

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: P197341

Luminaire Tested: **NAV-AF-01-D-UNV-T4W-8030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197341
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-8030
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 80 CRI, 3000K, 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4927 lumens
Efficiency: N/A
Efficacy: 83.5 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

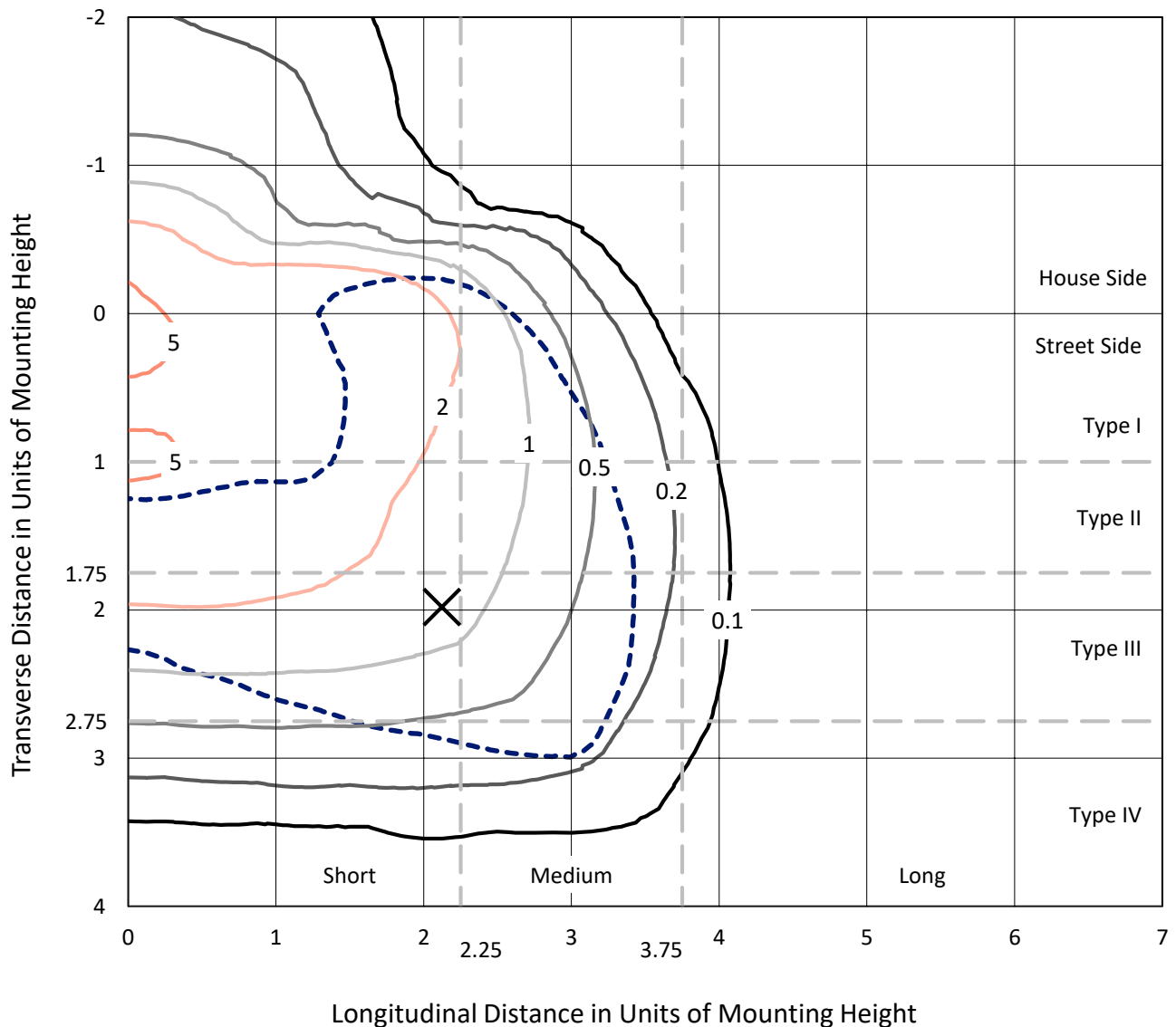
Input Watts (W): 59
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

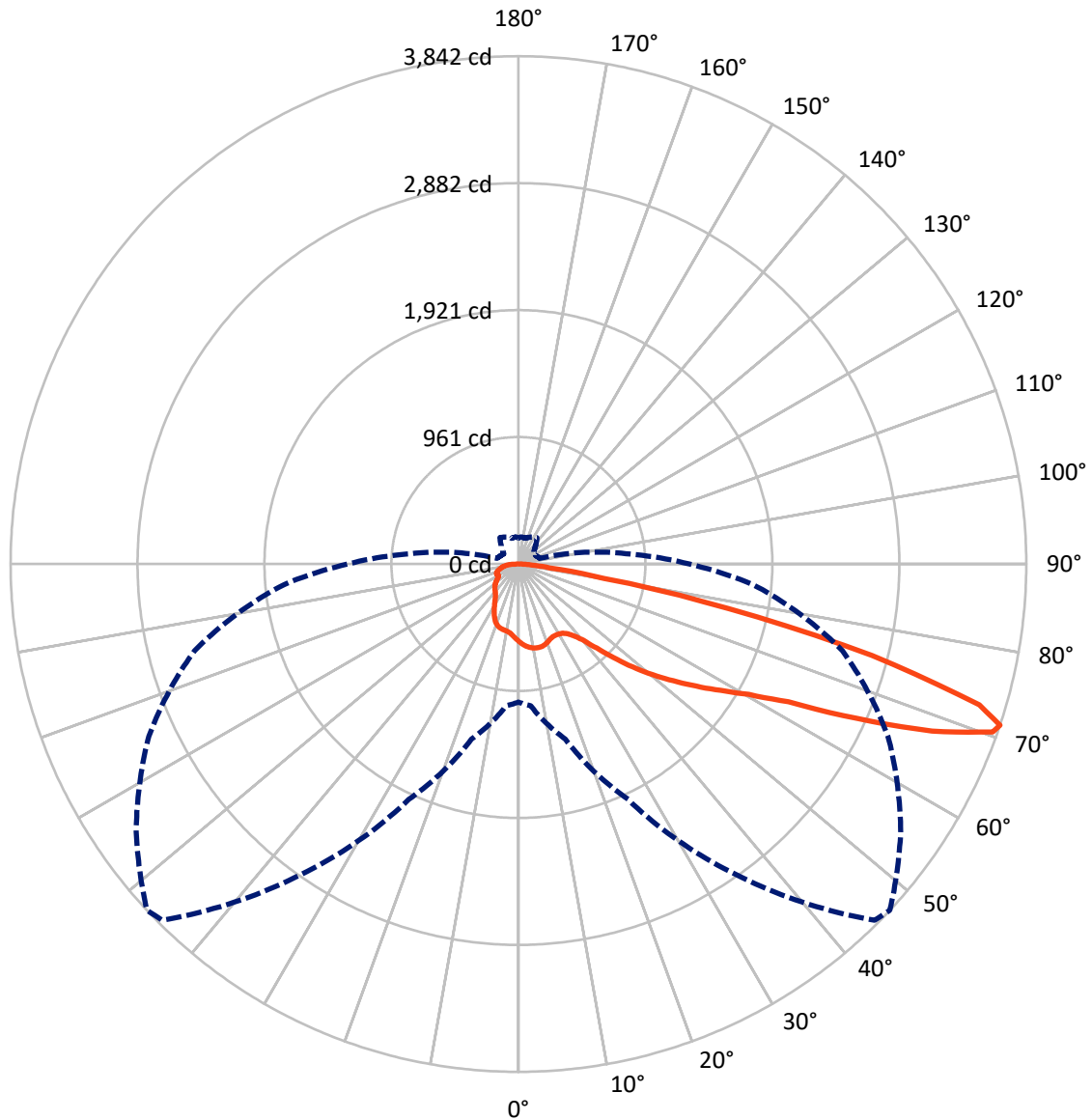
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 6.7 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	1055.9	0.0	1055.9
	% Fixture	21.4	0.0	21.4
Street Side	Lumens	3871.1	0.0	3871.1
	% Fixture	78.6	0.0	78.6
Total	Lumens	4927.0	0.0	4927.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	55.9	1.1
10°-20°	163.7	3.3
20°-30°	243.2	4.9
30°-40°	349.2	7.1
40°-50°	619.1	12.6
50°-60°	1059.4	21.5
60°-70°	1504.0	30.5
70°-80°	823.7	16.7
80°-90°	108.7	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°	4927.0	100.0
0°-180°	4927.0	100.0

Coefficient of Utilization



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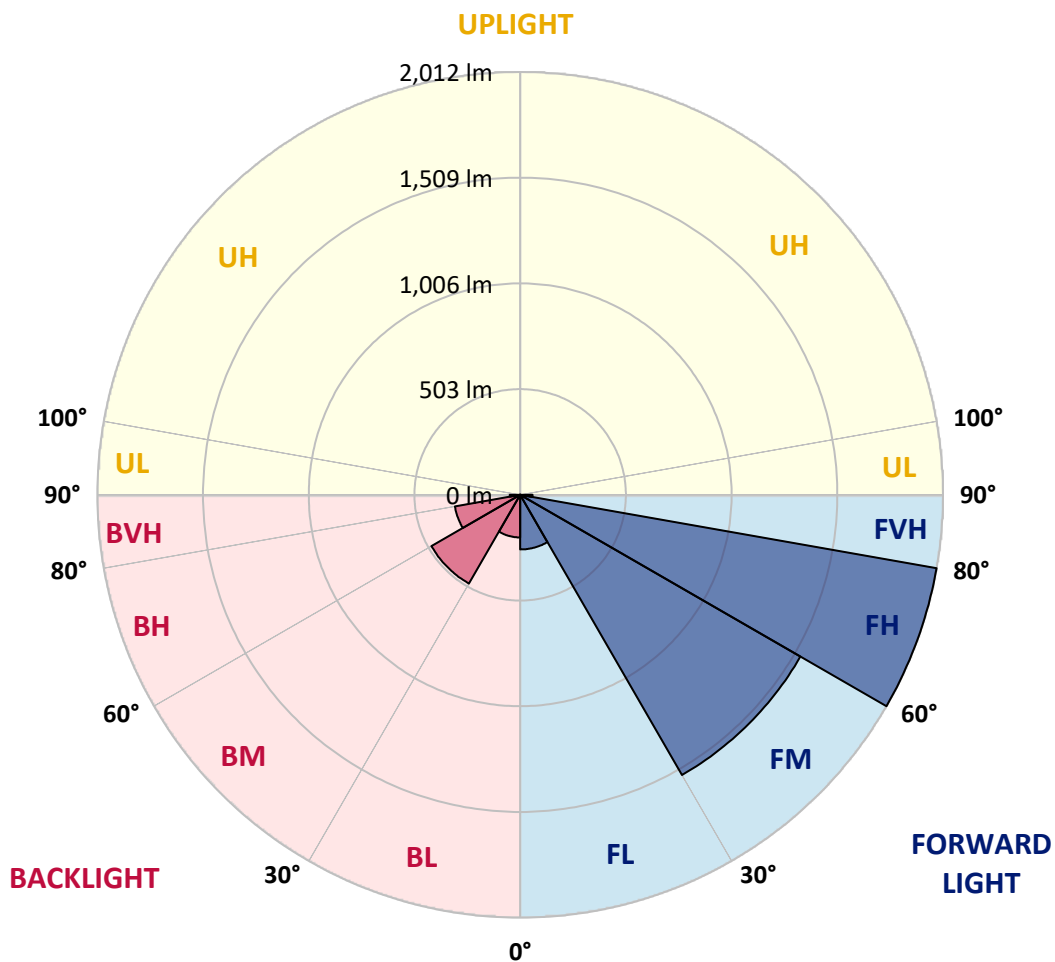
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	260.0	5.3			
FM (30°-60°)	1539.8	31.3			
FH (60°-80°)	2012.2	40.8			G2/5000
FVH (80°-90°)	59.0	1.2			G1/100
