

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: P196087

Luminaire Tested: **NAV-AF-01-D-UNV-SL2-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196087
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24257)
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-SL2-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 4000K, 800mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE II SPILL
LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4950.1 lumens
Efficiency: N/A
Efficacy: 112.5 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type II - Medium - Semi-Cutoff
BUG Rating: B1 - U0 - G2

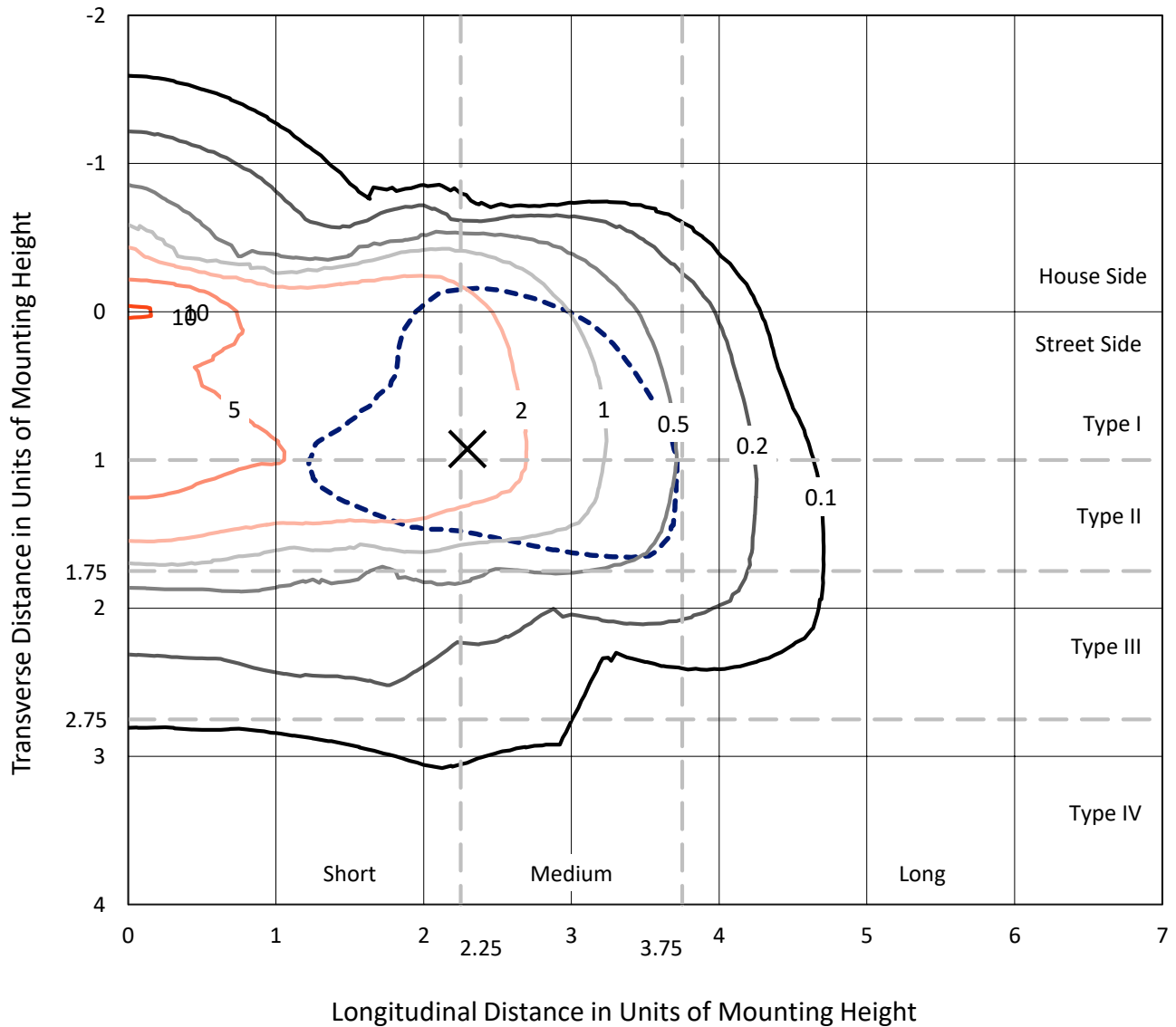
Input Watts (W): 44
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

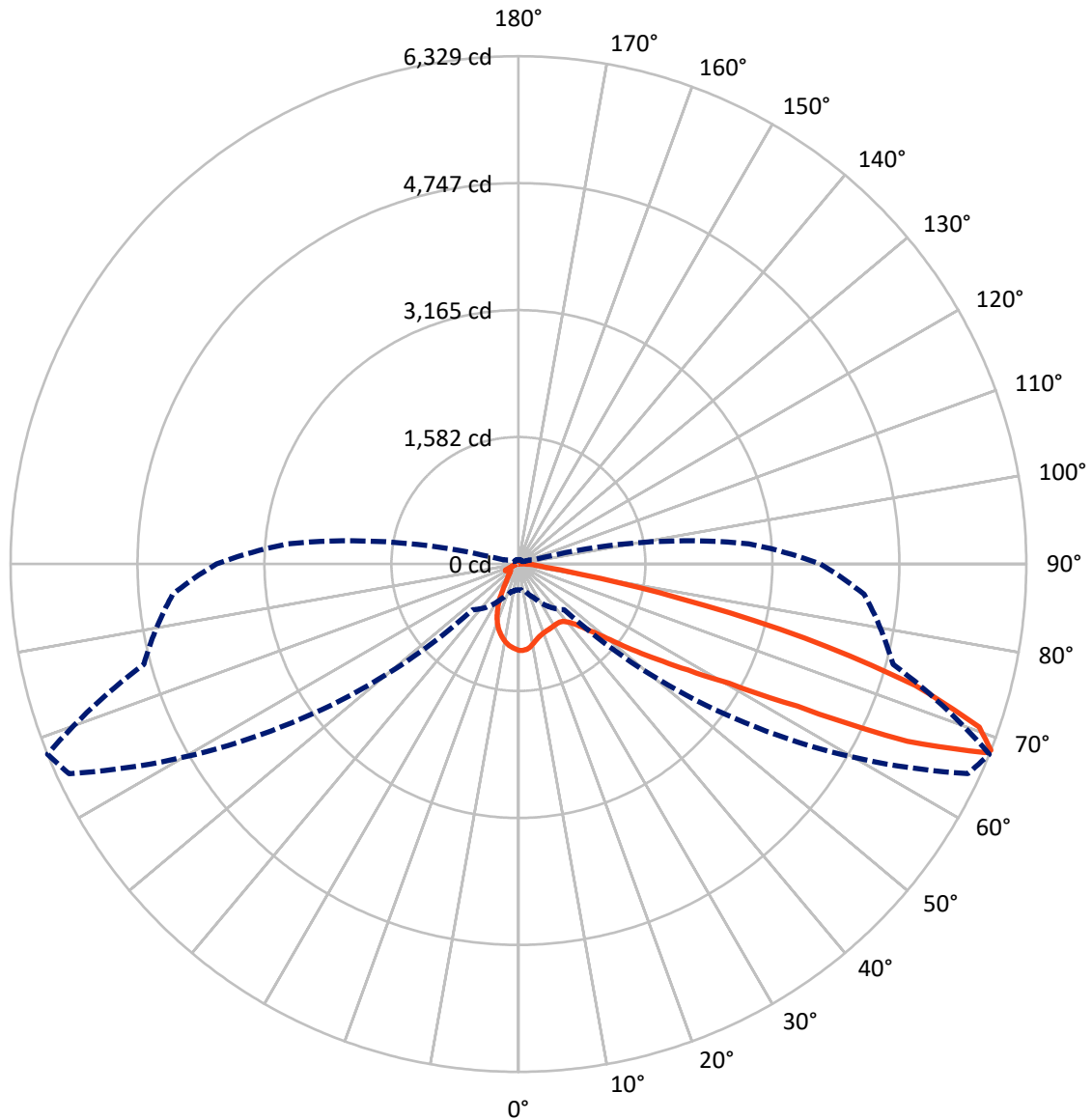
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 10.8 fc
 Type II - Medium - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 68-Deg Lateral - - - Horizontal Cone Through 68-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	809.8	0.0	809.8
	% Fixture	16.4	0.0	16.4
Street Side	Lumens	4140.2	0.0	4140.2
	% Fixture	83.6	0.0	83.6
Total	Lumens	4950.1	0.0	4950.1
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	92.3	1.9
10°-20°	214.0	4.3
20°-30°	289.5	5.8
30°-40°	408.2	8.2
40°-50°	671.2	13.6
50°-60°	1040.4	21.0
60°-70°	1349.0	27.3
70°-80°	774.1	15.6
80°-90°	111.4	2.3
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°	4950.1	100.0
0°-180°	4950.1	100.0



