

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: P270319

Luminaire Tested: **NAV-AF-01-D-UNV-T4W-7027-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270319
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24127)
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-T4W-7027-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 2700K, 800mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4238 lumens
Efficiency: N/A
Efficacy: 96.3 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B1 - U0 - G1

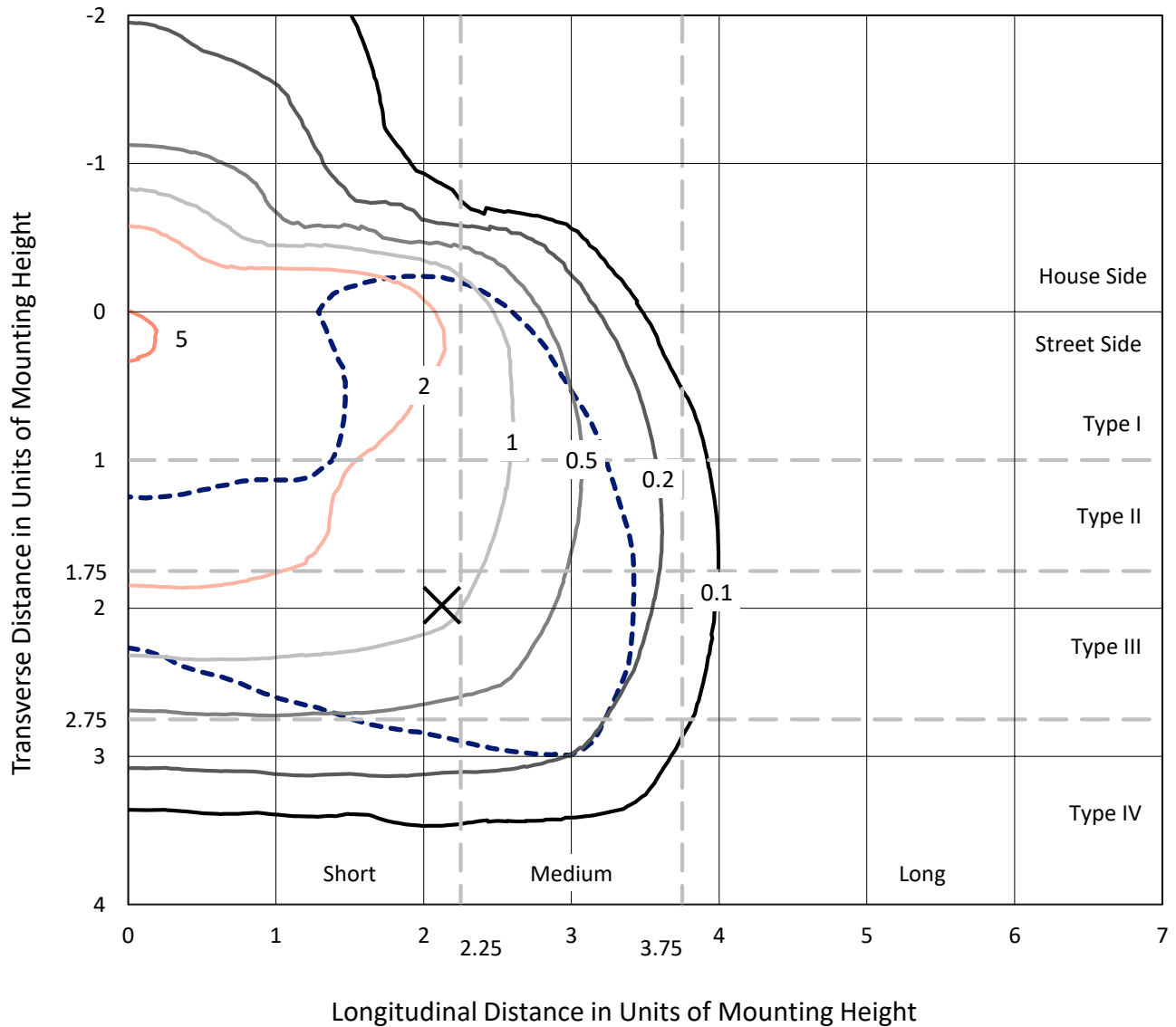
Input Watts (W): 44
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

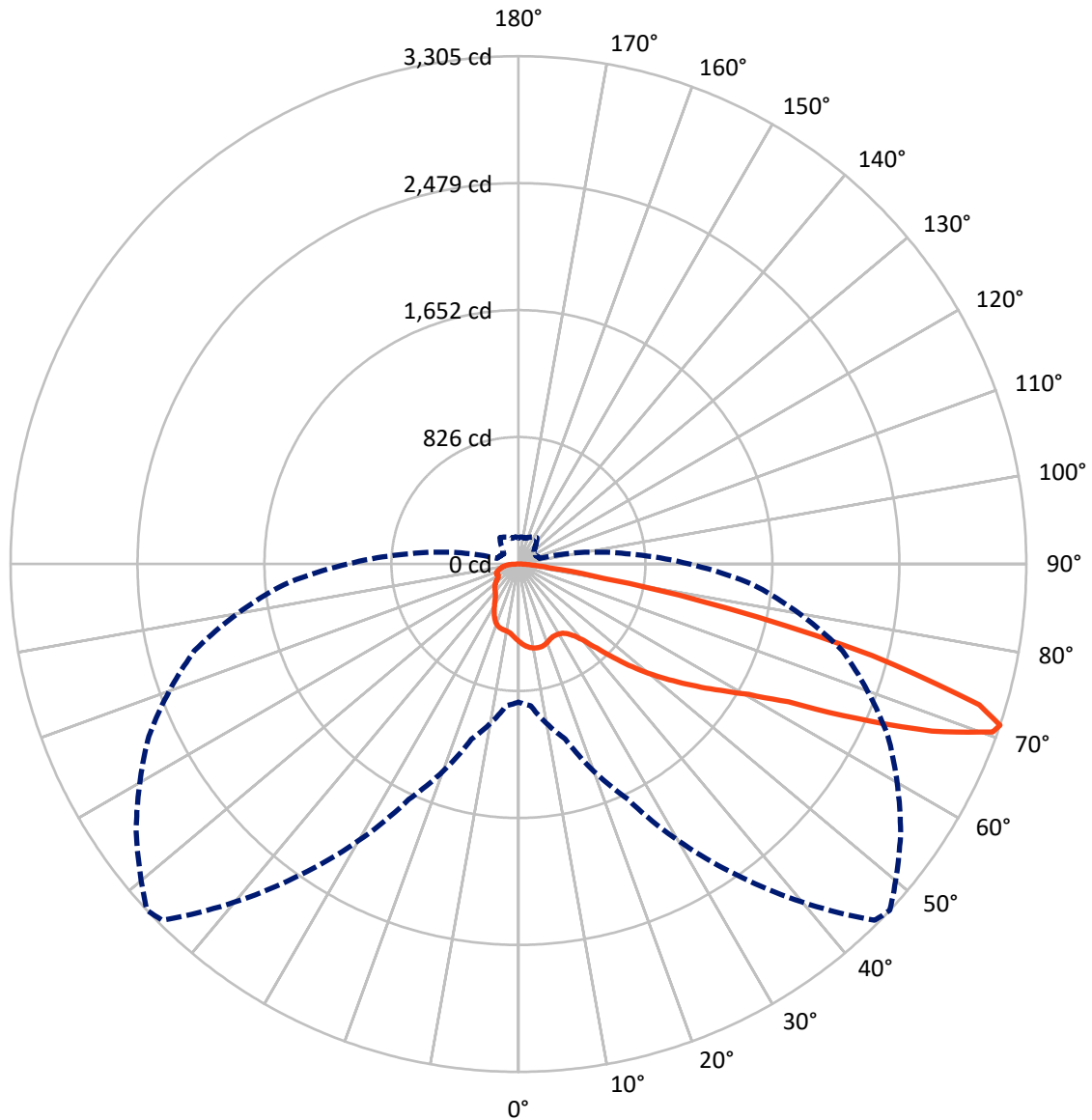
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 5.8 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 47-Deg Lateral - - - Horizontal Cone Through 71-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	908.3	0.0	908.3
	% Fixture	21.4	0.0	21.4
Street Side	Lumens	3329.8	0.0	3329.8
	% Fixture	78.6	0.0	78.6
Total	Lumens	4238.0	0.0	4238.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	48.1	1.1
10°-20°	140.8	3.3
20°-30°	209.2	4.9
30°-40°	300.4	7.1
40°-50°	532.6	12.6
50°-60°	911.3	21.5
60°-70°	1293.7	30.5
70°-80°	708.5	16.7
80°-90°	93.5	2.2
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°	4238.0	100.0
0°-180°	4238.0	100.0



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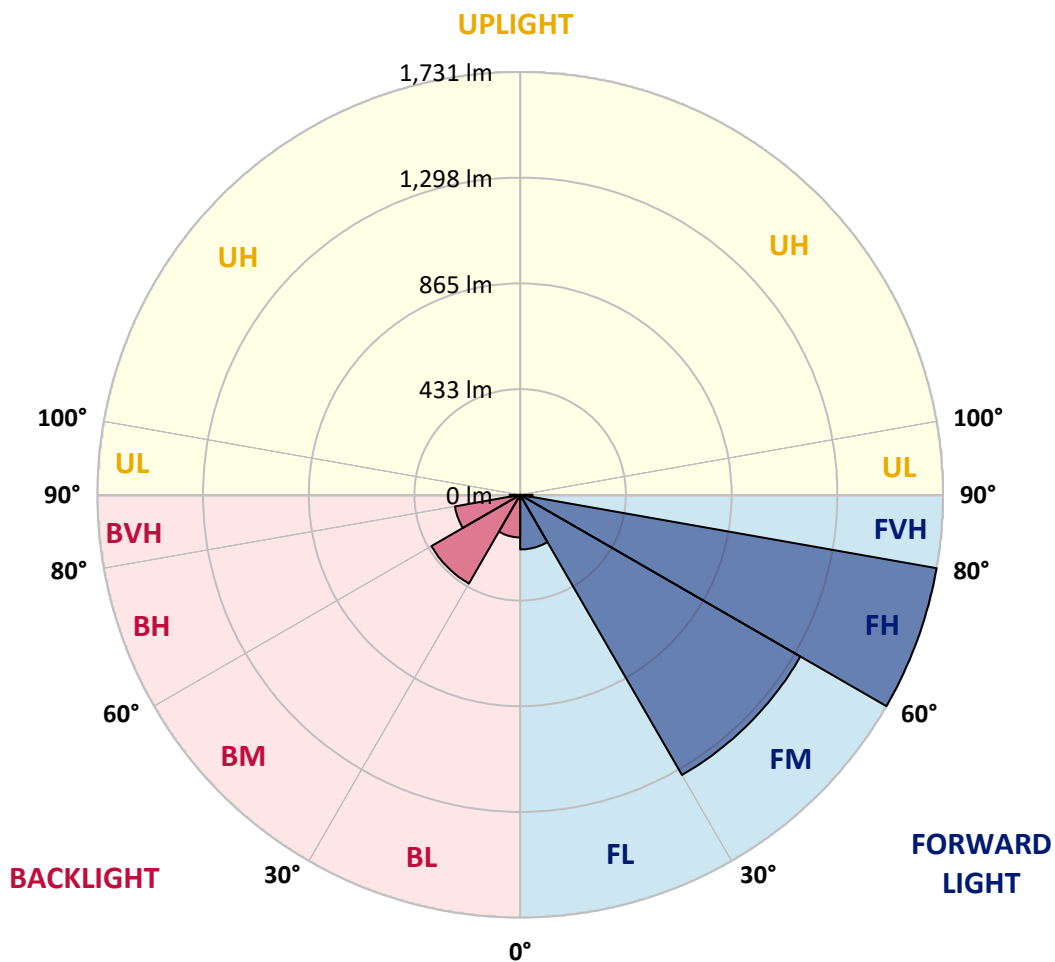
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	223.7	5.3			
