

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: P195337

Luminaire Tested: **NAV-AF-01-D-UNV-T3-7060-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195337
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (p24135)
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-T3-7060-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 5700K, 615mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE III OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4026 lumens
Efficiency: N/A
Efficacy: 118.4 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Short - Semi-Cutoff
BUG Rating: B1 - U0 - G1

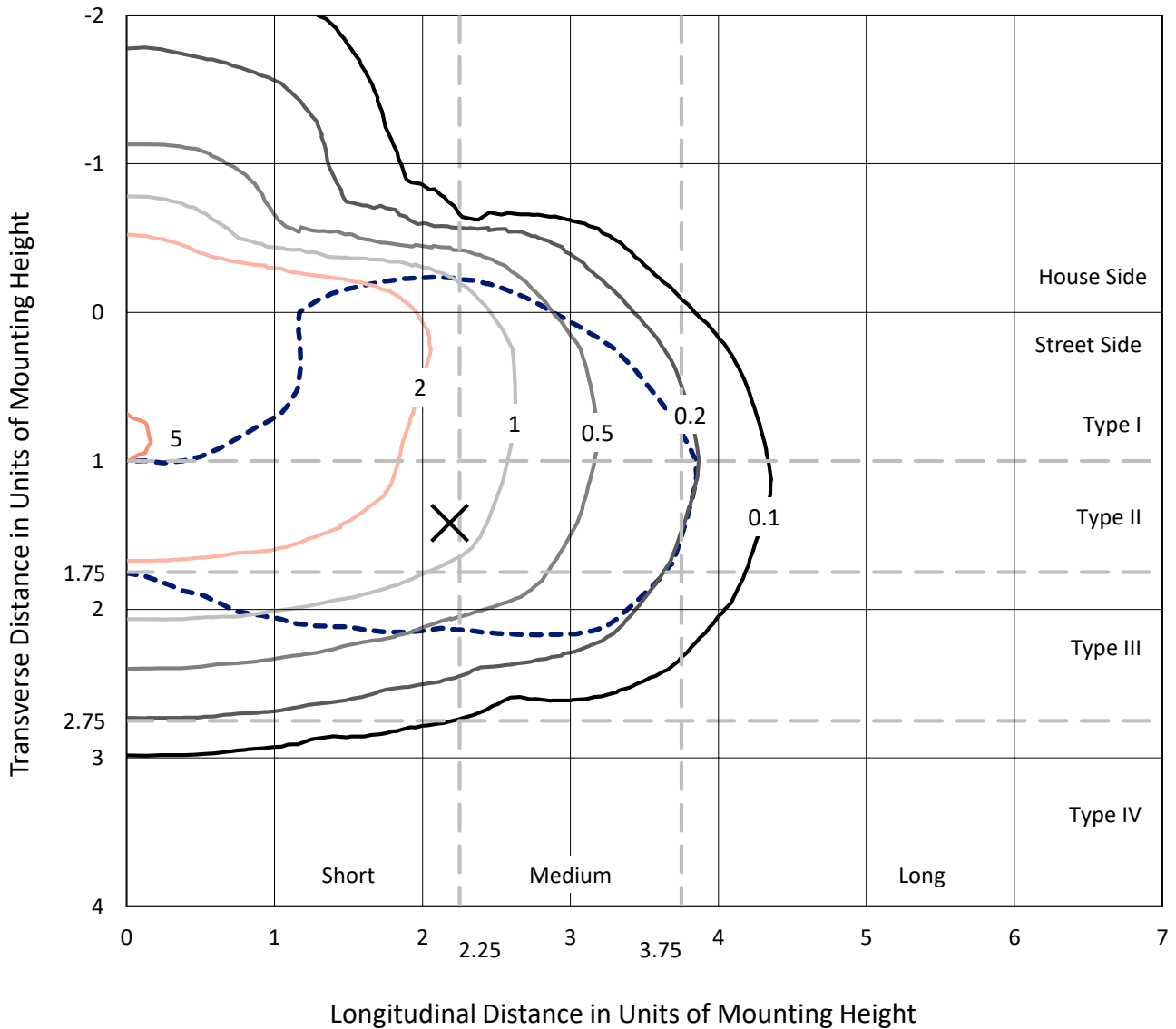
Input Watts (W): 34
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

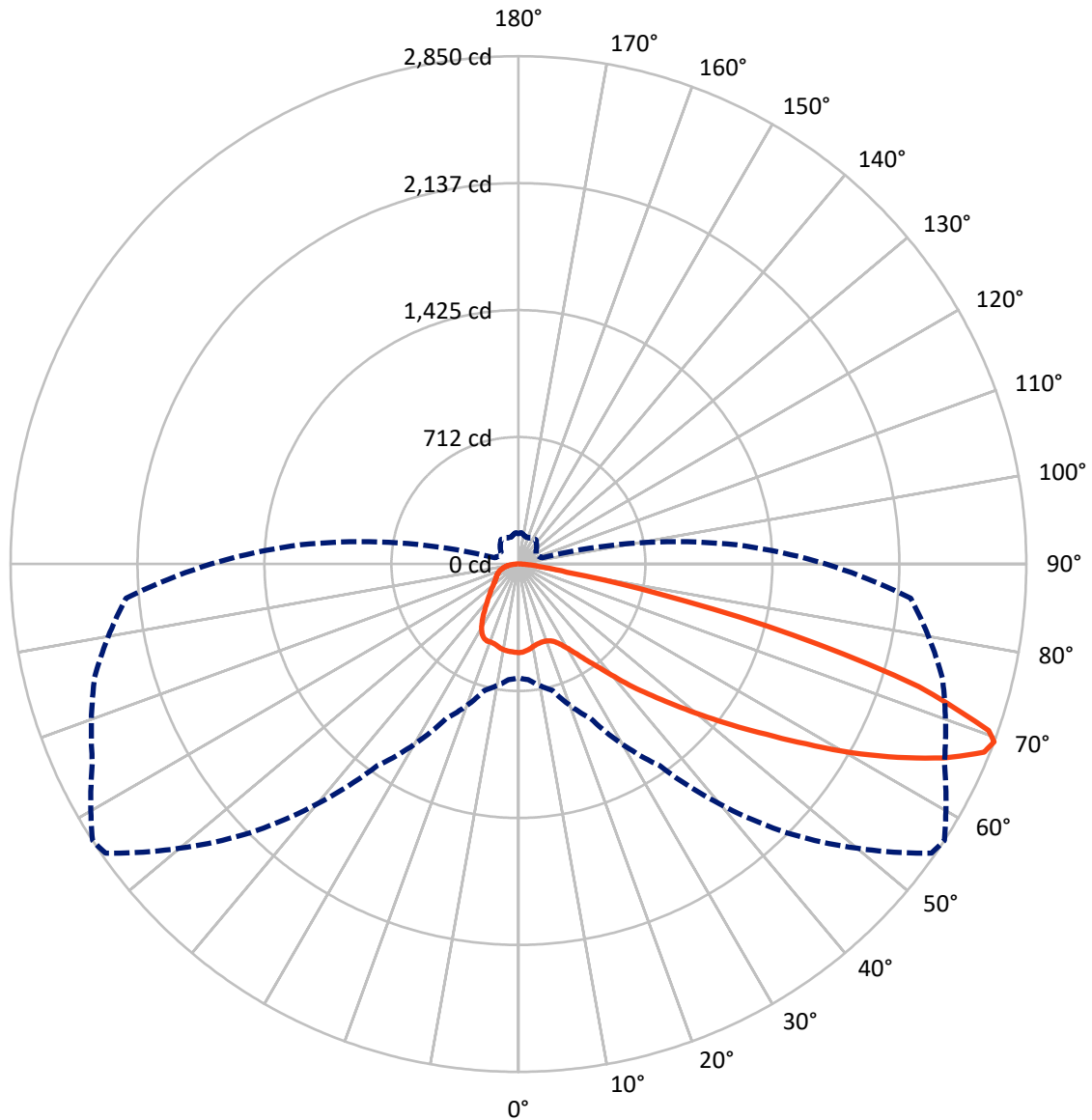
✕ Max cd
 - - - 1/2 Max cd



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

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Luminous Intensity Polar Plot



— Vertical Plane Through 57-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	888.4	0.0	888.4
	% Fixture	22.1	0.0	22.1
Street Side	Lumens	3137.6	0.0	3137.6
	% Fixture	77.9	0.0	77.9
Total	Lumens	4026.0	0.0	4026.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	46.6	1.2
10°-20°	132.4	3.3
20°-30°	220.3	5.5
30°-40°	359.7	8.9
40°-50°	607.1	15.1
50°-60°	944.3	23.5
60°-70°	1124.9	27.9
70°-80°	524.1	13.0
80°-90°	66.7	1.7
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°	4026.0	100.0
0°-180°	4026.0	100.0



