

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: P270282

Luminaire Tested: **NAV-AF-01-D-UNV-SL4-7027-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P270282  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24284)  
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-SL4-7027-600  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(1) 70 CRI, 2700K, 615mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE IV SPILL  
LIGHT ELIMINATOR OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3336.1 lumens  
Efficiency: N/A  
Efficacy: 98.1 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type IV - Short - Non-Cutoff  
BUG Rating: B0 - U0 - G2

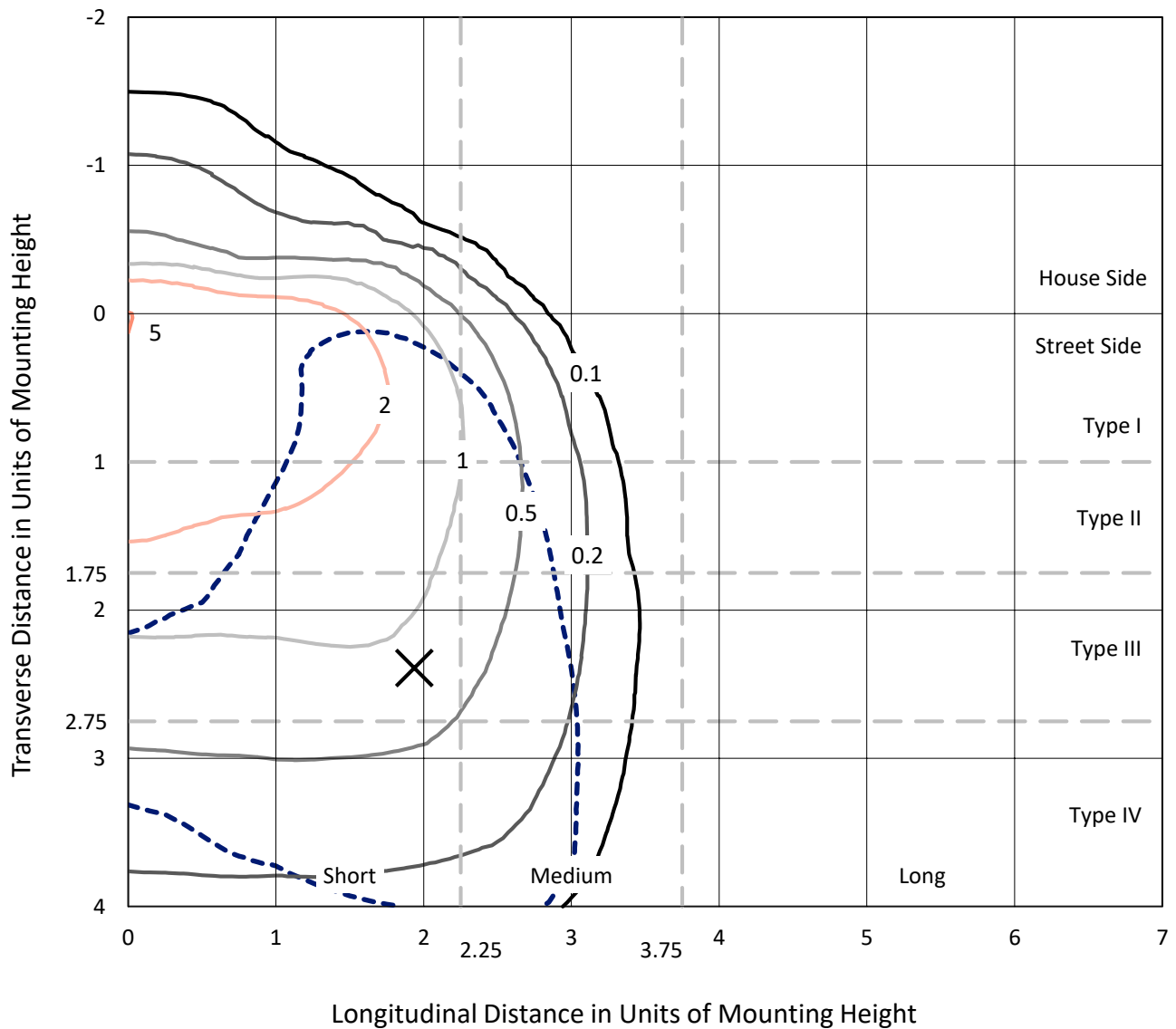
Input Watts (W): 34  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

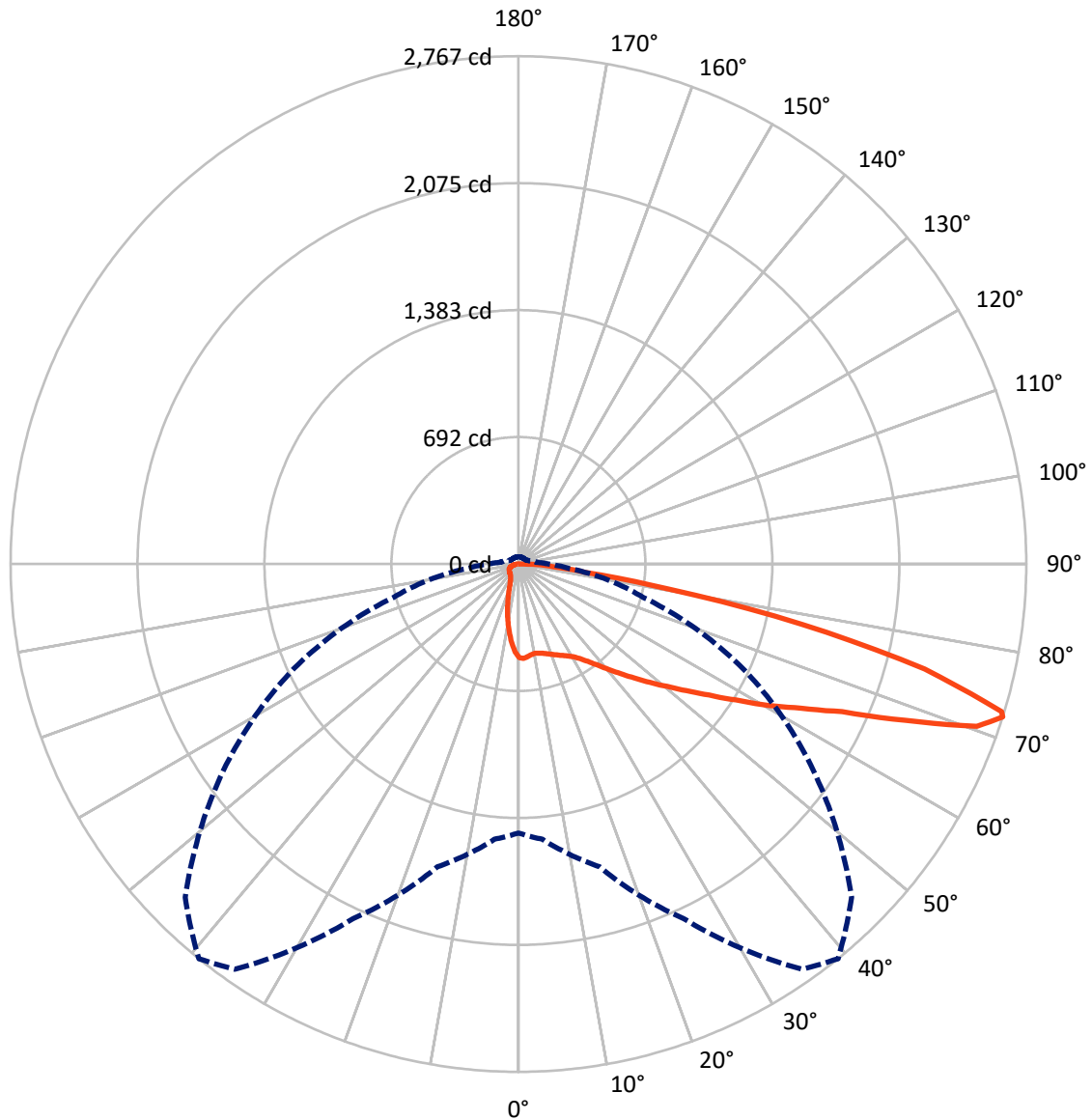
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 5.1 fc  
 Type IV - Short - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 39-Deg Lateral      - - - Horizontal Cone Through 72-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	382.5	0.0	382.5
	% Fixture	11.5	0.0	11.5
<b>Street Side</b>	Lumens	2953.5	0.0	2953.5
	% Fixture	88.5	0.0	88.5
<b>Total</b>	Lumens	3336.1	0.0	3336.1
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	43.8	1.3
10°-20°	110.0	3.3
20°-30°	171.4	5.1
30°-40°	264.0	7.9
40°-50°	430.3	12.9
50°-60°	668.7	20.0
60°-70°	895.0	26.8
70°-80°	643.7	19.3
80°-90°	109.1	3.3
