

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: P196303

Luminaire Tested: **NAV-AF-01-D-UNV-T3-800**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196303  
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-T3-800  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(1) 70 CRI, 4000K, 800mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE III OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5050.3 lumens  
Efficiency: N/A  
Efficacy: 114.8 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

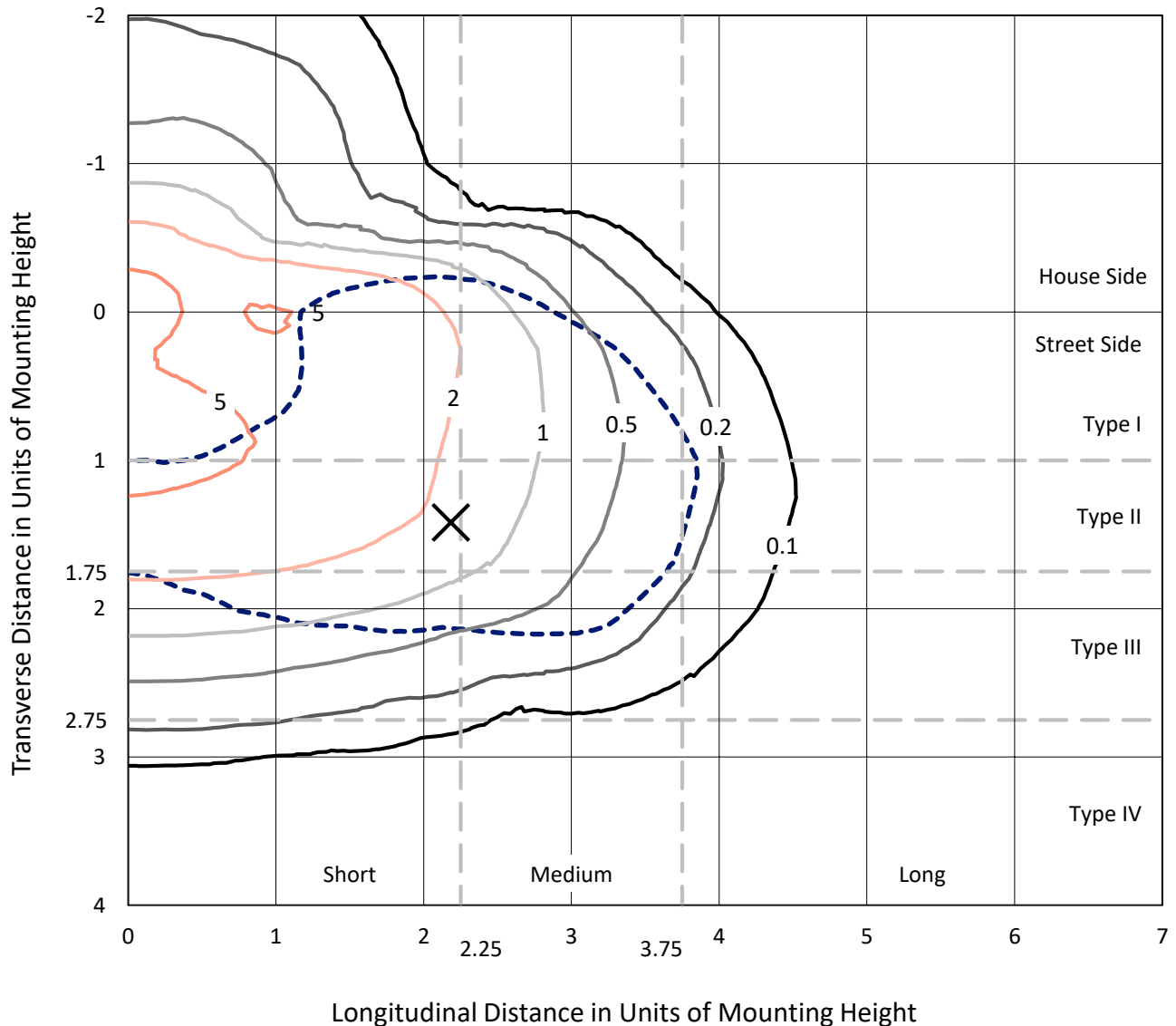
Input Watts (W): 44  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

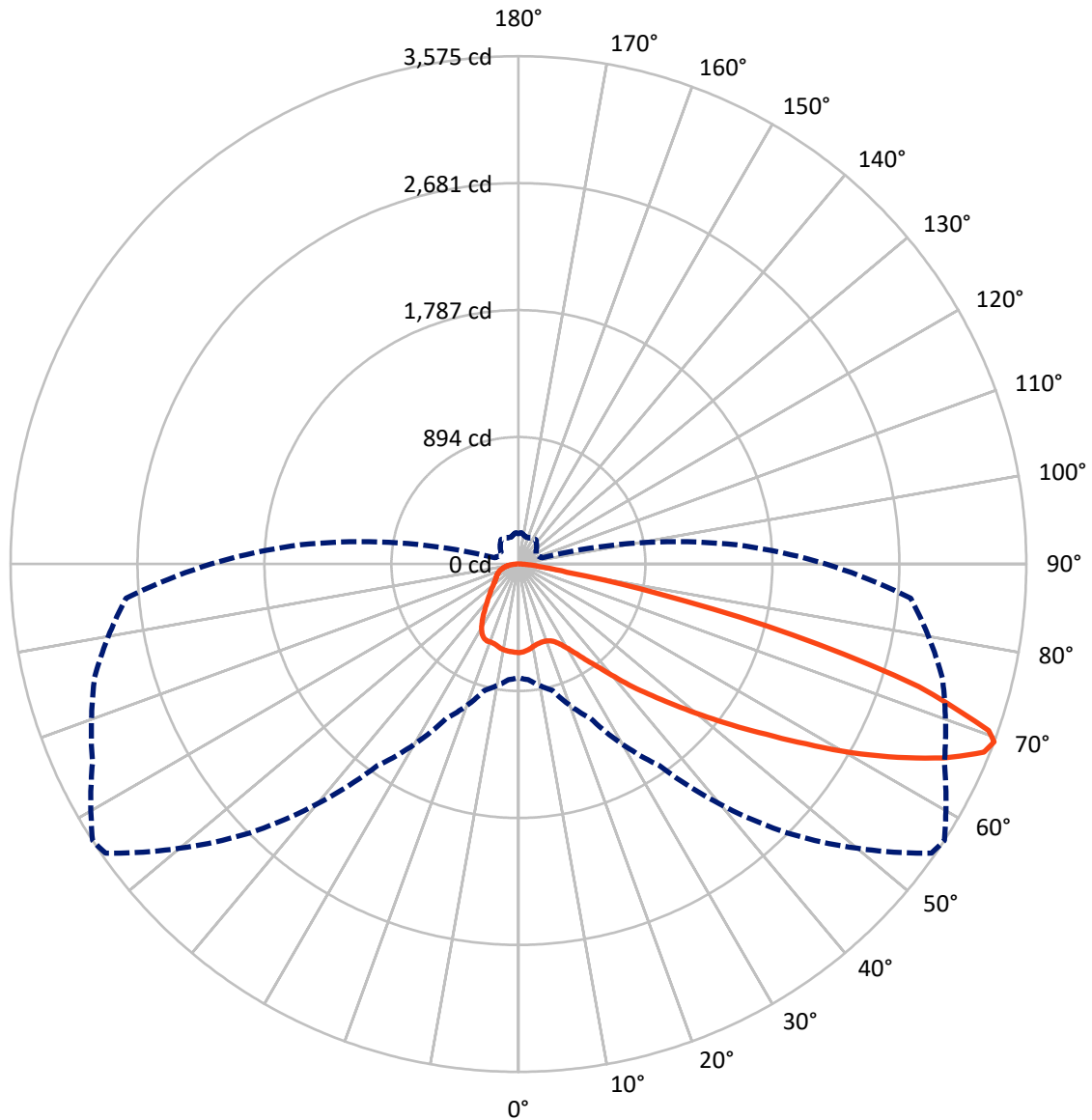
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 6.4 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
<b>House Side</b>	Lumens	1114.4	0.0	1114.4
	% Fixture	22.1	0.0	22.1
<b>Street Side</b>	Lumens	3935.9	0.0	3935.9
	% Fixture	77.9	0.0	77.9
<b>Total</b>	Lumens	5050.3	0.0	5050.3
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	58.4	1.2
10°-20°	166.1	3.3
20°-30°	276.3	5.5
30°-40°	451.2	8.9
40°-50°	761.5	15.1
50°-60°	1184.6	23.5
60°-70°	1411.1	27.9
70°-80°	657.4	13.0
80°-90°	83.6	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°	5050.3	100.0
0°-180°	5050.3	100.0



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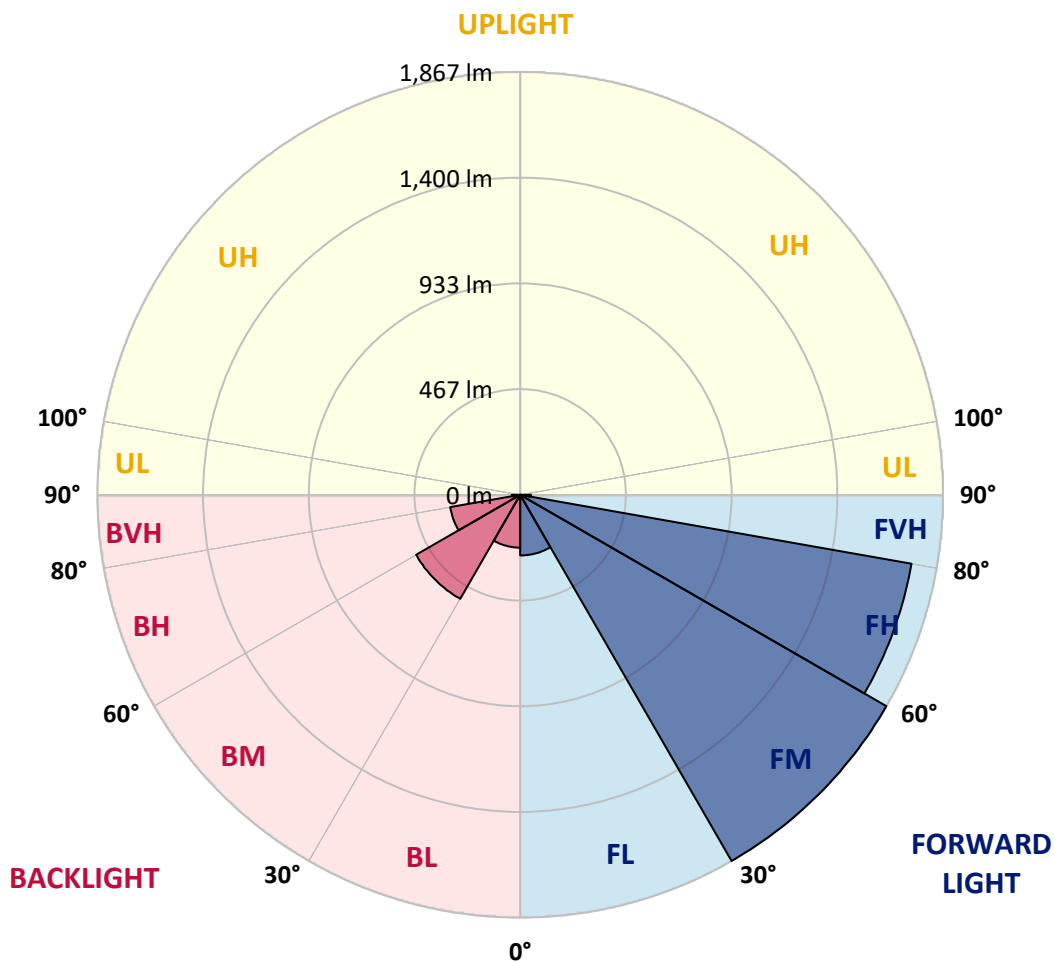
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	267.5	5.3			