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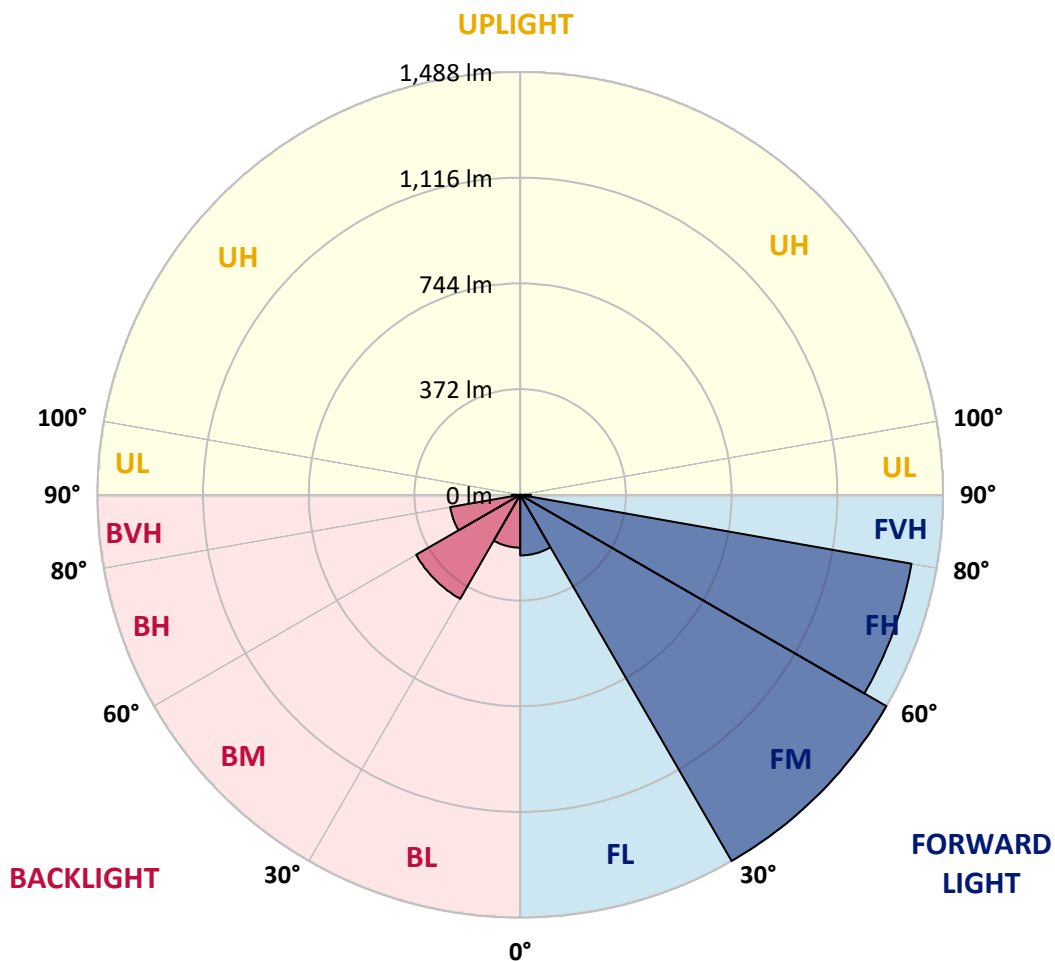
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	213.2	5.3			
FM	(30°-60°)	1488.3	37.0			
FH	(60°-80°)	1398.6	34.7			G1/1800
FVH	(80°-90°)	37.5	0.9			G1/100
BL	(0°-30°)	186.0	4.6	B1/500		
BM	(30°-60°)	422.8	10.5	B1/1000		
BH	(60°-80°)	250.3	6.2	B1/500		G1/500
BVH	(80°-90°)	29.2	0.7			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 III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	57°	65°	75°	85°
0°	497.5	497.5	497.5	497.5	497.5	497.5	497.5	497.5	497.5	497.5	497.5
2.5°	494.6	494.6	495.9	495.9	495.9	495.4	493.8	494.4	493.3	492.6	491.3
5°	484.6	485.1	486.6	487.1	487.9	488.2	488.2	487.9	488.2	488.2	487.4
7.5°	470.6	471.2	473.0	474.0	476.3	478.4	479.4	479.4	480.7	481.7	482.0
10°	462.1	462.1	463.2	463.2	465.0	466.0	469.4	469.1	472.7	476.1	477.6
12.5°	461.1	461.1	460.6	458.8	457.8	457.5	460.9	461.4	466.8	472.7	475.5
15°	464.5	464.5	462.9	459.3	455.4	453.6	457.0	458.0	463.9	470.9	475.3
17.5°	475.3	475.0	471.7	464.5	457.8	454.9	456.0	457.0	462.4	470.4	475.8
20°	499.3	499.3	492.0	478.9	467.3	460.6	459.0	459.8	463.7	471.2	478.1
22.5°	541.3	542.0	529.2	507.5	487.7	473.5	467.3	468.1	469.9	477.1	484.8
25°	603.1	601.1	582.8	552.1	521.2	496.9	484.3	485.1	485.1	491.8	499.8
27.5°	668.6	669.1	642.8	609.8	569.1	533.0	512.9	512.7	512.4	518.8	527.4
30°	742.6	742.8	712.4	674.3	627.6	581.5	551.3	551.1	548.7	556.7	567.8
32.5°	823.5	823.2	787.9	744.9	693.1	640.8	601.6	601.3	599.5	610.3	623.7