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°	3336.1	100.0
0°-180°	3336.1	100.0



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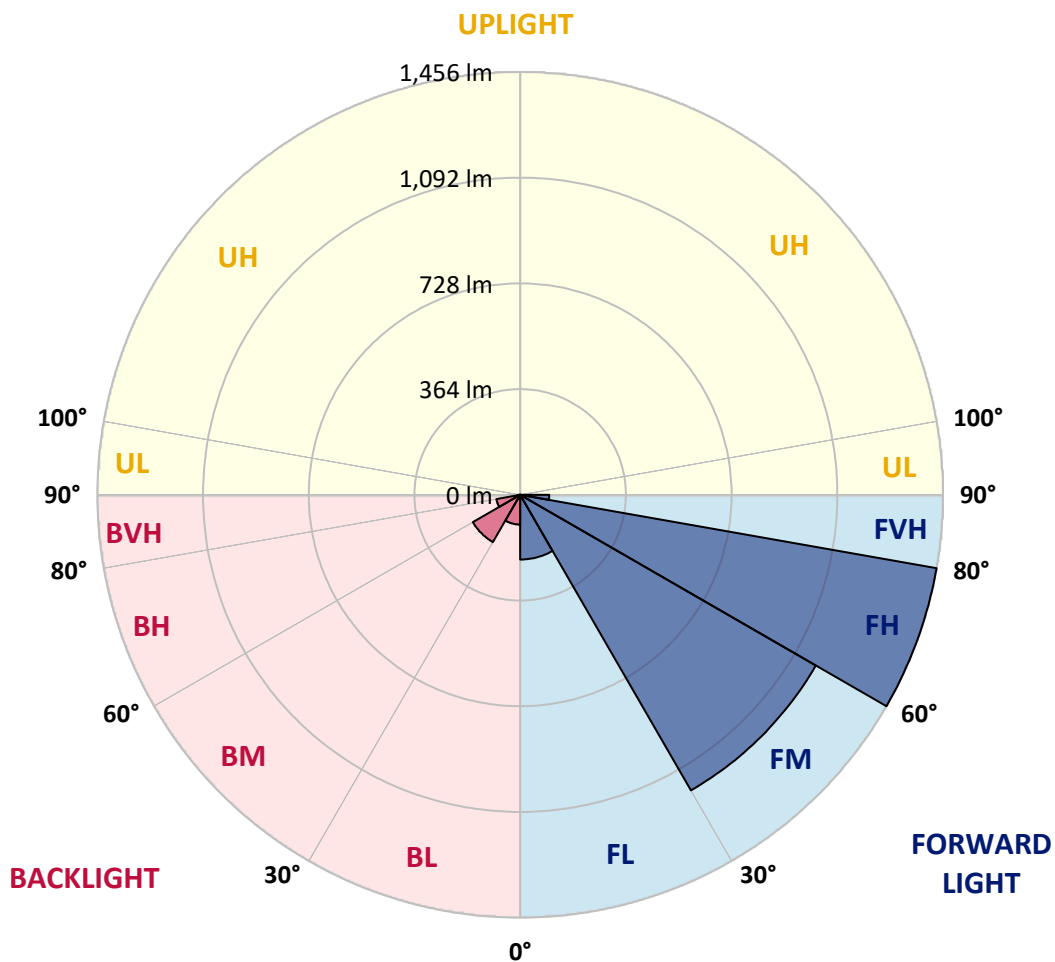
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	222.8	6.7			
FM	(30°-60°)	1175.0	35.2			
FH	(60°-80°)	1455.6	43.6			G1/1800
FVH	(80°-90°)	100.1	3.0			G2/225
BL	(0°-30°)	102.4	3.1	B0/110		
BM	(30°-60°)	188.0	5.6	B0/220		
BH	(60°-80°)	83.1	2.5	B0/110		G0/110
BVH	(80°-90°)	9.0	0.3			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B0-U0-G2**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	39°	45°	55°	65°	75°	85°
0°	509.5	509.5	509.5	509.5	509.5	509.5	509.5	509.5	509.5	509.5	509.5
2.5°	520.5	520.7	519.9	518.1	516.2	515.3	513.7	511.0	507.5	504.9	503.1
5°	515.4	516.2	515.7	512.5	509.2	507.5	504.9	501.2	496.6	494.4	489.8
7.5°	511.8	512.2	510.9	507.1	501.0	498.6	494.2	489.3	485.1	482.2	476.6
10°	509.0	509.5	508.4	504.6	497.8	495.1	489.8	484.4	478.7	475.3	468.9
12.5°	505.2	506.1	506.1	504.3	499.8	498.1	492.7	486.8	481.8	477.9	470.1
15°	504.6	505.7	507.7	507.5	506.1	504.8	500.5	494.6	490.3	485.8	476.1
17.5°	510.1	512.7	516.6	518.1	517.1	514.2	509.2	503.9	499.0	494.6	482.7
20°	524.3	525.6	531.6	534.3	529.9	525.6	519.1	512.2	507.7	504.3	489.0
22.5°	545.5	547.2	552.3	552.5	543.0	537.9	529.6	521.1	516.9	515.4	497.7
25°	579.5	579.0	580.5	574.8	557.8	551.7	541.7	531.8	528.9	531.6	510.1
27.5°	620.3	619.2	615.0	600.3	574.6	566.8	554.8	546.0	546.0	552.3	527.1