FM	(30°-60°)	1866.9	37.0			
FH	(60°-80°)	1754.5	34.7			G1/1800
FVH	(80°-90°)	47.0	0.9			G1/100
BL	(0°-30°)	233.4	4.6	B1/500		
BM	(30°-60°)	530.4	10.5	B1/1000		
BH	(60°-80°)	314.0	6.2	B1/500		G1/500
BVH	(80°-90°)	36.6	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°	624.0	624.0	624.0	624.0	624.0	624.0	624.0	624.0	624.0	624.0	624.0
2.5°	620.4	620.4	622.1	622.1	622.1	621.4	619.5	620.1	618.9	617.9	616.2
5°	607.8	608.5	610.4	611.1	612.0	612.3	612.3	612.0	612.3	612.3	611.4
7.5°	590.3	591.1	593.3	594.6	597.5	600.1	601.4	601.4	603.0	604.3	604.7
10°	579.7	579.7	581.0	581.0	583.3	584.6	588.8	588.4	593.0	597.2	599.1
12.5°	578.4	578.4	577.8	575.5	574.2	573.9	578.1	578.8	585.5	593.0	596.5
15°	582.7	582.7	580.7	576.1	571.3	569.1	573.3	574.6	582.0	590.8	596.2
17.5°	596.2	595.9	591.7	582.7	574.2	570.7	571.9	573.3	580.0	590.0	596.9
20°	626.3	626.3	617.2	600.8	586.2	577.8	575.8	576.8	581.6	591.1	599.8
22.5°	678.9	680.0	663.8	636.6	611.7	593.9	586.2	587.2	589.4	598.4	608.1
25°	756.6	754.0	731.0	692.5	653.8	623.4	607.5	608.5	608.5	616.9	627.0
27.5°	838.7	839.3	806.4	765.0	713.9	668.6	643.4	643.1	642.7	650.8	661.5
30°	931.5	931.8	893.6	845.8	787.3	729.5	691.6	691.3	688.3	698.4	712.3
32.5°	1033.0	1032.7	988.4	934.4	869.4	803.7	754.6	754.3	752.1	765.7	782.5
35°	1145.5	1145.5	1101.5	1034.9	964.8	891.7	834.8	834.5	835.8	854.3	870.0
37.5°	1281.0	1283.9	1230.9	1150.1	1073.5	995.5	929.2	927.3	917.6	948.6	974.9