35°	913.2	913.2	878.1	825.0	769.1	710.9	665.5	665.2	666.3	681.0	693.6
37.5°	1021.2	1023.5	981.2	916.8	855.7	793.6	740.8	739.2	731.5	756.2	777.1
40°	1133.8	1140.3	1096.5	1021.2	955.2	891.0	832.8	831.7	825.0	851.3	885.1
42.5°	1255.7	1270.4	1221.7	1144.9	1073.0	1003.7	945.2	942.3	916.5	957.5	1010.4
45°	1415.5	1425.1	1354.5	1284.9	1217.1	1138.0	1068.4	1053.2	1027.4	1080.0	1148.5
47.5°	1524.3	1519.7	1475.6	1428.9	1385.4	1309.6	1202.6	1183.3	1151.9	1221.5	1297.0
50°	1591.8	1595.2	1570.5	1568.1	1565.8	1513.0	1354.2	1331.0	1294.7	1377.1	1465.3
52.5°	1636.4	1621.2	1625.6	1678.2	1741.9	1716.6	1525.6	1499.8	1462.5	1544.9	1644.4
55°	1617.9	1597.8	1638.2	1741.9	1891.6	1897.3	1713.8	1687.2	1655.3	1723.3	1859.9
57.5°	1541.1	1551.1	1615.0	1759.1	1993.9	2059.1	1930.0	1902.9	1840.1	1909.1	2064.6
60°	1433.1	1453.4	1551.1	1731.8	2065.6	2185.2	2167.4	2149.4	2041.1	2090.1	2279.5
62.5°	1317.1	1337.2	1457.3	1685.1	2033.4	2296.8	2400.4	2389.3	2263.0	2264.3	2415.9
65°	1145.7	1153.9	1276.6	1557.8	1943.9	2397.6	2633.7	2623.9	2475.1	2413.0	2454.0
67.5°	865.3	875.6	976.3	1229.7	1671.7	2342.9	2820.0	2818.5	2602.7	2468.2	2363.3
69°	639.0	651.6	733.8	954.7	1382.3	2134.7	2828.8	2849.6	2637.3	2462.5	2209.9
70°	467.6	482.0	558.0	757.8	1151.4	1904.7	2753.8	2798.6	2624.1	2426.7	2090.3
72.5°	198.7	203.6	241.0	342.0	584.1	1148.5	2255.5	2349.9	2370.0	2174.4	1633.1
75°	124.5	126.0	140.7	175.5	259.8	475.0	1460.7	1589.3	1769.4	1687.0	1093.4
77.5°	93.8	95.1	103.6	120.9	161.3	177.3	677.6	808.0	1013.5	992.3	544.1