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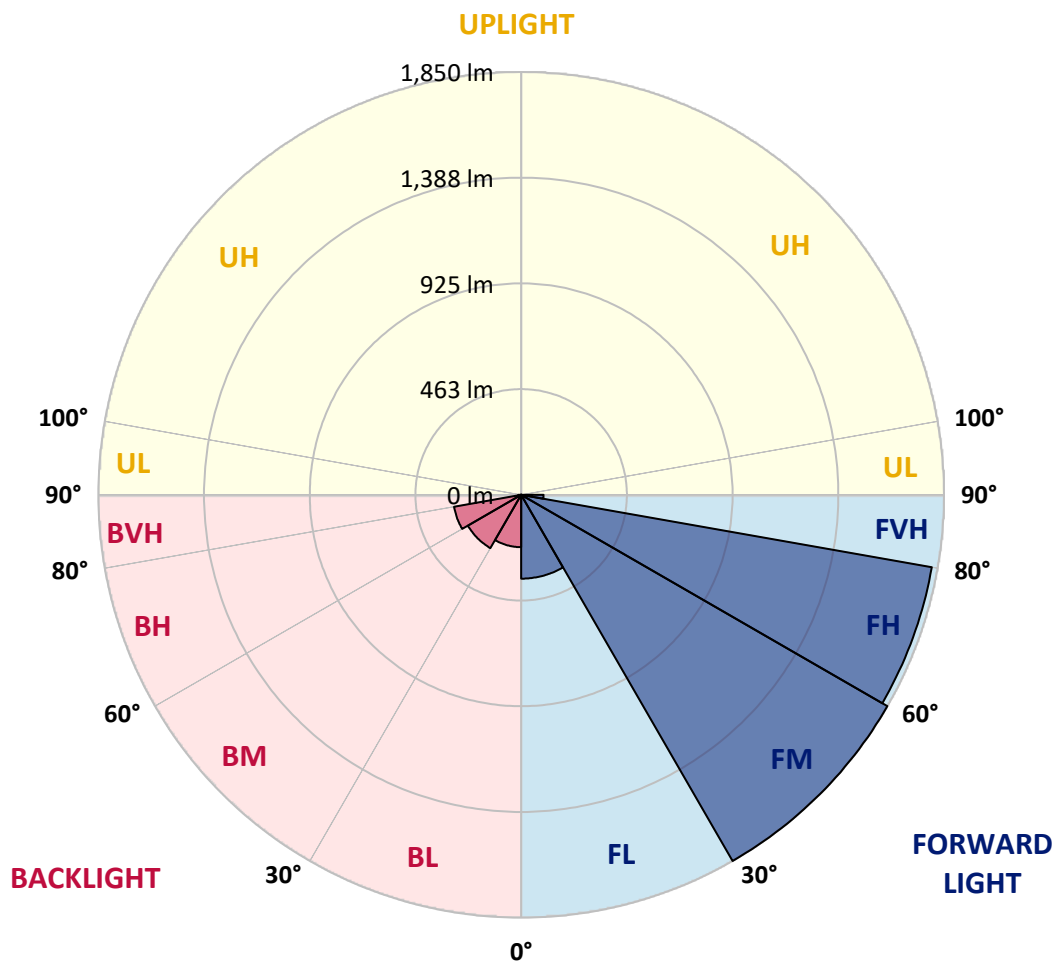
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	366.9	7.4			
FM (30°-60°)	1850.4	37.4			
FH (60°-80°)	1824.8	36.9			G2/5000
FVH (80°-90°)	98.1	2.0			G1/100
BL (0°-30°)	228.9	4.6	B1/500		
BM (30°-60°)	269.4	5.4	B1/1000		
BH (60°-80°)	298.3	6.0	B1/500		G1/500
BVH (80°-90°)	13.3	0.3			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 II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	68°	75°	85°
0°	1077.1	1077.1	1077.1	1077.1	1077.1	1077.1	1077.1	1077.1	1077.1	1077.1	1077.1
2.5°	1048.3	1056.7	1056.7	1062.8	1068.4	1072.9	1076.8	1076.8	1076.8	1074.2	1072.0
5°	938.0	949.4	950.9	966.5	986.8	1011.8	1039.6	1064.2	1069.0	1078.1	1081.6
7.5°	861.4	865.0	871.1	881.8	902.4	933.2	976.8	1031.9	1045.0	1073.5	1088.4
10°	807.1	810.0	815.2	825.8	844.5	872.4	915.4	986.8	1008.8	1059.3	1088.7
12.5°	767.3	769.6	774.5	784.1	803.2	828.1	872.1	946.4	973.6	1045.0	1093.2
15°	736.3	740.1	744.0	753.4	772.8	796.8	841.4	917.1	946.4	1033.8	1101.6
17.5°	723.9	725.9	726.6	731.4	748.9	773.1	817.7	896.3	926.7	1024.7	1108.2
20°	731.7	732.0	725.6	722.4	732.4	754.7	798.0	880.9	911.9	1016.6	1110.7
22.5°	765.7	765.7	748.9	734.7	727.8	741.7	784.8	870.1	903.8	1010.5	1110.7
25°	830.3	827.5	801.3	773.1	743.1	737.2	776.4	863.4	897.6	1007.2	1106.5
27.5°	915.4	912.8	879.5	837.8	783.5	747.0	773.5	857.8	891.5	1002.4	1097.4
30°	1018.9	1016.6	978.8	924.1	843.9	777.6	780.2	854.0	886.6	994.3	1082.3