40°	1422.3	1430.4	1375.5	1281.0	1198.3	1117.8	1044.6	1043.4	1034.9	1068.0	1110.3
42.5°	1575.2	1593.7	1532.6	1436.2	1346.0	1259.0	1185.6	1182.1	1149.7	1201.1	1267.4
45°	1775.7	1787.6	1699.0	1611.8	1526.8	1427.4	1340.2	1321.1	1288.8	1354.7	1440.7
47.5°	1912.1	1906.3	1851.0	1792.5	1737.9	1642.9	1508.6	1484.4	1444.9	1532.3	1627.0
50°	1996.8	2001.1	1970.0	1967.1	1964.2	1897.9	1698.7	1669.7	1624.0	1727.6	1838.1
52.5°	2052.8	2033.7	2039.3	2105.1	2185.0	2153.3	1913.7	1881.4	1834.6	1938.0	2062.8
55°	2029.5	2004.3	2055.0	2185.0	2372.8	2380.0	2149.7	2116.5	2076.4	2161.7	2333.1
57.5°	1933.2	1945.8	2026.0	2206.7	2501.2	2583.1	2421.0	2387.1	2308.2	2394.8	2589.8
60°	1797.6	1823.2	1945.8	2172.4	2591.1	2741.1	2718.8	2696.2	2560.4	2621.8	2859.5
62.5°	1652.2	1677.4	1828.1	2113.9	2550.7	2881.1	3011.2	2997.2	2838.8	2840.4	3030.5
65°	1437.1	1447.5	1601.4	1954.1	2438.5	3007.6	3303.7	3291.4	3104.9	3026.9	3078.4
67.5°	1085.4	1098.3	1224.8	1542.6	2097.0	2939.0	3537.5	3535.5	3265.0	3096.2	2964.5
69°	801.5	817.3	920.6	1197.6	1734.0	2677.8	3548.5	3574.7	3308.2	3089.0	2772.2
70°	586.6	604.7	700.0	950.5	1444.3	2389.4	3454.4	3510.7	3291.8	3044.1	2622.1
72.5°	249.3	255.4	302.3	429.0	732.6	1440.7	2829.4	2947.7	2973.0	2727.6	2048.6
75°	156.2	158.1	176.6	220.1	325.9	595.9	1832.3	1993.6	2219.6	2116.2	1371.6
77.5°	117.6	119.3	130.0	151.6	202.4	222.5	850.0	1013.6	1271.3	1244.8	682.5
80°	90.2	91.1	98.3	110.3	142.6	139.3	275.8	346.6	530.6	468.2	241.5
82.5°	70.8	71.1	77.2	79.6	99.5	93.8	138.4	154.3	214.4	178.2	118.0