BL (0°-30°)	202.8	4.1	B1/500		
BM (30°-60°)	487.9	9.9	B1/1000		
BH (60°-80°)	315.5	6.4	B1/500		G1/500
BVH (80°-90°)	49.8	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-G2

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	47°	55°	65°	75°	85°
0°	585.9	585.9	585.9	585.9	585.9	585.9	585.9	585.9	585.9	585.9	585.9
2.5°	621.7	620.4	621.0	618.8	613.4	607.6	607.6	601.5	595.2	588.8	581.8
5°	660.3	658.4	656.8	649.8	639.2	627.4	625.5	613.4	600.3	587.2	574.4
7.5°	692.5	690.6	685.8	673.1	657.7	640.2	637.9	622.0	604.7	586.5	568.7
10°	715.5	714.3	705.0	688.7	670.8	650.1	646.2	630.0	609.5	586.9	564.2
12.5°	728.3	726.4	715.2	696.1	675.0	653.9	650.1	634.4	611.1	586.2	559.7
15°	723.2	722.2	711.7	692.2	671.2	653.0	649.8	633.8	610.2	584.0	555.6
17.5°	701.5	703.7	695.4	676.3	659.0	646.2	642.7	627.7	605.4	578.6	549.2
20°	671.5	674.0	669.9	650.4	640.5	632.2	630.3	618.2	597.4	570.6	541.5
22.5°	639.5	641.8	642.1	623.9	620.7	617.5	615.9	607.3	590.4	565.8	536.4
25°	617.5	620.1	620.7	604.7	606.7	607.6	607.3	601.2	589.1	565.8	537.1
27.5°	611.8	613.0	612.4	597.7	601.2	606.7	607.0	605.7	594.2	572.2	546.0
30°	631.6	632.2	624.2	602.2	605.7	612.7	613.0	612.4	605.1	588.8	566.1
32.5°	717.1	716.5	689.0	632.2	620.1	622.6	623.6	629.3	630.0	616.2	595.2
35°	847.4	847.1	815.2	718.1	660.9	647.5	648.8	657.7	665.7	656.5	644.3
37.5°	990.8	991.7	972.2	840.7	749.1	693.2	691.9	698.6	713.0	716.2	717.8
40°	1149.8	1154.6	1153.6	981.5	872.6	771.1	758.3	750.7	778.4	796.0	818.7