30°	667.4	666.3	652.3	627.9	594.6	585.6	572.8	563.6	568.4	580.5	550.2
32.5°	717.0	713.1	693.5	660.9	623.1	613.2	600.8	591.4	600.3	621.0	583.4
35°	763.9	761.7	737.7	698.9	659.7	651.5	642.9	631.2	645.6	677.6	630.3
37.5°	812.2	810.5	781.2	739.9	704.5	698.9	691.8	683.7	706.7	748.8	693.5
40°	866.2	862.6	825.7	784.5	756.7	754.0	750.3	748.0	785.2	847.9	773.7
42.5°	927.4	920.5	872.8	833.5	813.5	815.8	813.9	822.8	879.7	962.1	869.1
45°	997.2	983.4	919.5	885.6	876.6	885.5	889.7	912.6	991.4	1094.0	975.6
47.5°	1062.7	1044.6	970.8	942.3	947.5	963.0	975.1	1015.4	1113.9	1224.3	1084.6
50°	1122.8	1102.7	1025.7	1001.0	1026.1	1048.1	1073.1	1130.0	1244.2	1358.4	1184.4
52.5°	1167.4	1152.9	1080.5	1065.1	1116.4	1145.5	1185.6	1257.4	1375.9	1486.3	1273.5
55°	1201.9	1194.0	1134.1	1138.5	1218.6	1260.1	1308.7	1391.4	1515.3	1601.0	1345.2
57.5°	1241.7	1236.0	1195.1	1227.3	1345.2	1397.7	1455.0	1546.8	1647.9	1702.0	1401.4
60°	1283.9	1283.9	1263.2	1334.1	1503.9	1563.8	1620.9	1692.3	1779.9	1792.8	1424.4
62.5°	1315.7	1323.9	1331.4	1447.8	1654.3	1728.9	1791.6	1860.1	1916.8	1837.8	1370.5
65°	1361.8	1379.4	1421.2	1579.3	1840.5	1938.3	2023.0	2080.5	2027.7	1802.1	1195.1
67.5°	1441.2	1467.3	1556.0	1775.1	2125.8	2272.2	2354.4	2254.9	2005.8	1578.0	915.6
70°	1512.6	1549.4	1701.1	2023.3	2496.7	2648.7	2610.7	2214.4	1747.1	1156.7	563.1
72°	1465.0	1505.4	1707.8	2131.5	2694.9	2766.6	2567.0	1962.4	1350.0	705.9	277.7
72.5°	1434.0	1475.7	1686.1	2128.9	2700.3	2751.6	2506.5	1862.4	1225.5	617.7	224.7