85°	62.7	63.7	69.9	58.2	63.7	56.6	76.0	82.4	113.9	107.3	44.6
87.5°	32.0	33.7	58.5	49.8	32.0	26.8	33.3	35.9	46.2	50.1	21.7
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°	624.0	624.0	624.0	624.0	624.0	624.0	624.0	624.0	624.0	624.0	624.0
2.5°	616.5	616.9	617.9	619.5	622.1	625.3	629.2	633.1	635.4	637.0	636.3
5°	611.4	611.7	613.7	616.5	619.8	624.6	631.2	636.0	639.5	641.8	641.5
7.5°	605.0	605.9	609.8	613.1	617.6	621.4	626.6	631.2	634.6	637.0	636.6
10°	600.1	601.1	605.9	610.1	614.0	614.6	613.7	612.3	612.0	613.7	613.1
12.5°	597.8	599.8	604.3	607.2	605.6	599.4	592.3	589.4	588.4	591.7	592.0
15°	598.4	600.1	604.0	602.0	593.3	583.0	579.1	581.3	583.3	585.2	585.5
17.5°	600.1	601.1	602.0	594.9	582.7	575.8	574.6	572.2	566.5	563.2	562.9
20°	603.0	604.3	602.7	591.4	580.3	571.3	555.8	541.9	528.7	521.5	518.6
22.5°	613.1	614.0	609.2	598.1	581.3	551.9	520.6	496.6	476.3	465.2	461.0
25°	632.7	634.3	627.6	613.7	569.7	518.3	474.0	441.7	416.1	402.8	399.3
27.5°	667.4	668.9	661.5	625.3	542.6	473.3	419.7	387.7	365.7	354.4	352.7
30°	719.0	721.4	714.5	625.0	501.1	416.1	366.6	347.9	335.3	327.5	327.2
32.5°	790.8	799.2	771.4	614.0	450.1	358.2	326.5	320.1	313.9	308.7	308.7
35°	882.0	901.7	827.7	591.1	393.8	318.8	304.2	298.1	290.3	284.9	284.2
37.5°	991.0	1021.7	867.8	550.3	345.3	299.7	290.6	280.6	268.3	257.7	255.1
40°	1140.7	1147.8	887.5	484.1	309.1	289.4	278.0	265.5	249.9	237.9	236.7
