

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: P195607

Luminaire Tested: **NAV-AF-01-D-UNV-SL2-7050-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195607
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-SL2-7050-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 5000K, 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: 4839 lumens
Efficiency: N/A
Efficacy: 110.0 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 - G1

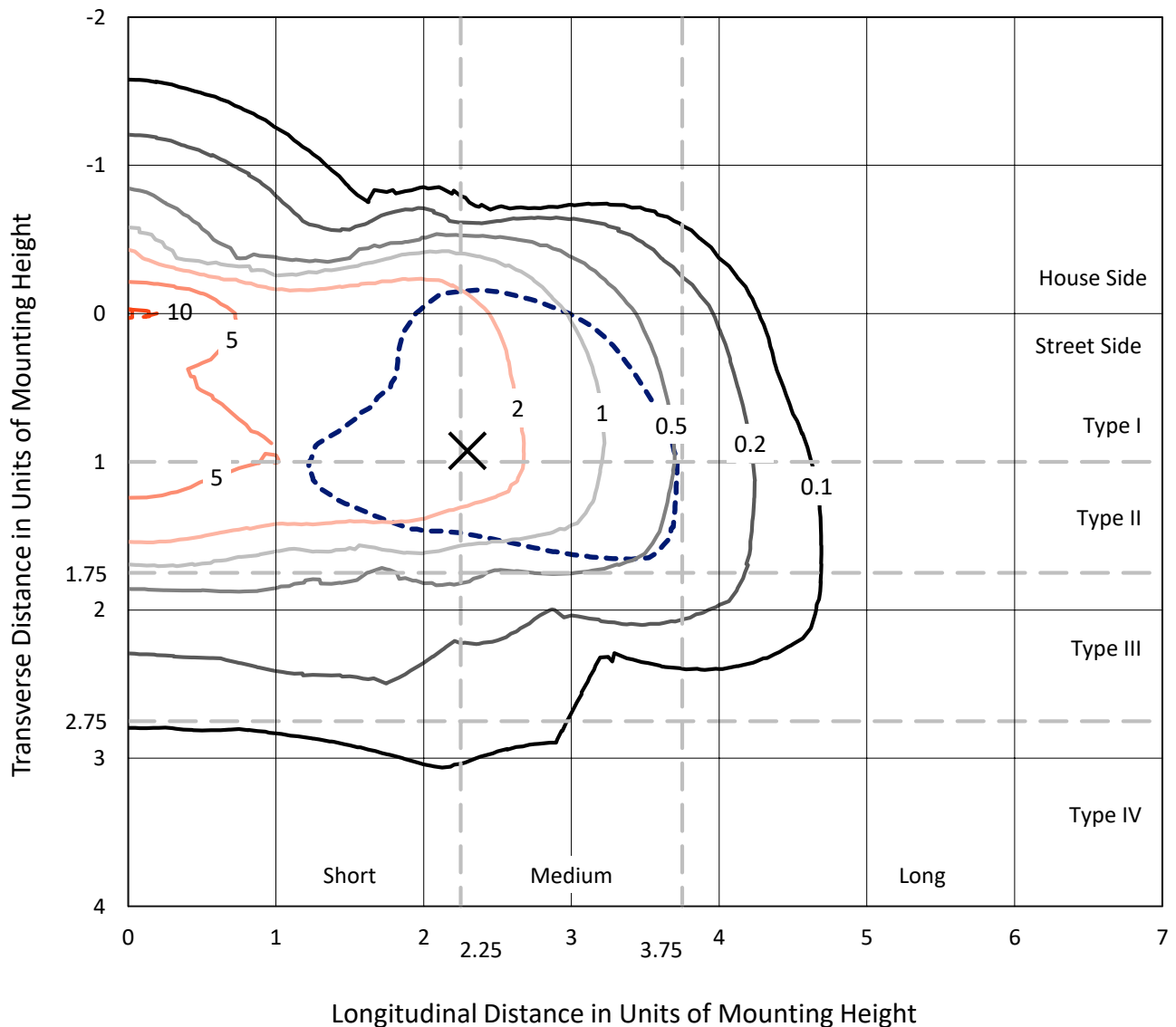
Input Watts (W): 44
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P195607
 CATALOG NUMBER: NAV-AF-01-D-UNV-SL2-7050-800