32.5°	1122.1	1120.7	1090.7	1034.7	927.4	829.7	798.0	853.3	884.0	984.6	1063.9
35°	1225.8	1225.8	1207.4	1160.2	1039.6	908.0	835.2	865.3	888.9	979.5	1048.0
37.5°	1379.1	1373.0	1338.6	1289.8	1180.9	1009.6	895.4	890.5	907.7	988.2	1042.8
40°	1616.5	1598.7	1512.9	1430.8	1335.2	1139.5	983.4	939.4	949.7	1017.9	1055.1
42.5°	1864.7	1836.6	1723.2	1591.9	1494.5	1299.9	1098.8	1018.6	1018.2	1075.4	1094.3
45°	2077.8	2063.3	1940.4	1773.9	1676.6	1480.3	1244.6	1136.3	1124.6	1164.7	1169.5
47.5°	2201.7	2192.0	2117.9	1966.6	1892.6	1693.4	1429.6	1299.6	1277.6	1301.5	1294.0
50°	2167.4	2176.8	2155.5	2078.2	2124.8	1992.8	1665.3	1523.3	1481.6	1505.6	1487.5
52.5°	1987.0	2012.2	2031.3	2046.2	2258.3	2393.5	1961.5	1802.6	1768.1	1763.9	1746.4
55°	1662.0	1702.1	1762.2	1871.6	2222.4	2715.2	2478.8	2140.6	2090.2	2063.6	2070.5
57.5°	1131.1	1191.8	1321.6	1529.4	2035.9	2852.3	3243.9	2577.1	2491.8	2397.4	2419.3
60°	623.1	673.8	828.1	1037.7	1610.0	2831.9	3922.0	3286.5	3017.8	2767.6	2812.8
62.5°	403.2	414.2	529.0	708.8	988.2	2500.2	4298.6	4472.3	3902.9	3255.8	3319.6
65°	324.0	331.7	388.0	571.7	688.4	1608.4	4315.4	5702.3	5326.9	3919.3	3921.3
67.5°	316.6	320.1	352.8	480.8	645.7	875.6	3730.2	6187.3	6274.4	4702.5	4323.9
68°	321.1	325.3	358.2	466.0	645.4	807.1	3447.5	6180.0	6329.0	4833.4	4323.9
70°	283.3	288.5	365.4	482.1	618.0	693.9	2360.8	5851.7	6091.7	5134.5	4102.7
72.5°	148.1	143.9	180.8	380.5	695.5	723.0	1247.2	4888.8	5168.8	4755.2	3544.6
75°	115.4	105.1	101.2	150.4	611.8	749.8	724.4	3474.8	3686.2	3427.9	2369.3