42.5°	1331.5	1330.2	1330.8	1136.0	1013.8	893.7	870.1	834.3	866.6	896.9	946.7
45°	1487.6	1492.7	1496.5	1300.5	1171.8	1033.9	1009.9	944.8	973.8	1019.2	1095.2
47.5°	1644.7	1635.7	1642.8	1483.4	1347.7	1193.8	1162.9	1075.1	1102.2	1166.1	1281.6
50°	1827.6	1823.5	1791.6	1722.3	1560.4	1356.0	1315.5	1211.1	1250.7	1335.9	1511.9
52.5°	1991.8	1969.4	1944.5	1910.0	1769.5	1520.2	1468.7	1352.5	1425.3	1531.0	1797.6
55°	2051.8	2036.8	2066.8	2111.5	1990.8	1687.5	1630.0	1517.6	1622.3	1754.2	2133.8
57.5°	2115.6	2120.7	2188.4	2278.8	2200.2	1865.9	1803.7	1713.0	1838.5	2003.9	2509.6
60°	2147.6	2168.0	2303.1	2472.6	2399.5	2061.7	2002.0	1937.5	2078.3	2279.8	2884.5
62.5°	2153.0	2180.5	2371.7	2540.6	2673.8	2361.5	2292.5	2222.6	2377.8	2584.7	3155.9
65°	2053.4	2095.5	2365.6	2624.3	2923.8	2862.5	2818.7	2696.7	2778.8	2853.2	3202.2
67.5°	1760.6	1806.6	2131.6	2589.8	3124.3	3382.3	3374.0	3193.9	3088.5	2957.0	2859.0
70°	1292.2	1329.2	1641.5	2214.0	3036.8	3790.3	3805.0	3516.1	3175.1	2736.7	2125.9
71°	1045.0	1077.0	1371.4	1965.6	2866.3	3811.4	3842.1	3530.4	3085.0	2537.7	1779.7
72.5°	650.4	668.3	910.6	1483.4	2468.1	3594.3	3646.0	3346.5	2801.5	2145.0	1258.0
75°	245.5	252.6	337.8	654.2	1473.2	2700.3	2762.8	2529.1	1968.1	1224.5	526.5
77.5°	131.9	135.4	167.6	272.0	590.4	1547.9	1628.4	1442.6	944.1	428.5	215.2
80°	88.4	90.7	115.9	161.2	271.4	589.4	656.5	579.2	353.5	244.6	153.3
82.5°	57.2	58.4	78.9	106.0	175.3	207.2	236.6	247.1	220.6	175.3	92.6
