

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: P195823

Luminaire Tested: **NAV-AF-01-D-UNV-T3-7050-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195823
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-T3-7050-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 5000K, 800mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE III OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4937 lumens
Efficiency: N/A
Efficacy: 112.2 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

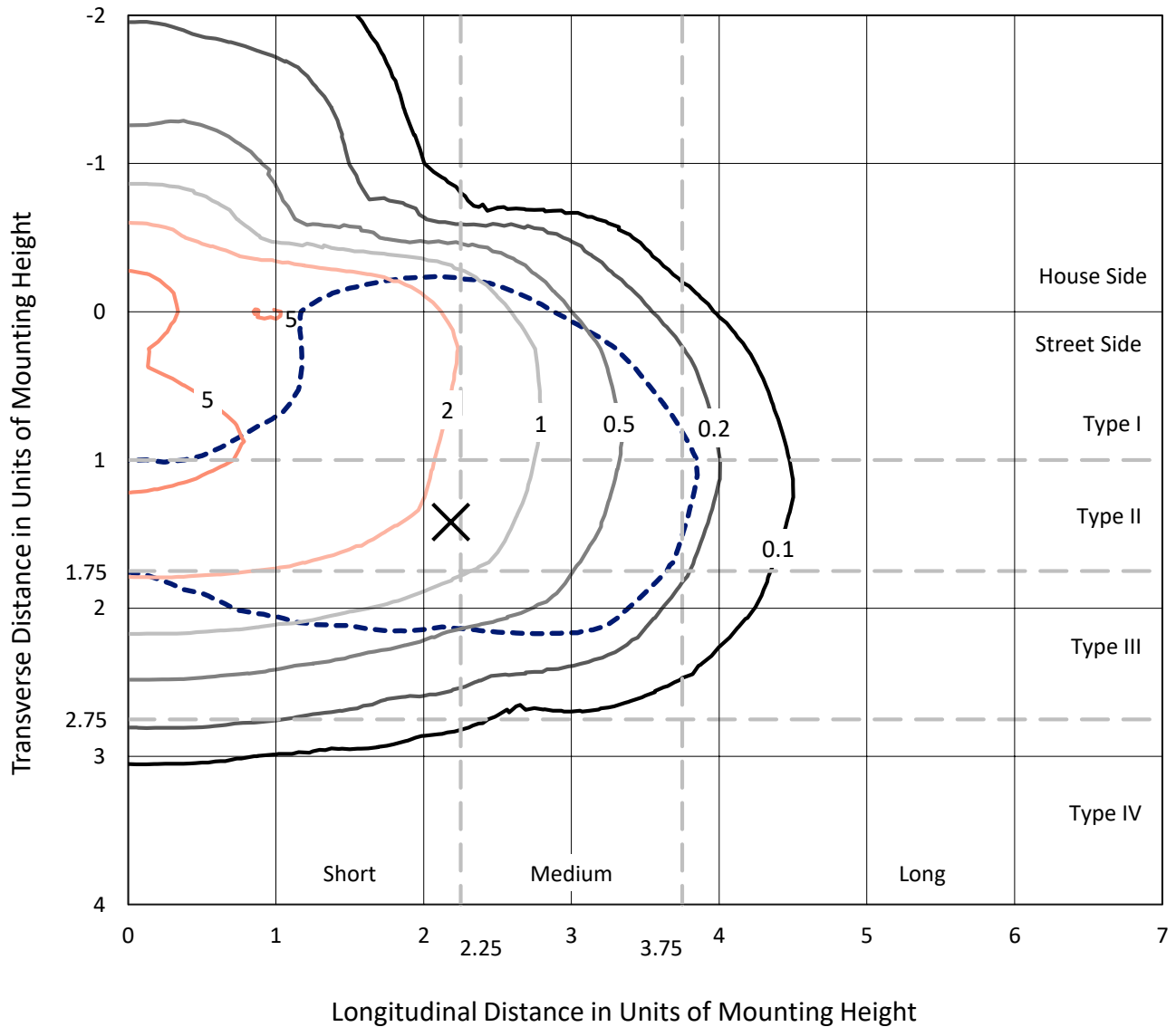
Input Watts (W): 44
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

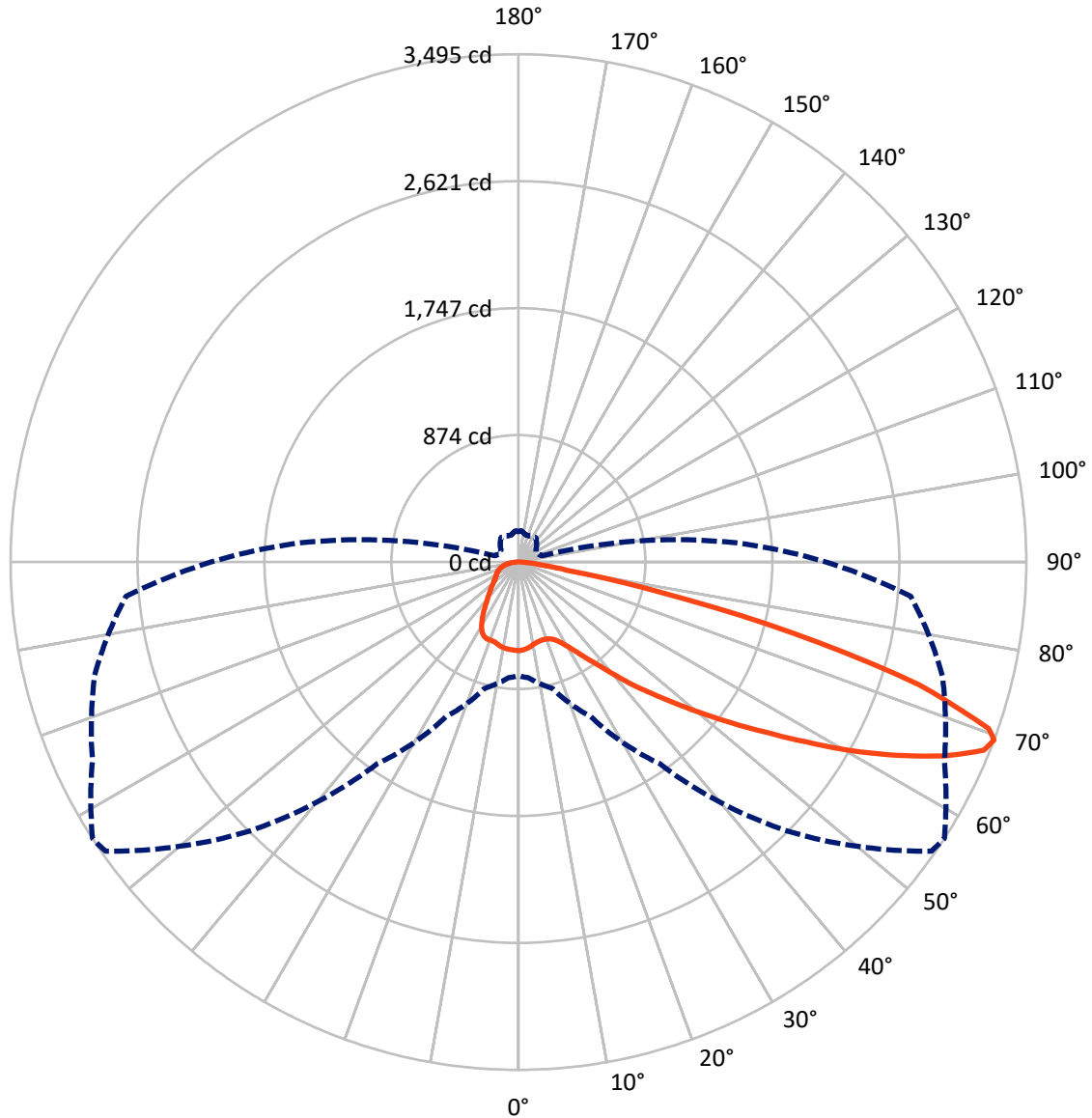
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 6.2 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	1089.4	0.0	1089.4
	% Fixture	22.1	0.0	22.1
Street Side	Lumens	3847.6	0.0	3847.6
	% Fixture	77.9	0.0	77.9
Total	Lumens	4937.0	0.0	4937.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	57.1	1.2
10°-20°	162.4	3.3
20°-30°	270.1	5.5
30°-40°	441.1	8.9
40°-50°	744.5	15.1
50°-60°	1158.0	23.5
60°-70°	1379.5	27.9
70°-80°	642.6	13.0
80°-90°	81.7	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°	4937.0	100.0
0°-180°	4937.0	100.0



