

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: P196375

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196375
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-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 4000K, 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: 4989.9 lumens
Efficiency: N/A
Efficacy: 113.4 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 - G2

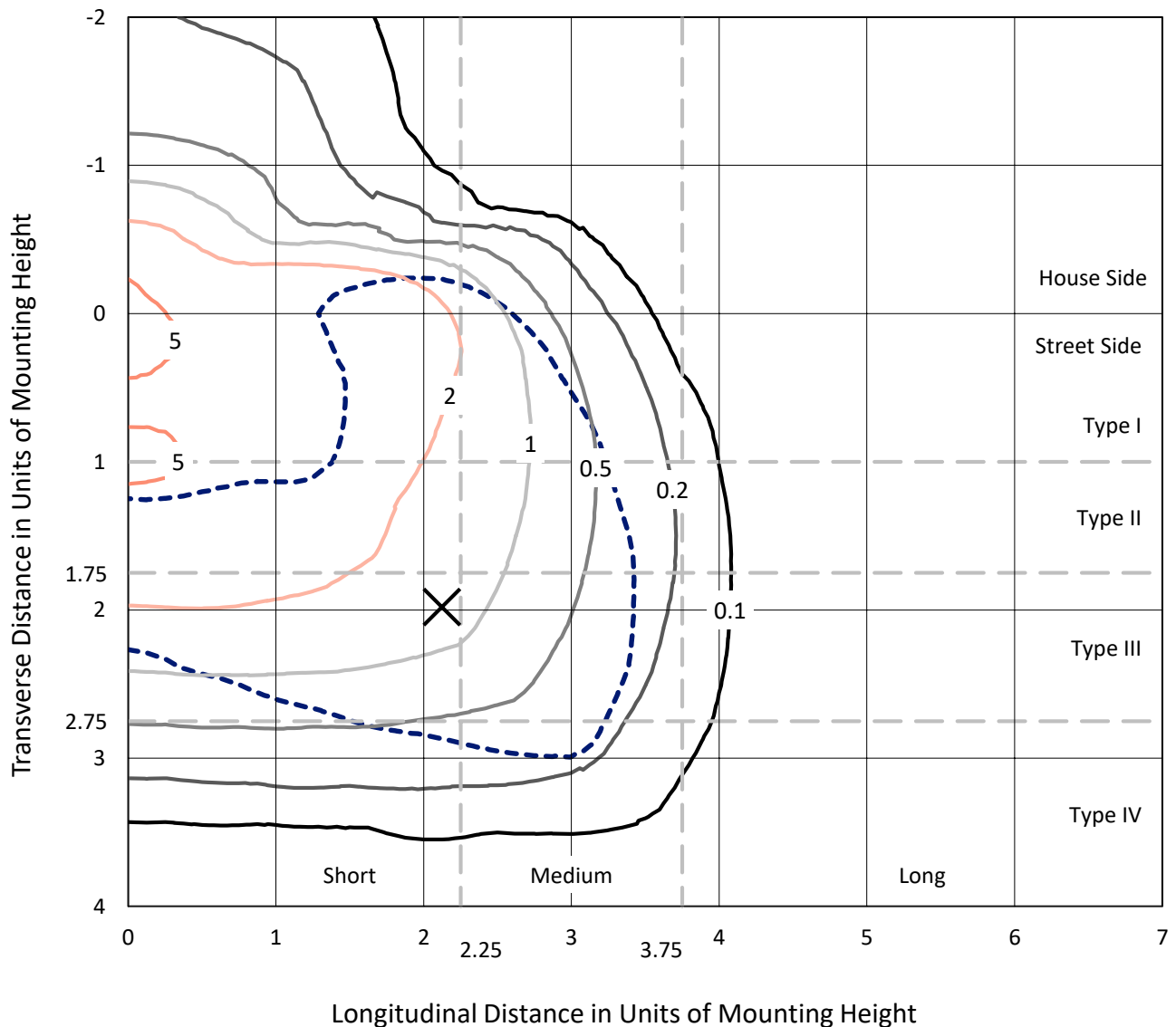
Input Watts (W): 44
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

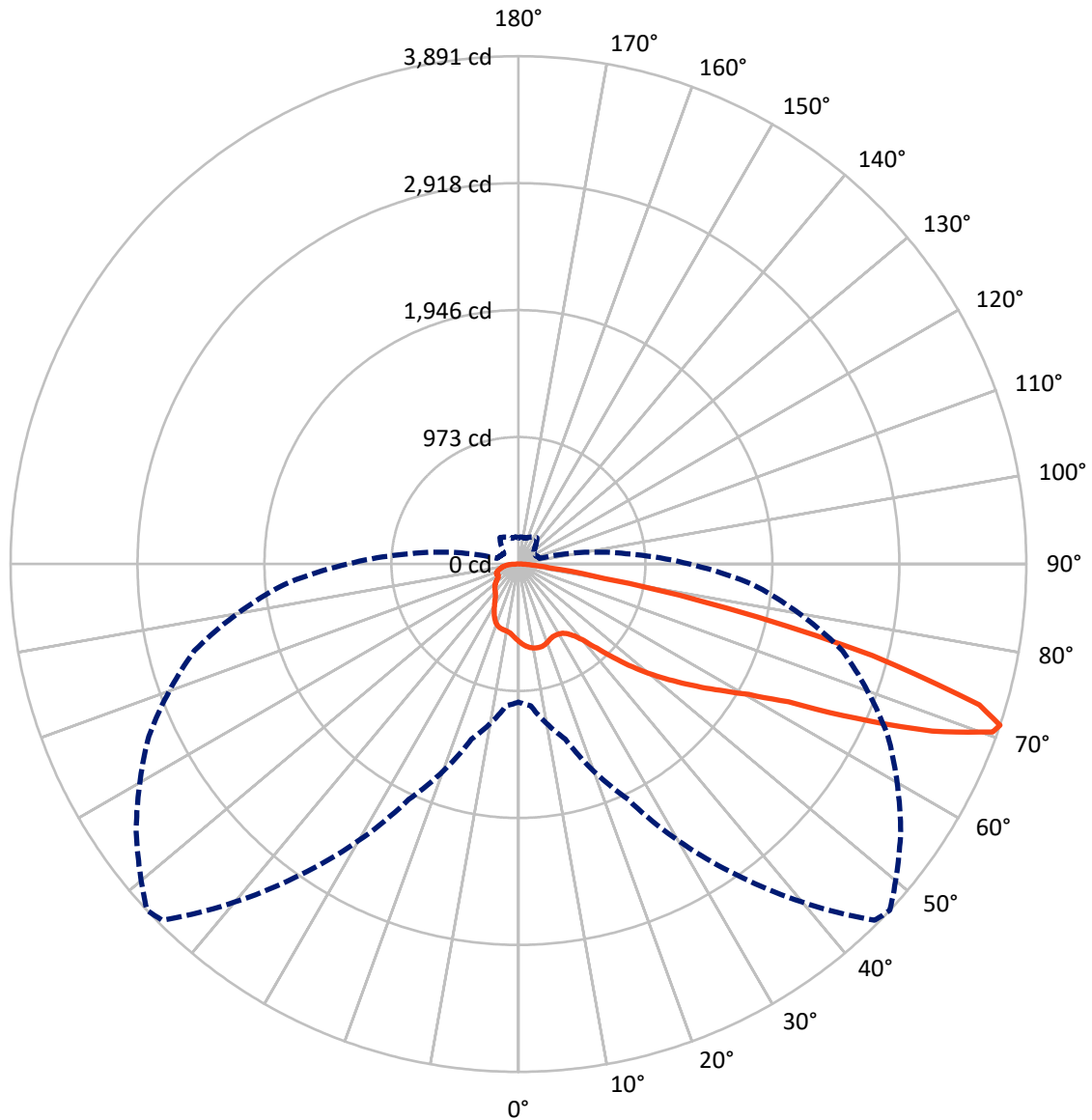
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 6.8 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	1069.4	0.0	1069.4
	% Fixture	21.4	0.0	21.4
Street Side	Lumens	3920.5	0.0	3920.5
	% Fixture	78.6	0.0	78.6
Total	Lumens	4989.9	0.0	4989.9
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	56.7	1.1
10°-20°	165.8	3.3
20°-30°	246.3	4.9
30°-40°	353.7	7.1
40°-50°	627.0	12.6
50°-60°	1073.0	21.5
60°-70°	1523.2	30.5
70°-80°	834.2	16.7
80°-90°	110.1	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°	4989.9	100.0
0°-180°	4989.9	100.0



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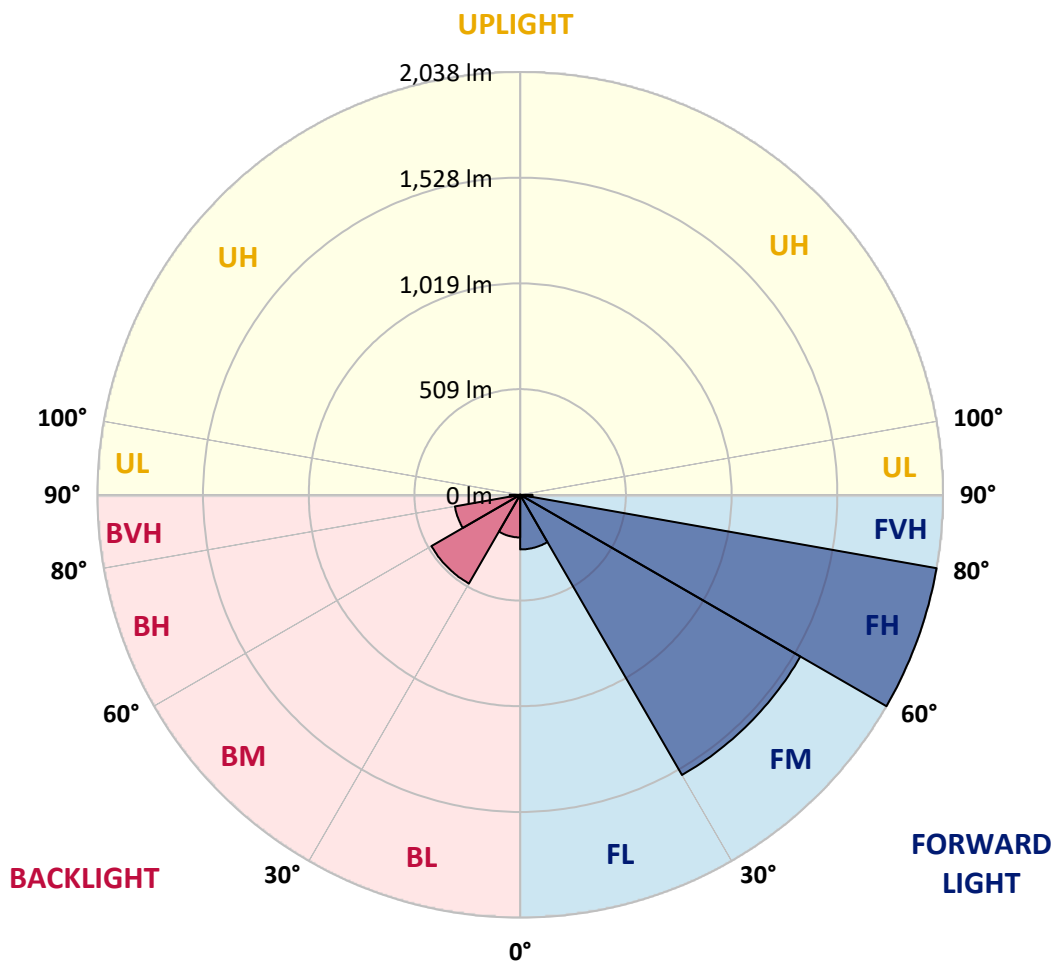
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	263.3	5.3			
FM	(30°-60°)	1559.5	31.3			
FH	(60°-80°)	2037.9	40.8			G2/5000
FVH	(80°-90°)	59.7	1.2			G1/100
BL	(0°-30°)	205.4	4.1	B1/500		
BM	(30°-60°)	494.1	9.9	B1/1000		