FM	(30°-60°)	1324.5	31.3			
FH	(60°-80°)	1730.9	40.8			G1/1800
FVH	(80°-90°)	50.7	1.2			G1/100
BL	(0°-30°)	174.4	4.1	B1/500		
BM	(30°-60°)	419.7	9.9	B1/1000		
BH	(60°-80°)	271.4	6.4	B1/500		G1/500
BVH	(80°-90°)	42.8	1.0			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 IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	47°	55°	65°	75°	85°
0°	503.9	503.9	503.9	503.9	503.9	503.9	503.9	503.9	503.9	503.9	503.9
2.5°	534.8	533.7	534.2	532.2	527.6	522.6	522.6	517.5	511.9	506.5	500.4
5°	568.0	566.3	564.9	558.8	549.9	539.7	538.1	527.6	516.3	505.0	494.1
7.5°	595.7	594.0	589.9	579.0	565.8	550.8	548.8	535.0	520.2	504.5	489.1
10°	615.5	614.4	606.4	592.4	577.0	559.1	556.0	541.9	524.3	504.8	485.4
12.5°	626.5	624.9	615.2	598.7	580.7	562.5	559.1	545.7	525.7	504.3	481.4
15°	622.0	621.3	612.1	595.4	577.3	561.6	558.8	545.2	524.8	502.3	477.9
17.5°	603.4	605.3	598.2	581.7	566.9	556.0	552.8	539.9	520.7	497.7	472.4
20°	577.6	579.8	576.3	559.5	550.9	543.8	542.1	531.6	513.9	490.8	465.9
22.5°	550.1	552.1	552.3	536.6	534.0	531.2	529.8	522.4	507.8	486.7	461.4
25°	531.2	533.4	534.0	520.2	521.8	522.6	522.4	517.2	506.7	486.7	462.0
27.5°	526.1	527.3	526.8	514.1	517.2	521.8	522.2	520.9	511.1	492.1	469.6
30°	543.3	543.8	536.9	518.1	520.9	527.0	527.3	526.8	520.5	506.5	486.9
32.5°	616.9	616.2	592.7	543.8	533.4	535.6	536.4	541.3	541.9	530.1	511.9
35°	729.0	728.6	701.1	617.7	568.4	556.9	558.0	565.8	572.6	564.7	554.3