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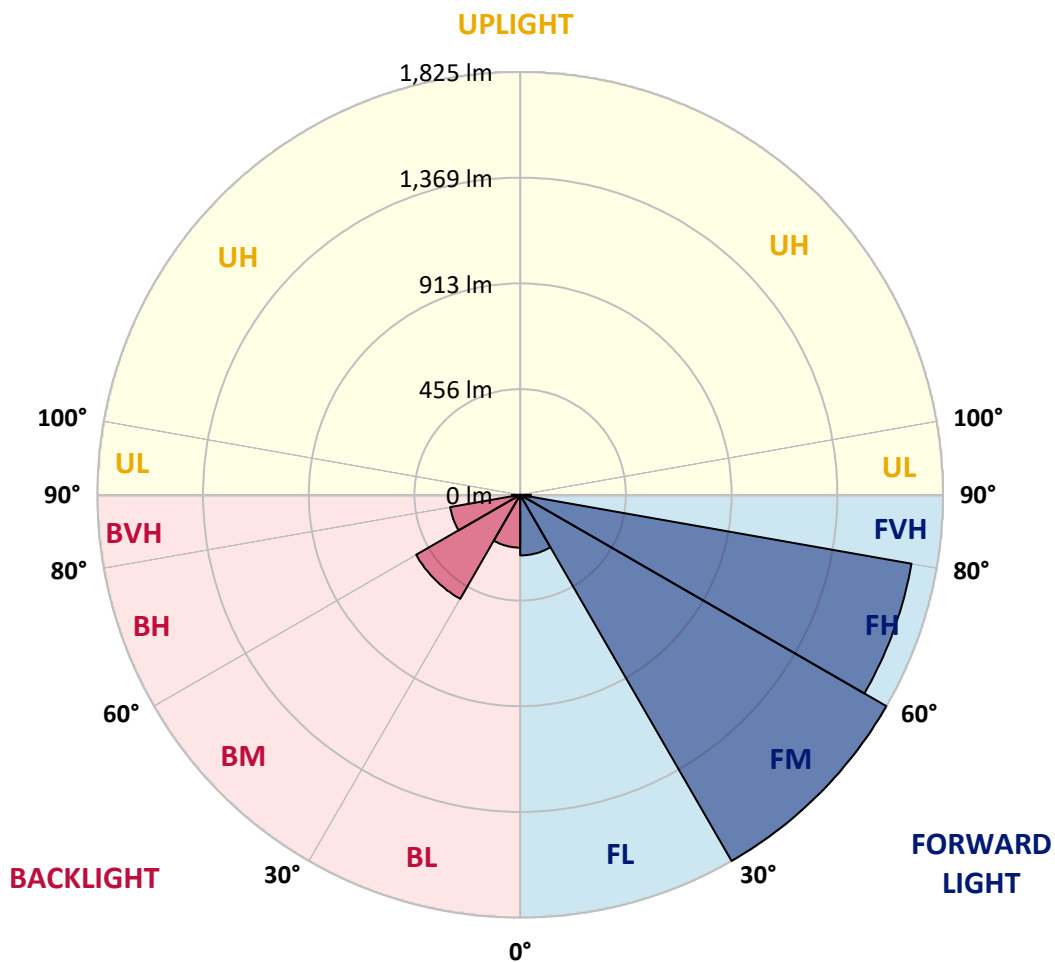
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	261.5	5.3			
FM	(30°-60°)	1825.1	37.0			
FH	(60°-80°)	1715.1	34.7			G1/1800
FVH	(80°-90°)	45.9	0.9			G1/100
BL	(0°-30°)	228.1	4.6	B1/500		
BM	(30°-60°)	518.5	10.5	B1/1000		
BH	(60°-80°)	307.0	6.2	B1/500		G1/500
BVH	(80°-90°)	35.8	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°	610.0	610.0	610.0	610.0	610.0	610.0	610.0	610.0	610.0	610.0	610.0
2.5°	606.5	606.5	608.1	608.1	608.1	607.5	605.6	606.2	605.0	604.0	602.4
5°	594.2	594.8	596.7	597.4	598.3	598.6	598.6	598.3	598.6	598.6	597.7
7.5°	577.1	577.8	580.0	581.3	584.1	586.6	587.9	587.9	589.5	590.7	591.1
10°	566.7	566.7	568.0	568.0	570.2	571.5	575.6	575.2	579.7	583.8	585.7
12.5°	565.4	565.4	564.8	562.6	561.3	561.0	565.1	565.8	572.4	579.7	583.1
15°	569.6	569.6	567.7	563.2	558.5	556.3	560.4	561.7	568.9	577.5	582.8
17.5°	582.8	582.5	578.4	569.6	561.3	557.9	559.1	560.4	567.0	576.8	583.5
20°	612.2	612.2	603.4	587.3	573.0	564.8	562.9	563.9	568.6	577.8	586.3
22.5°	663.7	664.7	648.9	622.3	598.0	580.6	573.0	574.0	576.2	585.0	594.5
25°	739.6	737.1	714.6	677.0	639.1	609.4	593.9	594.8	594.8	603.1	612.9
27.5°	819.9	820.5	788.3	747.8	697.9	653.6	629.0	628.7	628.3	636.2	646.7