BH	(60°-80°)	319.5	6.4	B1/500		G1/500
BVH	(80°-90°)	50.4	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-G2

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	47°	55°	65°	75°	85°
0°	593.4	593.4	593.4	593.4	593.4	593.4	593.4	593.4	593.4	593.4	593.4
2.5°	629.6	628.3	628.9	626.7	621.2	615.4	615.4	609.3	602.7	596.3	589.2
5°	668.7	666.8	665.2	658.1	647.4	635.5	633.5	621.2	607.9	594.6	581.8
7.5°	701.4	699.5	694.6	681.7	666.1	648.3	646.1	629.9	612.4	594.0	575.9
10°	724.7	723.4	714.0	697.6	679.4	658.4	654.5	638.0	617.4	594.3	571.4
12.5°	737.6	735.7	724.4	704.9	683.6	662.3	658.4	642.5	618.9	593.7	566.9
15°	732.4	731.5	720.8	701.0	679.8	661.3	658.1	641.9	618.0	591.5	562.6
17.5°	710.4	712.7	704.3	684.9	667.5	654.5	650.9	635.8	613.2	585.9	556.2
20°	680.1	682.6	678.4	658.7	648.7	640.3	638.3	626.0	605.1	577.9	548.4
22.5°	647.7	650.0	650.3	631.9	628.6	625.4	623.8	615.1	597.9	573.1	543.3
25°	625.4	628.0	628.6	612.4	614.4	615.4	615.1	608.9	596.6	573.1	543.9
27.5°	619.6	620.8	620.2	605.4	608.9	614.4	614.7	613.5	601.8	579.5	553.0
30°	639.7	640.3	632.2	609.9	613.5	620.5	620.8	620.2	612.7	596.3	573.4
32.5°	726.3	725.7	697.9	640.3	628.0	630.5	631.6	637.4	638.0	624.1	602.7
35°	858.3	857.9	825.5	727.2	669.4	655.8	657.1	666.1	674.2	664.8	652.5
37.5°	1003.4	1004.4	984.7	851.4	758.6	702.1	700.7	707.6	722.1	725.4	726.9
40°	1164.4	1169.3	1168.3	994.0	883.7	780.9	768.0	760.3	788.4	806.2	829.1