37.5°	852.2	853.0	836.3	723.1	644.4	596.3	595.1	601.0	613.4	616.1	617.5
40°	989.0	993.2	992.3	844.2	750.7	663.3	652.3	645.7	669.5	684.7	704.2
42.5°	1145.2	1144.3	1144.7	977.1	872.1	768.7	748.4	717.7	745.5	771.5	814.4
45°	1279.5	1283.9	1287.2	1118.6	1008.0	889.3	868.8	812.6	837.7	876.7	942.1
47.5°	1414.7	1407.0	1413.0	1276.0	1159.3	1026.9	1000.3	924.7	948.2	1003.0	1102.4
50°	1572.0	1568.5	1541.0	1481.5	1342.2	1166.4	1131.5	1041.8	1075.8	1149.1	1300.4
52.5°	1713.2	1694.1	1672.6	1642.9	1522.1	1307.7	1263.3	1163.3	1225.9	1316.9	1546.3
55°	1764.9	1752.0	1777.7	1816.3	1712.3	1451.5	1402.1	1305.3	1395.4	1509.0	1835.4
57.5°	1819.7	1824.2	1882.4	1960.1	1892.5	1605.0	1551.5	1473.5	1581.3	1723.7	2158.6
60°	1847.3	1864.8	1981.0	2126.8	2063.9	1773.3	1722.1	1666.5	1787.6	1961.0	2481.2
62.5°	1851.9	1875.5	2040.1	2185.3	2299.9	2031.2	1972.0	1911.9	2045.4	2223.2	2714.6
65°	1766.2	1802.4	2034.8	2257.4	2515.0	2462.2	2424.5	2319.7	2390.2	2454.2	2754.5
67.5°	1514.5	1554.0	1833.5	2227.6	2687.4	2909.3	2902.2	2747.2	2656.6	2543.6	2459.2
70°	1111.6	1143.4	1412.0	1904.3	2612.1	3260.3	3273.0	3024.5	2731.0	2354.0	1828.6
71°	898.9	926.4	1179.7	1690.7	2465.5	3278.5	3304.9	3036.7	2653.7	2182.9	1530.9
72.5°	559.5	574.8	783.3	1276.0	2123.1	3091.6	3136.2	2878.6	2409.8	1845.1	1082.1
75°	211.2	217.2	290.6	562.8	1267.1	2322.7	2376.5	2175.4	1692.9	1053.3	452.8
77.5°	113.5	116.4	144.2	234.0	507.8	1331.5	1400.6	1240.9	812.1	368.6	185.1
80°	76.0	78.1	99.7	138.7	233.5	507.1	564.7	498.2	304.0	210.4	131.8