75°	1197.9	1233.7	1449.9	1886.7	2379.6	2285.6	1955.9	1205.3	563.1	199.6	115.5
77.5°	782.2	809.6	999.8	1307.2	1666.8	1576.3	1190.6	564.3	211.2	121.1	86.9
80°	393.0	412.5	535.0	687.4	899.7	827.7	549.6	272.9	141.4	87.6	68.4
82.5°	273.4	291.4	368.3	350.9	376.0	364.0	258.4	227.7	105.7	55.3	35.8
85°	229.2	247.9	304.7	250.2	204.6	186.6	185.2	215.2	69.9	27.3	30.3
87.5°	200.1	228.2	251.4	182.7	140.4	123.8	136.5	197.3	22.2	15.0	9.3
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°	509.5	509.5	509.5	509.5	509.5	509.5	509.5	509.5	509.5	509.5	509.5
2.5°	499.5	499.0	495.5	490.5	486.6	484.1	479.4	479.2	479.6	475.7	477.2
5°	485.5	482.7	474.0	462.2	452.6	443.5	433.3	430.0	427.1	421.0	421.7
7.5°	470.7	466.0	450.8	431.4	412.7	395.8	378.9	370.6	364.4	356.4	356.4
10°	462.0	454.6	431.4	402.9	373.3	348.5	323.4	308.4	297.3	287.3	286.6
12.5°	461.5	450.4	417.9	378.6	338.1	303.2	269.0	245.9	229.5	217.7	216.5
15°	465.1	449.4	406.8	356.1	305.1	259.5	217.2	187.8	167.1	153.9	152.5
17.5°	468.2	448.3	394.5	332.4	272.7	217.5	170.4	140.0	120.3	109.6	108.3
20°	471.3	445.9	379.2	307.3	237.2	178.0	133.3	108.7	95.6	89.7	88.9
22.5°	475.5	443.7	363.1	279.1	202.2	144.8	110.0	92.3	85.2	82.5	81.9
25°	482.4	443.9	347.4	250.2	170.1	120.7	95.2	84.3	80.4	78.4	78.4
27.5°	492.5	446.5	331.8	220.9	143.1	104.2	86.4	79.9	77.4	75.8	75.5
30°	507.3	451.5	315.6	193.0	121.6	92.7	81.2	77.3	75.3	73.9	73.8
32.5°	528.7	460.2	298.2	167.8	105.2	84.6	77.4	75.0	73.4	72.4	72.1