80°	71.9	72.7	78.4	87.9	113.7	111.1	219.9	276.3	423.0	373.2	192.5
82.5°	56.4	56.7	61.6	63.4	79.4	74.7	110.3	122.9	170.9	142.0	94.1
85°	50.0	50.8	55.7	46.4	50.8	45.1	60.6	65.7	90.7	85.6	35.6
87.5°	25.5	26.8	46.7	39.7	25.5	21.4	26.5	28.6	36.9	40.0	17.3
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°	497.5	497.5	497.5	497.5	497.5	497.5	497.5	497.5	497.5	497.5	497.5
2.5°	491.5	491.8	492.6	493.8	495.9	498.5	501.6	504.7	506.5	507.8	507.2
5°	487.4	487.7	489.2	491.5	494.1	498.0	503.1	507.0	509.8	511.6	511.4
7.5°	482.2	483.0	486.1	488.7	492.3	495.4	499.5	503.1	506.0	507.8	507.5
10°	478.4	479.2	483.0	486.4	489.5	490.0	489.2	488.2	487.9	489.2	488.7
12.5°	476.6	478.1	481.7	484.0	482.8	477.9	472.2	469.9	469.1	471.7	471.9
15°	477.1	478.4	481.5	479.9	473.0	464.7	461.6	463.4	465.0	466.5	466.8
17.5°	478.4	479.2	479.9	474.3	464.5	459.0	458.0	456.2	451.6	449.0	448.7
20°	480.7	481.7	480.4	471.4	462.7	455.4	443.1	432.0	421.4	415.7	413.4
22.5°	488.7	489.5	485.6	476.8	463.4	440.0	415.0	395.9	379.7	370.9	367.5
25°	504.4	505.7	500.3	489.2	454.2	413.2	377.9	352.1	331.7	321.2	318.3
27.5°	532.0	533.3	527.4	498.5	432.5	377.3	334.6	309.0	291.5	282.5	281.2
30°	573.2	575.0	569.6	498.2	399.5	331.7	292.3	277.3	267.3	261.1	260.8
32.5°	630.4	637.2	615.0	489.5	358.8	285.6	260.3	255.2	250.3	246.1	246.1
35°	703.1	718.9	659.8	471.2	313.9	254.1	242.5	237.6	231.5	227.1	226.6
37.5°	790.0	814.5	691.8	438.7	275.3	238.9	231.7	223.7	213.9	205.4	203.4
40°	909.3	915.0	707.5	385.8	246.4	230.7	221.7	211.6	199.2	189.7	188.7
