

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: P195895

Luminaire Tested: **NAV-AF-01-D-UNV-T4W-7050-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195895
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-7050-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 5000K, 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: 4878 lumens
Efficiency: N/A
Efficacy: 110.9 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

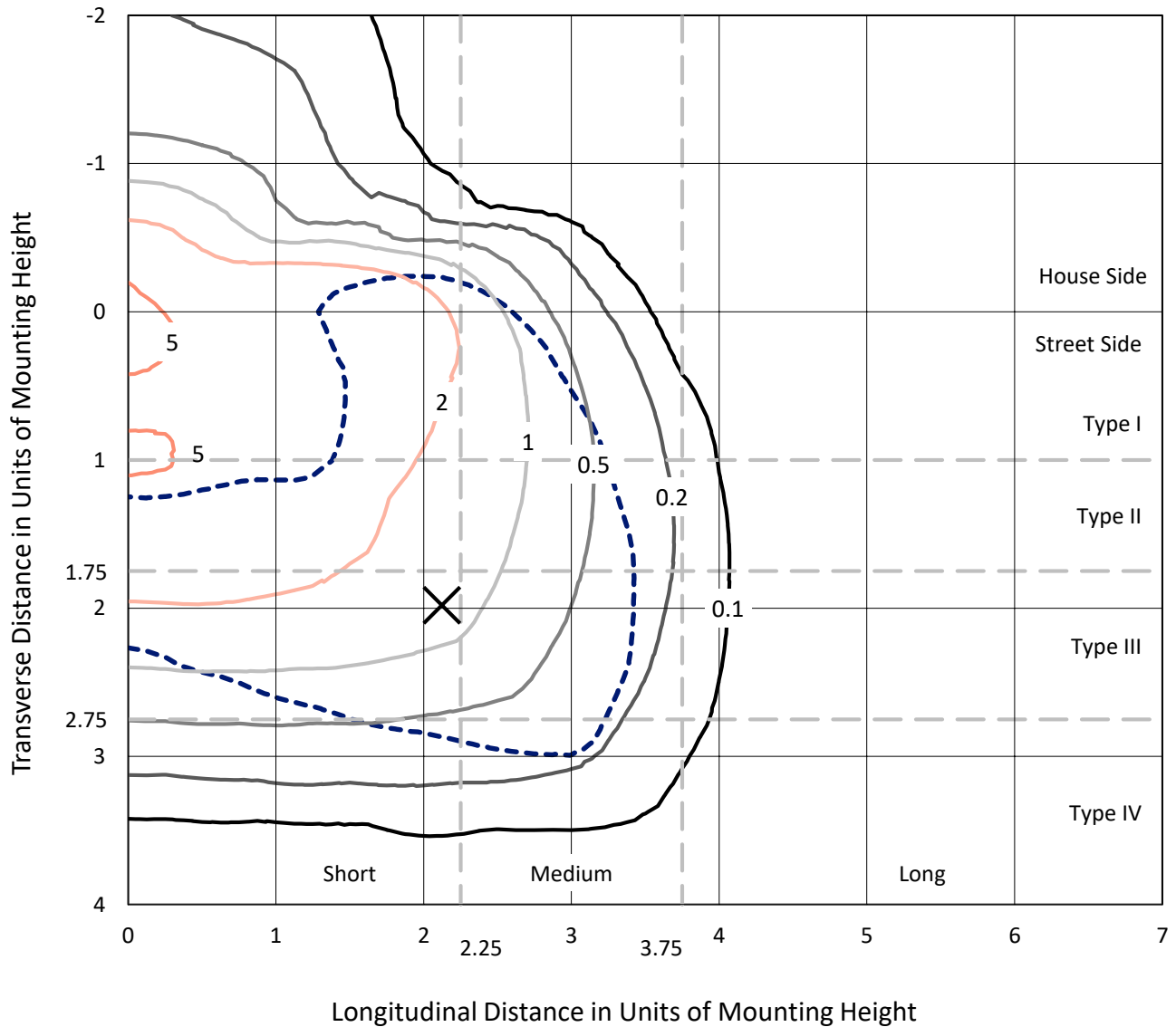
Input Watts (W): 44
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

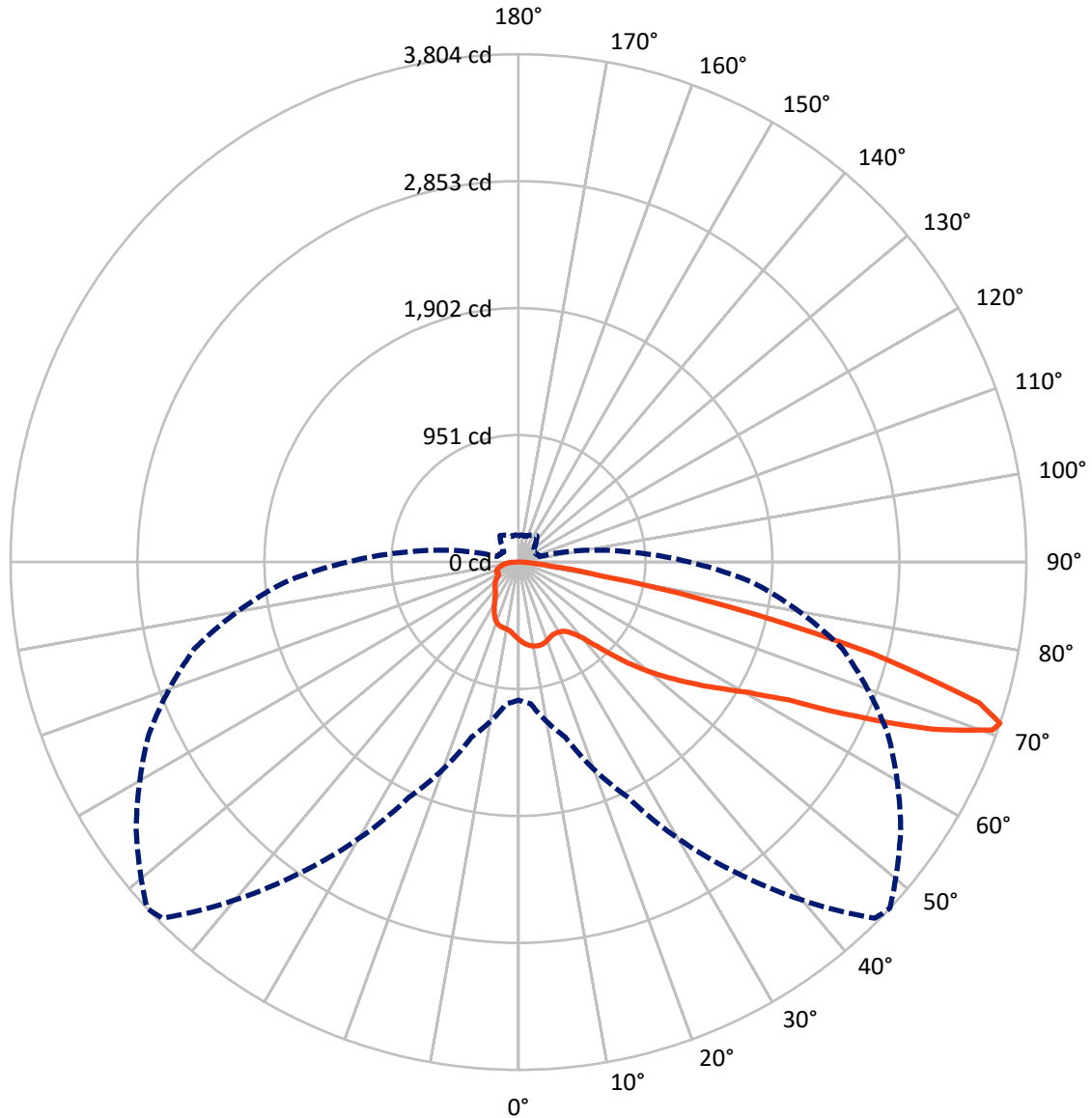
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 6.7 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	1045.4	0.0	1045.4
	% Fixture	21.4	0.0	21.4
Street Side	Lumens	3832.6	0.0	3832.6
	% Fixture	78.6	0.0	78.6
Total	Lumens	4878.0	0.0	4878.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	55.4	1.1
10°-20°	162.0	3.3
20°-30°	240.8	4.9
30°-40°	345.7	7.1
40°-50°	613.0	12.6
50°-60°	1048.9	21.5
60°-70°	1489.0	30.5
70°-80°	815.5	16.7
80°-90°	107.7	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°	4878.0	100.0
0°-180°	4878.0	100.0



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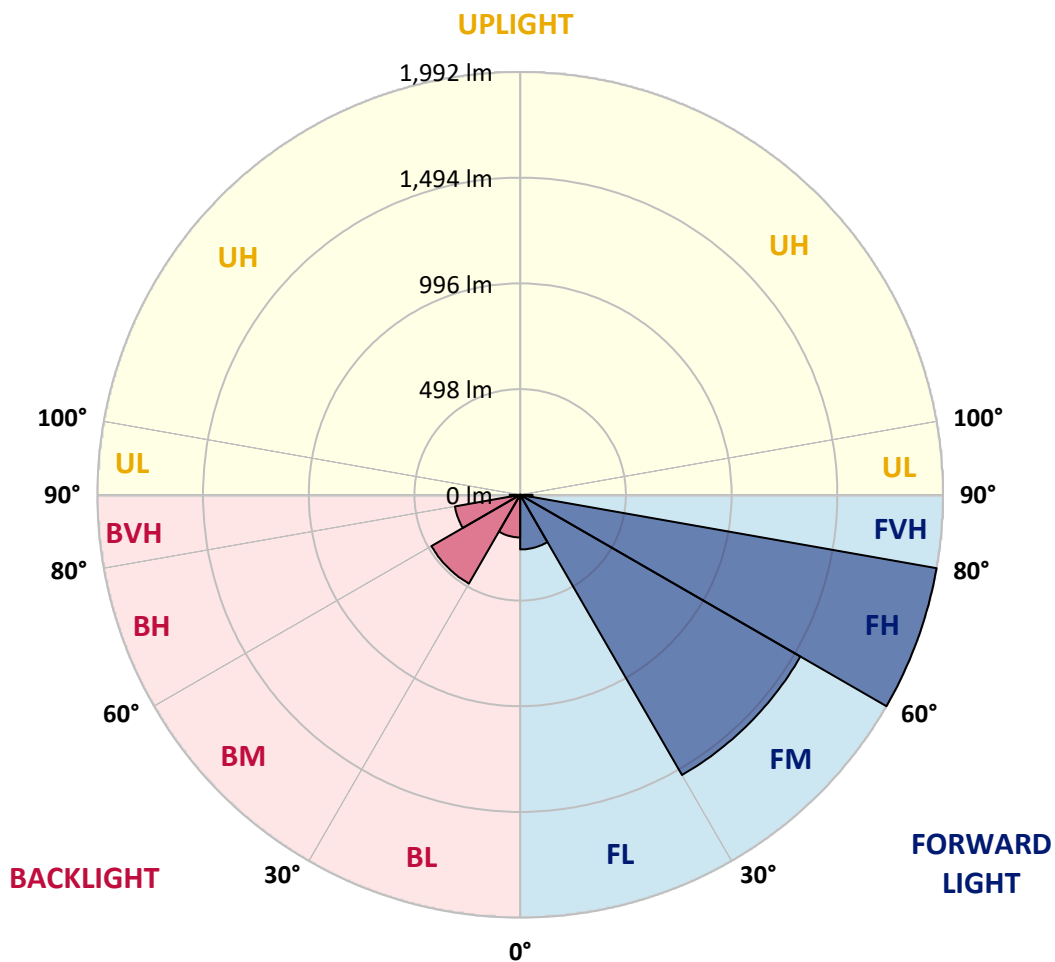
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	257.4	5.3			
FM	(30°-60°)	1524.5	31.3			
FH	(60°-80°)	1992.2	40.8			G2/5000
FVH	(80°-90°)	58.4	1.2			G1/100