42.5°	1348.5	1347.1	1347.8	1150.5	1026.7	905.1	881.2	845.0	877.6	908.4	958.8
45°	1506.6	1511.8	1515.6	1317.0	1186.8	1047.1	1022.8	956.9	986.3	1032.2	1109.2
47.5°	1665.7	1656.7	1663.7	1502.4	1364.9	1209.1	1177.7	1088.8	1116.2	1181.0	1298.0
50°	1851.0	1846.7	1814.4	1744.2	1580.4	1373.4	1332.3	1226.5	1266.6	1353.0	1531.2
52.5°	2017.2	1994.5	1969.4	1934.4	1792.1	1539.5	1487.5	1369.8	1443.5	1550.6	1820.5
55°	2078.0	2062.8	2093.2	2138.5	2016.2	1709.0	1650.8	1537.0	1643.1	1776.7	2161.1
57.5°	2142.7	2147.9	2216.4	2307.9	2228.4	1889.8	1826.7	1734.9	1862.0	2029.5	2541.7
60°	2175.0	2195.7	2332.5	2504.2	2430.1	2088.0	2027.6	1962.2	2104.8	2308.9	2921.3
62.5°	2180.5	2208.3	2402.0	2573.0	2708.0	2391.7	2321.8	2251.0	2408.1	2617.7	3196.2
65°	2079.7	2122.3	2395.9	2657.8	2961.1	2899.0	2854.7	2731.2	2814.3	2889.6	3243.1
67.5°	1783.1	1829.6	2158.8	2622.8	3164.2	3425.5	3417.1	3234.7	3128.0	2994.8	2895.5
70°	1308.7	1346.2	1662.5	2242.3	3075.6	3838.7	3853.7	3561.0	3215.6	2771.6	2153.0
71°	1058.4	1090.8	1388.9	1990.7	2902.9	3860.1	3891.1	3575.5	3124.4	2570.2	1802.4
72.5°	658.7	676.8	922.3	1502.4	2499.7	3640.2	3692.5	3389.2	2837.3	2172.4	1274.1
75°	248.7	255.7	342.2	662.6	1492.1	2734.8	2798.2	2561.5	1993.2	1240.1	533.3
77.5°	133.6	137.1	169.8	275.5	597.9	1567.7	1649.2	1461.0	956.3	433.9	218.0
80°	89.6	91.9	117.4	163.3	274.9	597.0	664.8	586.6	357.9	247.7	155.2
82.5°	57.9	59.1	79.9	107.4	177.5	209.9	239.6	250.3	223.4	177.5	93.8