42.5°	1029.2	1010.6	704.4	329.1	229.9	223.2	211.4	200.3	189.2	181.2	181.2
45°	1165.5	1094.1	681.0	272.2	215.0	214.7	201.8	191.2	182.7	176.8	175.5
47.5°	1296.0	1169.1	640.5	230.2	199.5	206.2	195.6	187.1	179.4	173.7	172.7
50°	1454.2	1256.0	597.5	200.8	184.5	198.7	193.1	188.7	181.2	171.4	170.4
52.5°	1611.4	1357.6	564.2	178.6	171.4	192.8	194.6	195.1	188.2	169.1	167.8
55°	1780.3	1466.1	529.2	161.3	160.6	190.0	198.2	197.7	194.3	169.6	167.5
57.5°	1940.8	1575.1	476.8	149.2	152.1	187.1	199.0	190.7	184.8	172.2	168.8
60°	2073.8	1665.3	400.0	140.7	144.9	181.5	193.8	181.5	171.4	171.7	168.6
62.5°	2138.5	1690.6	305.9	130.9	138.9	172.2	186.4	174.5	165.2	172.7	170.9
65°	2089.3	1618.7	218.1	121.9	131.7	161.3	182.0	168.6	162.1	177.8	175.8
67.5°	1912.5	1422.8	158.3	113.9	124.7	150.3	173.7	163.2	159.0	181.7	177.1
69°	1724.6	1228.4	137.1	109.3	119.9	144.3	168.3	160.3	156.7	176.3	169.6
70°	1568.4	1078.7	126.6	106.4	115.7	141.0	164.2	158.5	154.4	169.9	161.9
72.5°	1124.5	697.2	106.4	97.9	104.9	133.5	155.2	151.8	145.6	153.4	148.2
75°	679.4	363.9	90.5	89.2	93.6	123.2	144.6	140.5	134.3	135.1	132.5
77.5°	312.1	168.1	75.8	78.9	81.7	110.3	131.7	127.1	121.4	119.3	119.6
80°	136.9	98.2	63.4	67.3	68.8	99.2	117.8	112.6	106.4	117.5	109.0
82.5°	74.0	57.0	49.5	52.1	56.4	86.3	102.3	95.6	89.7	104.4	84.3
85°	29.9	29.1	33.5	36.1	39.2	62.1	85.6	78.6	71.4	63.9	62.4
87.5°	12.9	13.9	16.5	17.5	20.9	38.7	57.5	50.3	50.5	43.3	42.5
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)