BL	(0°-30°)	200.8	4.1	B1/500		
BM	(30°-60°)	483.0	9.9	B1/1000		
BH	(60°-80°)	312.4	6.4	B1/500		G1/500
BVH	(80°-90°)	49.3	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°	580.1	580.1	580.1	580.1	580.1	580.1	580.1	580.1	580.1	580.1	580.1
2.5°	615.5	614.2	614.8	612.6	607.3	601.6	601.6	595.6	589.2	582.9	576.0
5°	653.7	651.8	650.3	643.3	632.9	621.2	619.3	607.3	594.3	581.3	568.7
7.5°	685.7	683.8	679.0	666.4	651.2	633.8	631.6	615.8	598.7	580.7	563.0
10°	708.4	707.2	698.0	681.9	664.2	643.6	639.8	623.7	603.5	581.0	558.6
12.5°	721.1	719.2	708.1	689.1	668.3	647.4	643.6	628.1	605.0	580.4	554.2
15°	716.0	715.1	704.6	685.3	664.5	646.5	643.3	627.5	604.1	578.2	550.0
17.5°	694.5	696.7	688.5	669.5	652.5	639.8	636.3	621.5	599.4	572.8	543.7
20°	664.8	667.3	663.2	643.9	634.1	625.9	624.0	612.0	591.5	564.9	536.1
22.5°	633.2	635.4	635.7	617.7	614.5	611.4	609.8	601.3	584.5	560.2	531.1
25°	611.4	613.9	614.5	598.7	600.6	601.6	601.3	595.2	583.2	560.2	531.7
27.5°	605.7	606.9	606.3	591.8	595.2	600.6	600.9	599.7	588.3	566.5	540.6
30°	625.3	625.9	618.0	596.2	599.7	606.6	606.9	606.3	599.0	582.9	560.5
32.5°	710.0	709.4	682.2	625.9	613.9	616.4	617.4	623.1	623.7	610.1	589.2
35°	839.0	838.7	807.0	710.9	654.4	641.1	642.4	651.2	659.1	649.9	637.9
37.5°	980.9	981.9	962.6	832.3	741.6	686.3	685.0	691.7	705.9	709.1	710.6
40°	1138.3	1143.1	1142.1	971.7	863.9	763.4	750.8	743.2	770.7	788.1	810.5
42.5°	1318.2	1316.9	1317.6	1124.7	1003.7	884.8	861.4	826.0	857.9	888.0	937.3