85°	38.2	39.2	52.7	68.5	110.0	103.5	106.1	138.7	152.3	117.0	47.9
87.5°	22.0	22.6	31.7	35.3	49.5	38.8	42.0	66.0	90.5	76.3	27.5
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°	593.4	593.4	593.4	593.4	593.4	593.4	593.4	593.4	593.4	593.4	593.4
2.5°	585.9	583.4	577.6	574.0	572.3	571.7	571.1	572.3	572.3	571.7	570.4
5°	575.3	570.4	560.7	553.9	550.3	549.4	550.7	552.3	553.3	553.3	552.3
7.5°	567.5	560.4	547.5	538.1	532.5	531.0	534.5	540.3	544.2	546.2	546.5
10°	561.1	551.4	537.2	527.4	522.9	522.2	526.8	534.2	542.3	545.8	546.5
12.5°	555.3	544.2	528.8	519.7	516.4	518.0	524.2	531.0	540.3	545.5	545.8
15°	549.7	538.4	521.9	512.5	511.9	514.4	520.3	525.8	533.0	539.4	539.4
17.5°	543.3	531.0	513.8	505.1	505.1	507.4	511.3	514.1	518.7	524.9	524.5
20°	535.5	522.9	505.4	496.3	494.4	493.2	493.2	493.8	497.7	503.2	504.1
22.5°	529.7	516.8	498.3	487.3	478.6	470.1	466.7	465.3	468.9	474.0	475.4
25°	529.7	516.8	496.0	477.6	456.2	440.1	433.3	431.4	435.0	439.8	441.7
27.5°	538.4	525.5	501.2	468.9	429.7	403.9	395.8	394.1	397.4	401.3	403.2
30°	558.8	546.2	516.1	458.9	400.4	366.4	357.3	355.7	357.3	359.0	361.2
32.5°	592.7	582.1	540.3	449.8	370.6	332.5	321.4	318.9	319.5	319.8	321.7
35°	648.0	643.2	572.6	439.2	342.5	304.6	293.3	288.2	287.8	289.4	291.6
37.5°	732.7	735.7	614.4	423.6	319.2	284.9	273.5	268.4	265.8	269.0	271.6
40°	852.4	859.2	662.6	402.6	300.1	273.2	261.3	256.5	252.9	252.0	253.2
42.5°	1007.9	1006.0	711.8	375.7	279.4	265.5	252.9	247.7	241.9	234.5	232.8
