	1070.2	939.0	631.0	330.3	205.8	180.5	176.3	181.3	194.3	207.7	210.4
30°	1054.3	903.5	529.1	237.5	171.5	158.1	160.0	168.5	188.4	208.9	214.4
32.5°	1047.2	874.8	426.6	182.4	146.6	139.1	144.0	155.1	175.7	196.1	202.8
35°	1053.8	854.0	331.8	151.5	128.3	122.7	128.3	139.9	153.3	163.3	167.4
37.5°	1078.1	846.6	249.9	134.2	116.3	110.8	115.3	123.1	129.0	132.8	134.7
40°	1129.2	854.3	195.8	125.4	109.7	103.2	104.5	108.2	112.3	115.3	115.6
42.5°	1210.5	880.1	174.1	121.9	105.6	97.3	95.5	98.1	102.5	106.7	107.3
45°	1318.6	923.0	171.9	123.1	103.7	92.4	88.8	91.4	97.3	104.1	105.1
47.5°	1458.4	990.8	182.4	129.0	104.8	89.9	84.4	86.9	94.7	103.7	105.1
50°	1624.0	1084.8	201.7	138.0	110.0	89.9	82.5	84.6	92.9	102.9	104.5
52.5°	1819.0	1215.6	221.9	147.0	117.5	93.2	83.2	82.7	90.2	99.5	101.4
55°	2034.2	1378.3	241.3	154.8	121.6	97.6	85.0	80.6	86.4	94.0	95.5
57.5°	2287.4	1600.9	275.2	162.2	123.7	101.1	87.2	78.3	81.7	86.9	88.0
60°	2630.9	1927.9	341.1	174.9	127.9	102.5	87.7	76.0	75.6	79.4	79.8
62.5°	3078.8	2310.9	404.2	189.8	136.2	102.9	86.1	74.6	70.8	72.0	72.0
65°	3397.2	2451.8	385.9	202.5	143.5	102.5	84.6	73.4	67.2	65.2	65.2
67.5°	3215.9	2165.9	327.8	205.8	144.3	98.5	81.2	70.8	63.8	59.3	59.3
69°	2949.7	1898.5	300.9	199.9	138.3	93.7	77.6	68.2	61.5	56.4	56.4
70°	2732.6	1696.0	284.6	192.7	131.2	89.6	74.2	65.7	59.3	54.8	54.4
72.5°	2040.2	1131.8	243.1	166.4	107.7	75.6	64.9	58.6	53.3	50.3	50.3
75°	1076.6	567.2	199.2	135.7	83.2	60.5	53.3	49.2	46.3	45.9	45.5
77.5°	352.8	256.6	143.2	102.1	61.2	47.0	42.5	40.0	39.5	41.1	41.1
80°	190.5	153.3	92.0	69.0	42.5	35.0	32.8	32.5	33.5	35.8	35.8
82.5°	92.4	75.6	54.8	42.5	29.0	25.7	25.7	26.1	27.6	30.3	30.3
85°	40.0	35.8	31.7	23.9	17.8	16.0	18.2	20.1	21.3	23.1	23.9
87.5°	19.0	16.8	14.6	9.3	7.8	8.3	9.7	11.9	14.2	15.7	16.0
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)