42.5°	1291.1	1267.7	883.6	412.9	288.4	280.0	265.1	251.2	237.3	227.3	227.3
45°	1462.1	1372.5	854.3	341.5	269.6	269.3	253.2	239.9	229.2	221.8	220.1
47.5°	1625.7	1466.6	803.4	288.8	250.2	258.7	245.4	234.8	225.0	217.9	216.7
50°	1824.2	1575.5	749.4	251.9	231.5	249.3	242.1	236.7	227.3	215.0	213.7
52.5°	2021.5	1702.9	707.8	224.0	215.0	241.8	244.1	244.8	236.0	212.1	210.5
55°	2233.2	1839.1	663.8	202.4	201.4	238.2	248.7	248.0	243.8	212.8	210.1
57.5°	2434.6	1975.8	598.1	187.2	190.8	234.8	249.6	239.3	231.8	215.9	211.8
60°	2601.5	2089.0	501.8	176.6	181.7	227.6	243.2	227.6	215.0	215.3	211.4
62.5°	2682.6	2120.7	383.8	164.3	174.3	215.9	233.7	218.9	207.2	216.7	214.4
65°	2620.9	2030.5	273.5	152.9	165.2	202.4	228.2	211.4	203.4	223.1	220.5
67.5°	2399.0	1784.7	198.6	142.9	156.5	188.5	217.9	204.7	199.5	227.9	222.1
69°	2163.3	1541.0	172.0	137.1	150.4	181.1	211.1	201.1	196.6	221.2	212.8
70°	1967.4	1353.2	158.8	133.5	145.2	176.9	205.9	198.9	193.6	213.1	203.1
72.5°	1410.6	874.6	133.5	122.9	131.6	167.5	194.7	190.5	182.7	192.4	185.9
75°	852.3	456.5	113.4	111.9	117.3	154.6	181.4	176.3	168.5	169.4	166.2
77.5°	391.6	210.8	95.0	98.9	102.5	138.4	165.2	159.4	152.3	149.7	150.1
80°	171.7	123.2	79.6	84.4	86.3	124.5	147.7	141.3	133.5	147.4	136.8
82.5°	92.8	71.5	62.1	65.3	70.8	108.3	128.4	120.0	112.5	130.9	105.8
85°	37.5	36.5	42.0	45.2	49.1	77.9	107.3	98.6	89.6	80.2	78.3
87.5°	16.2	17.5	20.7	22.0	26.2	48.5	72.1	63.0	63.3	54.3	53.4
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)