45°	1192.2	1164.4	752.8	342.8	255.7	258.1	245.1	238.0	228.9	218.0	216.7
47.5°	1409.9	1333.3	778.1	307.5	233.8	248.4	236.4	225.4	212.2	205.0	204.1
50°	1672.1	1530.8	795.9	271.6	214.1	236.1	224.1	209.5	196.6	194.7	194.4
52.5°	1982.6	1764.0	817.8	239.3	198.6	220.2	211.9	196.9	186.6	187.5	187.5
55°	2312.8	2005.2	818.5	213.8	184.9	201.8	202.7	190.8	182.7	186.0	186.9
57.5°	2613.8	2216.1	754.1	195.7	172.1	187.2	199.9	193.0	186.9	198.2	199.2
60°	2876.4	2378.4	615.7	180.8	161.3	181.8	206.3	206.9	205.7	236.4	238.7
62.5°	2972.5	2380.0	437.2	168.2	155.6	184.9	219.9	220.9	220.9	249.3	253.5
65°	2837.9	2181.7	291.0	160.7	151.7	192.1	230.9	226.7	216.7	236.4	231.9
67.5°	2363.8	1698.3	212.8	155.9	146.2	192.4	240.6	230.0	212.8	229.6	221.9
70°	1624.7	1080.7	178.2	151.3	139.7	184.0	245.7	228.9	206.9	214.1	203.8
71°	1307.7	862.4	169.1	149.8	137.1	179.1	246.4	227.6	204.1	208.6	199.2
72.5°	861.4	531.3	158.1	146.2	133.2	170.7	244.8	224.7	200.2	200.5	194.4
75°	339.8	220.2	142.3	138.1	122.2	157.1	237.6	218.6	192.7	186.3	183.7
77.5°	171.8	143.9	125.1	126.7	109.3	143.2	227.6	208.6	182.4	173.7	171.8
80°	125.5	109.3	107.0	110.0	94.7	129.7	215.0	195.0	169.1	178.2	174.3
82.5°	76.3	66.6	83.8	90.8	79.2	115.8	200.2	179.1	152.3	140.3	135.8
85°	36.2	39.2	60.5	66.9	58.5	92.5	183.0	161.7	132.9	114.8	116.7
87.5°	17.8	21.7	34.6	40.1	38.5	67.9	138.1	125.5	104.8	86.3	84.4
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)