30°	910.6	910.9	873.6	826.8	769.6	713.1	676.1	675.8	672.9	682.7	696.3
32.5°	1009.8	1009.5	966.2	913.4	849.9	785.7	737.7	737.4	735.2	748.5	764.9
35°	1119.8	1119.8	1076.8	1011.7	943.2	871.7	816.1	815.8	817.0	835.1	850.5
37.5°	1252.3	1255.1	1203.3	1124.3	1049.4	973.2	908.4	906.5	897.0	927.3	953.0
40°	1390.4	1398.3	1344.6	1252.3	1171.4	1092.7	1021.2	1020.0	1011.7	1044.0	1085.4
42.5°	1539.9	1557.9	1498.2	1404.0	1315.8	1230.8	1159.0	1155.6	1123.9	1174.2	1239.0
45°	1735.9	1747.5	1660.9	1575.6	1492.5	1395.4	1310.1	1291.5	1259.9	1324.3	1408.4
47.5°	1869.2	1863.5	1809.5	1752.3	1698.9	1606.0	1474.8	1451.1	1412.5	1497.9	1590.5
50°	1952.0	1956.2	1925.8	1923.0	1920.1	1855.3	1660.6	1632.2	1587.6	1688.8	1796.9
52.5°	2006.7	1988.1	1993.5	2057.9	2136.0	2105.0	1870.8	1839.2	1793.4	1894.5	2016.5
55°	1984.0	1959.3	2008.9	2136.0	2319.6	2326.6	2101.5	2069.0	2029.8	2113.2	2280.8
57.5°	1889.8	1902.1	1980.5	2157.2	2445.1	2525.1	2366.7	2333.5	2256.4	2341.1	2531.7
60°	1757.3	1782.3	1902.1	2123.7	2533.0	2679.6	2657.8	2635.7	2503.0	2563.0	2795.3
62.5°	1615.1	1639.8	1787.1	2066.5	2493.5	2816.5	2943.6	2930.0	2775.1	2776.7	2962.5
65°	1404.9	1415.0	1565.5	1910.3	2383.8	2940.1	3229.6	3217.6	3035.2	2959.0	3009.3
67.5°	1061.0	1073.7	1197.3	1508.0	2050.0	2873.1	3458.1	3456.2	3191.7	3026.7	2898.0