45°	1472.8	1477.9	1481.6	1287.5	1160.2	1023.6	999.9	935.4	964.2	1009.0	1084.3
47.5°	1628.3	1619.5	1626.4	1468.7	1334.3	1182.0	1151.3	1064.4	1091.2	1154.5	1268.9
50°	1809.5	1805.3	1773.7	1705.1	1544.9	1342.6	1302.4	1199.0	1238.2	1322.6	1496.8
52.5°	1971.9	1949.8	1925.2	1891.0	1751.9	1505.0	1454.1	1339.1	1411.1	1515.8	1779.7
55°	2031.4	2016.5	2046.2	2090.5	1971.0	1670.7	1613.8	1502.5	1606.2	1736.8	2112.6
57.5°	2094.6	2099.7	2166.7	2256.1	2178.4	1847.4	1785.7	1696.0	1820.2	1984.0	2484.7
60°	2126.2	2146.4	2280.2	2448.0	2375.6	2041.2	1982.1	1918.2	2057.6	2257.1	2855.8
62.5°	2131.6	2158.8	2348.1	2515.3	2647.2	2338.0	2269.7	2200.5	2354.1	2559.0	3124.5
65°	2033.0	2074.7	2342.1	2598.2	2894.7	2834.0	2790.7	2669.9	2751.2	2824.8	3170.3
67.5°	1743.1	1788.6	2110.4	2564.0	3093.2	3348.6	3340.4	3162.1	3057.8	2927.6	2830.5
70°	1279.3	1316.0	1625.2	2192.0	3006.6	3752.6	3767.2	3481.1	3143.5	2709.4	2104.7
71°	1034.7	1066.3	1357.7	1946.0	2837.8	3773.5	3803.8	3495.3	3054.3	2512.5	1762.0
72.5°	643.9	661.6	901.6	1468.7	2443.6	3558.5	3609.7	3313.2	2773.6	2123.7	1245.5
75°	243.1	250.0	334.5	647.7	1458.6	2673.4	2735.4	2504.0	1948.5	1212.3	521.3
77.5°	130.6	134.0	166.0	269.3	584.5	1532.5	1612.2	1428.2	934.8	424.2	213.1
80°	87.6	89.8	114.8	159.6	268.7	583.6	649.9	573.4	349.9	242.1	151.7
82.5°	56.6	57.8	78.1	105.0	173.5	205.2	234.2	244.7	218.4	173.5	91.7