35°	560.7	475.7	281.4	146.2	93.7	78.8	74.4	72.4	71.4	71.0	70.7
37.5°	607.9	500.5	265.5	129.4	86.0	75.0	71.2	70.1	69.7	69.7	69.7
40°	666.9	533.2	251.3	117.6	81.7	72.1	69.0	68.1	68.1	68.4	68.4
42.5°	738.8	574.1	238.9	109.6	79.3	70.1	67.5	67.0	66.7	66.7	67.0
45°	822.3	622.5	231.4	103.2	77.4	69.0	66.3	66.0	65.1	64.7	64.7
47.5°	906.3	674.3	230.9	99.6	75.3	67.6	65.1	65.1	63.4	62.5	62.7
50°	984.7	720.7	235.9	98.8	73.9	65.7	64.0	64.3	61.9	60.6	60.5
52.5°	1047.9	756.1	241.9	99.9	73.9	63.8	62.1	63.2	60.5	59.1	58.8
55°	1096.7	780.6	244.1	102.3	74.7	62.3	60.2	62.1	59.9	58.2	58.2
57.5°	1131.5	788.5	234.5	103.5	76.1	62.1	58.5	61.9	60.6	58.5	58.5
60°	1118.7	743.1	198.6	99.3	75.8	61.5	57.1	62.3	62.9	60.5	60.5
62.5°	1019.1	621.6	159.4	89.7	72.1	59.9	55.5	61.9	64.5	63.6	63.2
65°	829.8	456.0	123.6	78.2	65.7	56.7	52.2	57.9	60.9	61.9	62.1
67.5°	584.7	288.6	96.1	66.6	57.5	51.7	48.4	51.1	52.2	52.6	53.4
70°	319.7	156.3	76.4	56.0	49.2	46.8	44.3	44.6	44.0	43.7	44.0
72°	160.5	102.0	64.5	48.6	43.7	42.1	41.1	40.3	40.3	39.6	39.9
72.5°	138.2	95.0	62.3	46.8	42.3	41.1	40.1	39.4	39.2	38.7	38.9
75°	92.0	75.3	51.9	39.2	36.0	35.2	35.7	34.9	35.2	34.8	34.9
77.5°	74.4	64.7	44.0	33.1	30.9	29.6	30.5	30.7	31.1	30.7	30.5
80°	62.3	55.1	36.9	27.3	25.7	24.7	25.2	26.7	26.9	25.5	25.3
82.5°	40.3	44.3	29.1	21.3	19.8	19.3	20.4	22.0	22.4	20.7	20.1
85°	33.9	35.7	21.0	14.6	12.9	12.5	14.8	16.3	17.4	15.7	15.2
87.5°	9.4	17.4	10.3	6.9	5.7	5.7	7.1	8.5	10.2	10.3	10.3
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)