82.5°	49.1	50.2	67.8	91.2	150.7	178.3	203.6	212.5	189.8	150.7	79.6
85°	32.3	33.2	44.7	58.2	93.3	87.9	90.1	117.8	129.4	99.4	40.7
87.5°	18.7	19.3	26.9	30.0	42.0	33.0	35.8	56.1	77.0	64.8	23.4
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°	503.9	503.9	503.9	503.9	503.9	503.9	503.9	503.9	503.9	503.9	503.9
2.5°	497.7	495.4	490.6	487.5	486.2	485.5	485.1	486.2	486.2	485.5	484.5
5°	488.6	484.5	476.2	470.4	467.5	466.6	467.7	469.0	470.0	470.0	469.0
7.5°	482.0	475.9	465.0	457.0	452.3	450.9	454.1	458.9	462.2	463.9	464.2
10°	476.6	468.2	456.2	448.0	444.1	443.6	447.4	453.7	460.7	463.5	464.2
12.5°	471.6	462.2	449.1	441.3	438.6	440.0	445.2	450.9	458.9	463.3	463.5
15°	466.8	457.2	443.3	435.3	434.8	436.9	441.8	446.5	452.7	458.1	458.1
17.5°	461.4	450.9	436.3	429.0	429.0	430.8	434.2	436.7	440.4	445.7	445.5
20°	454.8	444.1	429.3	421.6	420.0	418.8	418.8	419.4	422.7	427.4	428.2
22.5°	450.0	438.9	423.2	413.8	406.5	399.3	396.3	395.3	398.2	402.6	403.7
25°	450.0	438.9	421.3	405.7	387.4	373.8	368.0	366.4	369.5	373.5	375.1
27.5°	457.2	446.3	425.6	398.2	365.0	343.1	336.1	334.8	337.6	340.8	342.4
30°	474.6	463.9	438.4	389.8	340.0	311.2	303.4	302.1	303.4	304.9	306.9
32.5°	503.4	494.3	458.9	382.0	314.8	282.3	272.9	270.7	271.4	271.6	273.3
35°	550.4	546.3	486.4	372.9	290.8	258.7	249.1	244.7	244.3	245.7	247.8
37.5°	622.3	624.9	521.8	359.9	271.1	242.0	232.3	228.0	225.7	228.4	230.8
40°	723.9	729.8	562.8	342.0	254.8	232.1	221.9	217.7	214.8	213.9	215.1