85°	37.7	38.6	52.0	67.7	108.6	102.2	104.7	137.0	150.4	115.6	47.3
87.5°	21.7	22.4	31.3	34.8	48.9	38.3	41.5	65.1	89.4	75.4	27.1
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°	585.9	585.9	585.9	585.9	585.9	585.9	585.9	585.9	585.9	585.9	585.9
2.5°	578.6	576.0	570.3	566.7	565.1	564.5	563.9	565.1	565.1	564.5	563.2
5°	568.0	563.2	553.7	546.9	543.4	542.5	543.8	545.4	546.3	546.3	545.4
7.5°	560.4	553.3	540.6	531.3	525.9	524.3	527.8	533.5	537.4	539.3	539.6
10°	554.0	544.4	530.3	520.8	516.3	515.7	520.1	527.5	535.5	539.0	539.6
12.5°	548.2	537.4	522.0	513.1	509.9	511.5	517.6	524.3	533.5	538.6	539.0
15°	542.8	531.6	515.3	506.1	505.4	508.0	513.7	519.2	526.2	532.6	532.6
17.5°	536.4	524.3	507.4	498.7	498.7	501.0	504.8	507.7	512.1	518.2	517.9
20°	528.7	516.3	499.1	490.1	488.2	486.9	486.9	487.6	491.4	496.8	497.8
22.5°	523.0	510.2	492.0	481.2	472.6	464.3	460.7	459.5	463.0	468.1	469.4
25°	523.0	510.2	489.8	471.6	450.5	434.6	427.9	425.9	429.4	434.2	436.2
27.5°	531.6	518.9	494.9	463.0	424.3	398.8	390.8	389.2	392.4	396.2	398.2
30°	551.7	539.3	509.6	453.1	395.3	361.8	352.8	351.2	352.8	354.4	356.7
32.5°	585.3	574.7	533.5	444.1	365.9	328.2	317.4	314.8	315.5	315.8	317.7
35°	639.9	635.1	565.5	433.6	338.1	300.8	289.6	284.5	284.2	285.8	288.0
37.5°	723.5	726.4	606.7	418.3	315.1	281.3	270.1	265.0	262.5	265.7	268.2
40°	841.7	848.4	654.2	397.5	296.3	269.8	258.0	253.2	249.7	248.7	250.0
42.5°	995.2	993.3	702.8	371.0	275.9	262.1	249.7	244.6	238.8	231.5	229.9