85°	37.3	38.3	51.5	67.0	107.5	101.2	103.7	135.6	148.9	114.4	46.8
87.5°	21.5	22.1	31.0	34.5	48.4	37.9	41.1	64.5	88.5	74.6	26.9
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°	580.1	580.1	580.1	580.1	580.1	580.1	580.1	580.1	580.1	580.1	580.1
2.5°	572.8	570.3	564.6	561.1	559.5	558.9	558.3	559.5	559.5	558.9	557.6
5°	562.4	557.6	548.1	541.5	538.0	537.1	538.3	539.9	540.9	540.9	539.9
7.5°	554.8	547.8	535.2	526.0	520.6	519.1	522.5	528.2	532.0	533.9	534.2
10°	548.5	539.0	525.1	515.6	511.2	510.5	515.0	522.2	530.1	533.6	534.2
12.5°	542.8	532.0	516.9	508.0	504.8	506.4	512.4	519.1	528.2	533.3	533.6
15°	537.4	526.3	510.2	501.0	500.4	502.9	508.6	514.0	521.0	527.3	527.3
17.5°	531.1	519.1	502.3	493.8	493.8	496.0	499.8	502.6	507.1	513.1	512.7
20°	523.5	511.2	494.1	485.2	483.3	482.1	482.1	482.7	486.5	491.9	492.8
22.5°	517.8	505.2	487.1	476.4	467.9	459.6	456.2	454.9	458.4	463.4	464.7
25°	517.8	505.2	484.9	466.9	446.0	430.2	423.6	421.7	425.2	429.9	431.8
27.5°	526.3	513.7	490.0	458.4	420.1	394.8	386.9	385.3	388.5	392.3	394.2
30°	546.3	533.9	504.5	448.6	391.4	358.2	349.3	347.7	349.3	350.9	353.1
32.5°	579.4	569.0	528.2	439.7	362.3	325.0	314.2	311.7	312.3	312.6	314.5
35°	633.5	628.8	559.8	429.3	334.8	297.8	286.7	281.7	281.3	282.9	285.1
37.5°	716.3	719.2	600.6	414.1	312.0	278.5	267.4	262.4	259.8	263.0	265.5
40°	833.3	839.9	647.7	393.6	293.4	267.1	255.4	250.7	247.2	246.3	247.5
42.5°	985.3	983.4	695.8	367.3	273.1	259.5	247.2	242.1	236.5	229.2	227.6