Iso-Footcandle Lines of Horizontal Illumination

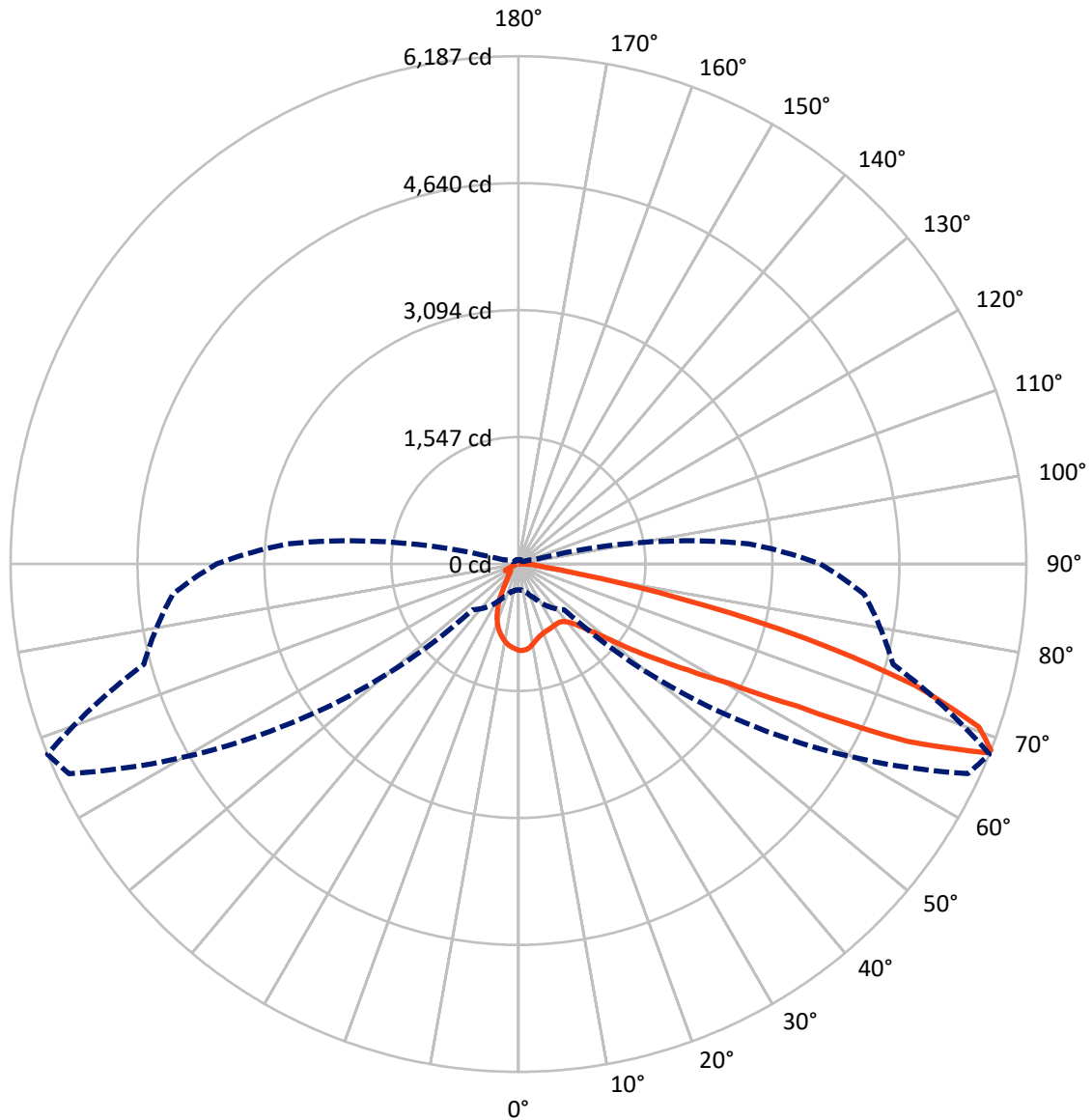
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 10.5 fc
 Type II - Medium - Semi-Cutoff

REPORT NUMBER: P195607
CATALOG NUMBER: NAV-AF-01-D-UNV-SL2-7050-800

Luminous Intensity Polar Plot



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

REPORT NUMBER: P195607

CATALOG NUMBER: NAV-AF-01-D-UNV-SL2-7050-800

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	791.7	0.0	791.7
	% Fixture	16.4	0.0	16.4
Street Side	Lumens	4047.3	0.0	4047.3
	% Fixture	83.6	0.0	83.6
Total	Lumens	4839.0	0.0	4839.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	90.2	1.9
10°-20°	209.2	4.3
20°-30°	283.0	5.8
30°-40°	399.0	8.2
40°-50°	656.1	13.6
50°-60°	1017.1	21.0
60°-70°	1318.7	27.3
70°-80°	756.7	15.6
80°-90°	108.9	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°	4839.0	100.0
0°-180°	4839.0	100.0