69°	783.5	799.0	899.9	1170.7	1695.1	2617.7	3468.9	3494.5	3234.0	3019.7	2710.0
70°	573.4	591.1	684.3	929.2	1411.9	2335.8	3376.9	3431.9	3217.9	2975.8	2563.3
72.5°	243.7	249.7	295.5	419.4	716.2	1408.4	2765.9	2881.6	2906.3	2666.4	2002.6
75°	152.7	154.6	172.6	215.2	318.6	582.5	1791.2	1948.9	2169.8	2068.7	1340.8
77.5°	115.0	116.6	127.1	148.2	197.9	217.5	830.9	990.9	1242.8	1216.9	667.2
80°	88.2	89.1	96.1	107.8	139.4	136.2	269.6	338.8	518.7	457.7	236.1
82.5°	69.2	69.5	75.5	77.8	97.3	91.7	135.3	150.8	209.6	174.2	115.4
85°	61.3	62.3	68.3	56.9	62.3	55.3	74.3	80.6	111.3	104.9	43.6
87.5°	31.3	32.9	57.2	48.7	31.3	26.2	32.6	35.1	45.2	49.0	21.2
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°	610.0	610.0	610.0	610.0	610.0	610.0	610.0	610.0	610.0	610.0	610.0
2.5°	602.7	603.1	604.0	605.6	608.1	611.3	615.1	618.9	621.1	622.7	622.0
5°	597.7	598.0	599.9	602.7	605.9	610.6	617.0	621.7	625.2	627.4	627.1
7.5°	591.4	592.3	596.1	599.3	603.7	607.5	612.5	617.0	620.4	622.7	622.3
10°	586.6	587.6	592.3	596.4	600.2	600.8	599.9	598.6	598.3	599.9	599.3
12.5°	584.4	586.3	590.7	593.6	592.0	586.0	579.0	576.2	575.2	578.4	578.7
15°	585.0	586.6	590.4	588.5	580.0	569.9	566.1	568.3	570.2	572.1	572.4
17.5°	586.6	587.6	588.5	581.6	569.6	562.9	561.7	559.4	553.8	550.6	550.3