45°	1165.5	1138.3	735.9	335.1	250.0	252.3	239.6	232.7	223.8	213.1	211.8
47.5°	1378.3	1303.4	760.6	300.6	228.6	242.8	231.1	220.3	207.4	200.4	199.5
50°	1634.6	1496.5	778.0	265.5	209.3	230.8	219.1	204.8	192.2	190.3	190.0
52.5°	1938.1	1724.4	799.5	233.9	194.1	215.3	207.1	192.5	182.4	183.3	183.3
55°	2260.9	1960.2	800.1	209.0	180.8	197.3	198.2	186.5	178.6	181.8	182.7
57.5°	2555.2	2166.4	737.2	191.3	168.2	183.0	195.4	188.7	182.7	193.8	194.7
60°	2811.9	2325.0	601.9	176.7	157.7	177.7	201.7	202.3	201.1	231.1	233.3
62.5°	2905.8	2326.6	427.4	164.4	152.1	180.8	215.0	215.9	215.9	243.7	247.8
65°	2774.2	2132.8	284.5	157.1	148.3	187.8	225.7	221.6	211.8	231.1	226.7
67.5°	2310.8	1660.2	208.0	152.4	142.9	188.1	235.2	224.8	208.0	224.4	216.9
70°	1588.2	1056.5	174.2	147.9	136.6	179.9	240.2	223.8	202.3	209.3	199.2
71°	1278.4	843.1	165.3	146.4	134.0	175.1	240.9	222.5	199.5	203.9	194.7
72.5°	842.1	519.4	154.6	142.9	130.2	166.9	239.3	219.7	195.7	196.0	190.0
75°	332.2	215.3	139.1	135.0	119.5	153.6	232.3	213.7	188.4	182.1	179.6
77.5°	167.9	140.7	122.3	123.9	106.8	140.0	222.5	203.9	178.3	169.8	167.9
80°	122.7	106.8	104.6	107.5	92.6	126.8	210.2	190.6	165.3	174.2	170.4
82.5°	74.6	65.1	81.9	88.8	77.4	113.2	195.7	175.1	148.9	137.2	132.8
85°	35.4	38.3	59.1	65.4	57.2	90.4	178.9	158.1	129.9	112.2	114.1
87.5°	17.4	21.2	33.8	39.2	37.6	66.4	135.0	122.7	102.4	84.4	82.5
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)