REPORT NUMBER: P195607

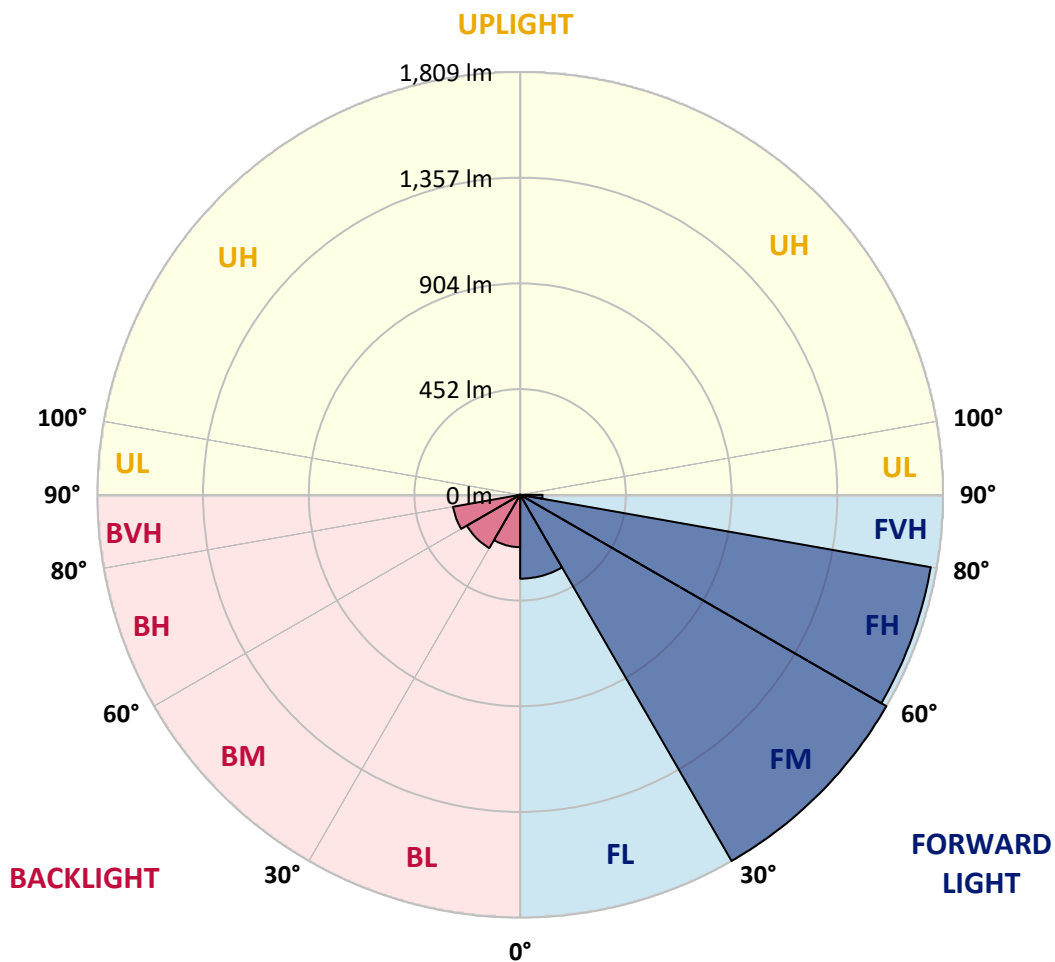
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	358.6	7.4			
FM	(30°-60°)	1808.9	37.4			
FH	(60°-80°)	1783.9	36.9			G1/1800
FVH	(80°-90°)	95.9	2.0			G1/100
BL	(0°-30°)	223.8	4.6	B1/500		
BM	(30°-60°)	263.3	5.4	B1/1000		
BH	(60°-80°)	291.6	6.0	B1/500		G1/500
BVH	(80°-90°)	13.0	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-G1