77.5°	108.6	96.1	88.6	88.9	269.3	780.2	585.9	2044.9	2044.9	1635.2	756.0
80°	87.3	75.7	70.8	80.8	130.0	719.1	611.4	931.9	794.8	422.6	208.3
82.5°	57.6	51.5	51.8	65.7	98.6	480.2	708.2	460.1	345.7	187.2	122.5
85°	36.5	31.4	34.9	45.9	73.8	214.1	701.0	319.8	228.9	105.1	61.1
87.5°	18.4	14.2	17.5	23.9	44.9	61.5	577.1	285.5	169.8	43.7	33.3
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°	1077.1	1077.1	1077.1	1077.1	1077.1	1077.1	1077.1	1077.1	1077.1	1077.1	1077.1
2.5°	1072.0	1064.8	1061.2	1055.4	1048.3	1041.2	1036.4	1034.1	1032.8	1033.4	1033.1
5°	1079.7	1070.3	1055.1	1033.4	1011.1	987.6	969.5	955.5	946.7	944.2	943.6
7.5°	1085.5	1072.0	1043.4	1004.0	965.9	924.4	889.3	861.1	842.0	833.3	833.0
10°	1084.5	1067.0	1022.1	963.9	908.0	847.2	791.9	744.7	710.4	693.9	693.3
12.5°	1085.5	1061.6	995.9	917.1	836.9	749.8	667.7	594.3	543.2	518.9	518.0
15°	1089.3	1055.8	969.0	864.6	753.7	630.9	513.5	421.4	374.8	359.0	359.0
17.5°	1089.0	1046.1	938.0	803.8	655.1	490.5	350.6	293.6	289.1	303.6	305.9
20°	1082.6	1030.5	897.9	731.7	539.4	339.5	237.6	229.6	265.8	305.9	310.5
22.5°	1072.6	1010.5	851.7	648.0	404.5	221.2	183.3	195.6	244.8	294.6	301.7
25°	1058.7	986.2	798.7	550.7	269.0	159.1	152.9	168.2	202.7	236.1	241.2
27.5°	1038.3	955.5	740.8	445.3	171.7	130.9	133.2	143.9	158.8	173.0	175.9
30°	1012.7	919.6	677.7	328.6	130.3	117.0	120.9	127.4	133.9	142.9	144.8
32.5°	986.8	883.1	612.1	225.7	113.9	109.7	113.5	117.0	122.5	128.7	130.0
35°	963.6	849.2	544.5	157.4	106.7	104.8	106.7	108.9	114.5	120.6	121.2