42.5°	856.1	854.4	604.5	319.2	237.3	225.5	214.8	210.4	205.4	199.2	197.7
45°	1012.6	989.0	639.4	291.1	217.2	219.1	208.1	202.2	194.5	185.1	184.1
47.5°	1197.4	1132.4	660.9	261.1	198.5	210.9	200.9	191.3	180.2	174.1	173.4
50°	1420.2	1300.1	676.0	230.8	181.7	200.5	190.4	178.0	166.9	165.4	165.1
52.5°	1683.9	1498.3	694.6	203.2	168.6	187.0	179.9	167.3	158.6	159.3	159.3
55°	1964.2	1703.0	695.1	181.5	157.2	171.3	172.2	162.1	155.1	157.9	158.7
57.5°	2219.9	1882.2	640.5	166.1	146.2	159.0	169.7	164.0	158.7	168.3	169.2
60°	2443.0	2020.0	523.0	153.5	137.0	154.4	175.2	175.8	174.7	200.9	202.7
62.5°	2524.5	2021.4	371.3	142.8	132.1	157.2	186.8	187.6	187.6	211.7	215.4
65°	2410.3	1853.1	247.2	136.5	128.7	163.1	196.1	192.5	184.1	200.9	196.9
67.5°	2007.6	1442.5	180.6	132.4	124.1	163.4	204.4	195.3	180.6	195.0	188.5
70°	1379.8	917.9	151.4	128.5	118.7	156.2	208.8	194.5	175.8	181.7	173.1
71°	1110.7	732.5	143.5	127.2	116.4	152.2	209.2	193.3	173.4	177.1	169.2
72.5°	731.7	451.3	134.2	124.1	113.1	144.9	207.9	190.9	170.0	170.3	165.1
75°	288.6	187.0	120.8	117.3	103.8	133.5	201.8	185.7	163.8	158.2	155.9
77.5°	145.9	122.2	106.3	107.6	92.9	121.7	193.3	177.1	154.9	147.5	145.9
80°	106.5	92.9	90.9	93.3	80.5	110.1	182.6	165.6	143.5	151.4	148.0
82.5°	64.8	56.6	71.1	77.2	67.4	98.4	170.0	152.2	129.4	119.1	115.3
85°	30.7	33.2	51.4	56.9	49.6	78.5	155.4	137.4	112.8	97.5	99.2
87.5°	15.1	18.3	29.4	34.0	32.7	57.8	117.3	106.5	89.0	73.3	71.7
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)