Type II Medium





REPORT NUMBER: P195607

CATALOG NUMBER: NAV-AF-01-D-UNV-SL2-7050-800

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	68°	75°	85°
0°	1052.9	1052.9	1052.9	1052.9	1052.9	1052.9	1052.9	1052.9	1052.9	1052.9	1052.9
2.5°	1024.8	1033.0	1033.0	1039.0	1044.4	1048.8	1052.6	1052.6	1052.6	1050.1	1047.9
5°	917.0	928.1	929.6	944.8	964.7	989.1	1016.3	1040.3	1045.0	1053.9	1057.3
7.5°	842.1	845.6	851.6	862.0	882.2	912.3	954.9	1008.7	1021.6	1049.4	1064.0
10°	789.0	791.8	796.9	807.3	825.6	852.8	894.9	964.7	986.2	1035.5	1064.3
12.5°	750.1	752.3	757.1	766.5	785.2	809.5	852.5	925.2	951.8	1021.6	1068.7
15°	719.8	723.5	727.3	736.5	755.5	778.9	822.5	896.5	925.2	1010.6	1076.9
17.5°	707.7	709.6	710.3	715.0	732.1	755.8	799.4	876.2	905.9	1001.7	1083.3
20°	715.3	715.6	709.3	706.2	716.0	737.8	780.1	861.1	891.4	993.8	1085.8
22.5°	748.5	748.5	732.1	718.2	711.5	725.1	767.2	850.6	883.5	987.8	1085.8
25°	811.7	808.9	783.3	755.8	726.4	720.7	759.0	844.0	877.5	984.6	1081.7
27.5°	894.9	892.3	859.8	819.0	765.9	730.2	756.1	838.6	871.5	979.9	1072.8
30°	996.0	993.8	956.8	903.4	825.0	760.2	762.7	834.8	866.7	972.0	1058.0
32.5°	1096.9	1095.6	1066.2	1011.5	906.6	811.1	780.1	834.2	864.2	962.5	1040.0
35°	1198.3	1198.3	1180.3	1134.2	1016.3	887.6	816.5	845.9	869.0	957.5	1024.5
37.5°	1348.2	1342.2	1308.6	1260.9	1154.4	986.9	875.3	870.5	887.3	966.0	1019.4
40°	1580.2	1562.8	1479.0	1398.7	1305.2	1113.9	961.3	918.3	928.4	995.1	1031.4
42.5°	1822.9	1795.4	1684.5	1556.2	1461.0	1270.7	1074.1	995.7	995.4	1051.3	1069.7
45°	2031.2	2017.0	1896.9	1734.1	1639.0	1447.1	1216.7	1110.8	1099.4	1138.6	1143.3
47.5°	2152.3	2142.8	2070.4	1922.5	1850.1	1655.4	1397.5	1270.4	1248.9	1272.3	1265.0
50°	2118.8	2128.0	2107.1	2031.6	2077.1	1948.1	1627.9	1489.1	1448.4	1471.8	1454.1
52.5°	1942.4	1967.1	1985.7	2000.3	2207.6	2339.8	1917.5	1762.2	1728.4	1724.3	1707.2
55°	1624.7	1663.9	1722.7	1829.6	2172.5	2654.3	2423.2	2092.6	2043.3	2017.3	2024.0
57.5°	1105.7	1165.1	1291.9	1495.1	1990.2	2788.3	3171.1	2519.3	2435.9	2343.6	2365.0
60°	609.1	658.7	809.5	1014.4	1573.9	2768.4	3834.0	3212.8	2950.1	2705.5	2749.7
62.5°	394.2	404.9	517.1	692.9	966.0	2444.1	4202.2	4372.0	3815.3	3182.8	3245.1
65°	316.7	324.3	379.3	558.9	673.0	1572.3	4218.6	5574.4	5207.4	3831.4	3833.3
67.5°	309.5	312.9	344.9	470.0	631.2	856.0	3646.5	6048.5	6133.6	4597.0	4226.9
68°	313.9	318.0	350.2	455.5	630.9	789.0	3370.2	6041.3	6187.0	4725.0	4226.9
70°	276.9	282.0	357.2	471.3	604.1	678.3	2307.8	5720.4	5955.0	5019.3	4010.7
72.5°	144.8	140.7	176.7	372.0	679.9	706.8	1219.2	4779.1	5052.8	4648.5	3465.1
75°	112.8	102.7	98.9	147.0	598.1	733.0	708.1	3396.8	3603.5	3351.0	2316.1
77.5°	106.2	93.9	86.6	86.9	263.3	762.7	572.8	1999.0	1999.0	1598.5	739.0
80°	85.3	74.0	69.2	79.0	127.1	703.0	597.7	911.0	777.0	413.1	203.6
82.5°	56.3	50.3	50.6	64.2	96.4	469.4	692.3	449.8	337.9	183.0	119.8
85°	35.7	30.7	34.1	44.9	72.1	209.3	685.3	312.6	223.8	102.7	59.7
87.5°	18.0	13.9	17.1	23.4	43.9	60.1	564.2	279.1	166.0	42.7	32.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P195607