45°	1177.2	1149.8	743.3	338.5	252.6	254.8	242.0	235.0	226.1	215.2	213.9
47.5°	1392.1	1316.4	768.2	303.6	230.8	245.2	233.4	222.5	209.5	202.4	201.5
50°	1651.1	1511.5	785.8	268.2	211.4	233.1	221.3	206.9	194.1	192.2	191.9
52.5°	1957.6	1741.7	807.5	236.3	196.0	217.4	209.1	194.4	184.2	185.2	185.2
55°	2283.6	1979.9	808.1	211.1	182.6	199.2	200.2	188.4	180.4	183.6	184.6
57.5°	2580.8	2188.1	744.6	193.2	169.9	184.9	197.3	190.6	184.6	195.7	196.7
60°	2840.1	2348.4	607.9	178.5	159.3	179.4	203.7	204.3	203.1	233.4	235.6
62.5°	2934.9	2350.0	431.7	166.0	153.6	182.6	217.1	218.1	218.1	246.2	250.3
65°	2802.1	2154.3	287.4	158.7	149.7	189.7	228.0	223.8	213.9	233.4	228.9
67.5°	2334.0	1676.9	210.1	153.9	144.3	190.0	237.6	227.0	210.1	226.7	219.0
70°	1604.1	1067.1	175.9	149.4	137.9	181.7	242.7	226.1	204.3	211.4	201.2
71°	1291.2	851.6	167.0	147.8	135.4	176.9	243.3	224.8	201.5	205.9	196.7
72.5°	850.6	524.6	156.1	144.3	131.5	168.6	241.7	221.9	197.6	198.0	191.9
75°	335.6	217.4	140.5	136.3	120.7	155.2	234.7	215.8	190.3	183.9	181.4
77.5°	169.5	142.1	123.6	125.2	107.9	141.4	224.8	205.9	180.1	171.5	169.5
80°	123.9	107.9	105.7	108.6	93.6	128.0	212.3	192.5	167.0	175.9	172.1
82.5°	75.4	65.8	82.7	89.7	78.2	114.3	197.6	176.9	150.4	138.6	134.1
85°	35.8	38.6	59.7	66.1	57.8	91.3	180.7	159.6	131.2	113.3	115.3
87.5°	17.6	21.4	34.2	39.6	38.0	67.1	136.3	123.9	103.5	85.3	83.3
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)