37.5°	946.7	821.3	474.0	124.5	102.5	100.6	101.6	102.5	108.9	118.0	119.0
40°	944.5	802.9	402.5	111.9	99.2	96.7	96.1	96.7	105.1	115.4	116.4
42.5°	966.5	803.8	332.8	106.7	96.7	93.8	91.1	92.5	99.9	108.0	108.6
45°	1018.6	826.4	272.3	104.4	94.4	92.2	88.3	88.9	92.5	96.7	97.3
47.5°	1110.4	876.0	226.1	103.1	92.5	90.5	85.7	83.8	84.1	86.3	86.3
50°	1257.2	958.7	197.9	101.9	90.8	87.3	81.8	77.9	76.9	78.3	78.6
52.5°	1476.1	1100.7	184.3	99.2	88.0	83.1	76.9	73.0	71.5	72.7	72.7
55°	1772.0	1327.4	177.9	95.7	84.4	77.9	72.4	69.2	67.9	68.8	68.8
57.5°	2109.2	1621.9	188.8	90.8	79.9	72.4	68.5	66.3	65.4	66.3	66.6
60°	2509.9	2007.3	264.5	84.7	75.0	67.6	65.4	64.0	63.4	64.3	64.3
62.5°	3042.5	2520.2	409.4	79.9	69.9	63.0	62.4	61.8	61.1	62.1	62.1
65°	3617.4	2986.8	421.4	76.9	65.4	59.1	59.5	59.5	58.8	59.8	59.8
67.5°	3800.4	2946.4	235.4	73.4	59.8	55.3	56.6	56.6	56.3	57.2	56.9
68°	3761.6	2882.4	205.0	72.4	58.8	54.3	55.6	56.0	55.6	56.6	56.3
70°	3472.5	2530.6	134.8	66.9	54.6	51.0	53.0	53.4	53.0	54.3	54.0
72.5°	2866.5	1898.1	99.6	58.5	49.5	46.9	48.8	49.1	49.5	50.7	50.4
75°	1820.4	1048.3	78.6	49.8	44.3	42.0	44.0	44.9	45.6	47.6	46.5
77.5°	498.6	318.1	63.7	42.4	38.2	37.2	38.5	39.8	40.4	42.7	41.0
80°	174.6	140.7	53.0	35.9	31.7	31.4	32.6	34.0	34.6	36.5	34.6
82.5°	106.1	91.9	42.4	28.1	24.9	24.6	26.2	27.5	28.1	28.1	26.8
85°	55.3	48.5	31.0	19.7	17.2	16.2	19.0	20.7	21.0	20.7	19.7
87.5°	31.0	27.5	16.5	9.4	7.8	8.1	10.0	12.3	13.3	12.9	12.3
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)