CATALOG NUMBER: NAV-AF-01-D-UNV-SL2-7050-800

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1052.9	1052.9	1052.9	1052.9	1052.9	1052.9	1052.9	1052.9	1052.9	1052.9	1052.9
2.5°	1047.9	1040.9	1037.4	1031.7	1024.8	1017.8	1013.1	1010.9	1009.6	1010.2	1009.9
5°	1055.5	1046.3	1031.4	1010.2	988.4	965.4	947.7	934.1	925.5	923.0	922.4
7.5°	1061.1	1047.9	1020.0	981.5	944.2	903.7	869.3	841.8	823.1	814.6	814.3
10°	1060.2	1043.1	999.2	942.3	887.6	828.2	774.1	728.0	694.5	678.3	677.7
12.5°	1061.1	1037.8	973.6	896.5	818.1	733.0	652.7	581.0	531.0	507.3	506.4
15°	1064.9	1032.1	947.3	845.2	736.8	616.7	502.0	411.9	366.4	350.9	350.9
17.5°	1064.6	1022.6	917.0	785.8	640.4	479.5	342.7	287.0	282.6	296.8	299.0
20°	1058.3	1007.4	877.8	715.3	527.3	331.9	232.3	224.4	259.8	299.0	303.5
22.5°	1048.5	987.8	832.6	633.5	395.4	216.2	179.2	191.2	239.3	288.0	294.9
25°	1034.9	964.1	780.8	538.3	263.0	155.5	149.5	164.4	198.2	230.8	235.8
27.5°	1015.0	934.1	724.2	435.3	167.8	128.0	130.2	140.7	155.2	169.1	172.0
30°	990.0	899.0	662.5	321.2	127.4	114.4	118.2	124.5	130.9	139.7	141.6
32.5°	964.7	863.3	598.4	220.6	111.3	107.2	111.0	114.4	119.8	125.8	127.1
35°	942.0	830.1	532.3	153.9	104.3	102.4	104.3	106.5	111.9	117.9	118.5
37.5°	925.5	802.9	463.4	121.7	100.2	98.3	99.3	100.2	106.5	115.4	116.3
40°	923.3	784.9	393.5	109.4	97.0	94.5	93.9	94.5	102.7	112.8	113.8
42.5°	944.8	785.8	325.3	104.3	94.5	91.7	89.1	90.4	97.7	105.6	106.2
45°	995.7	807.9	266.2	102.1	92.3	90.1	86.3	86.9	90.4	94.5	95.1
47.5°	1085.5	856.3	221.0	100.8	90.4	88.5	83.8	81.9	82.2	84.4	84.4
50°	1229.0	937.2	193.5	99.6	88.8	85.3	80.0	76.2	75.2	76.5	76.8
52.5°	1443.0	1076.0	180.2	97.0	86.0	81.2	75.2	71.4	69.9	71.1	71.1
55°	1732.2	1297.6	173.9	93.6	82.5	76.2	70.8	67.6	66.4	67.3	67.3
57.5°	2061.9	1585.5	184.6	88.8	78.1	70.8	67.0	64.8	63.9	64.8	65.1
60°	2453.6	1962.3	258.6	82.8	73.3	66.1	63.9	62.6	62.0	62.9	62.9
62.5°	2974.2	2463.7	400.2	78.1	68.3	61.6	61.0	60.4	59.7	60.7	60.7
65°	3536.2	2919.8	411.9	75.2	63.9	57.8	58.2	58.2	57.5	58.5	58.5
67.5°	3715.1	2880.3	230.1	71.8	58.5	54.1	55.3	55.3	55.0	55.9	55.6
68°	3677.2	2817.7	200.4	70.8	57.5	53.1	54.4	54.7	54.4	55.3	55.0
70°	3394.6	2473.8	131.8	65.4	53.4	49.9	51.8	52.2	51.8	53.1	52.8
72.5°	2802.2	1855.5	97.4	57.2	48.4	45.8	47.7	48.0	48.4	49.6	49.3
75°	1779.6	1024.8	76.8	48.7	43.3	41.1	43.0	43.9	44.6	46.5	45.5
77.5°	487.4	311.0	62.3	41.4	37.3	36.4	37.6	38.9	39.5	41.7	40.1
80°	170.7	137.5	51.8	35.1	31.0	30.7	31.9	33.2	33.8	35.7	33.8
82.5°	103.7	89.8	41.4	27.5	24.3	24.0	25.6	26.9	27.5	27.5	26.2
85°	54.1	47.4	30.3	19.3	16.8	15.8	18.6	20.2	20.5	20.2	19.3
87.5°	30.3	26.9	16.1	9.2	7.6	7.9	9.8	12.0	13.0	12.6	12.0
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)