20°	589.5	590.7	589.2	578.1	567.3	558.5	543.3	529.7	516.8	509.8	507.0
22.5°	599.3	600.2	595.5	584.7	568.3	539.5	508.9	485.5	465.6	454.8	450.7
25°	618.5	620.1	613.5	599.9	556.9	506.7	463.4	431.8	406.8	393.8	390.3
27.5°	652.4	653.9	646.7	611.3	530.4	462.7	410.3	379.0	357.5	346.4	344.8
30°	702.9	705.2	698.5	611.0	489.9	406.8	358.4	340.1	327.8	320.2	319.9
32.5°	773.1	781.3	754.1	600.2	440.0	350.2	319.2	312.9	306.9	301.8	301.8
35°	862.2	881.5	809.1	577.8	385.0	311.6	297.4	291.4	283.8	278.5	277.8
37.5°	968.8	998.8	848.3	538.0	337.6	293.0	284.1	274.3	262.3	251.9	249.4
40°	1115.1	1122.0	867.6	473.2	302.2	282.9	271.8	259.5	244.3	232.6	231.4
42.5°	1262.1	1239.3	863.8	403.6	281.9	273.7	259.2	245.6	232.0	222.2	222.2
45°	1429.3	1341.7	835.1	333.8	263.6	263.3	247.5	234.5	224.1	216.8	215.2
47.5°	1589.2	1433.7	785.4	282.3	244.6	252.9	239.9	229.5	220.0	213.0	211.8
50°	1783.3	1540.2	732.6	246.2	226.3	243.7	236.7	231.4	222.2	210.2	208.9
52.5°	1976.1	1664.7	691.9	219.0	210.2	236.4	238.6	239.3	230.7	207.3	205.8
55°	2183.1	1797.8	648.9	197.9	196.9	232.9	243.1	242.4	238.3	208.0	205.4
57.5°	2380.0	1931.5	584.7	183.0	186.5	229.5	244.0	233.9	226.6	211.1	207.0
60°	2543.1	2042.1	490.5	172.6	177.6	222.5	237.7	222.5	210.2	210.5	206.7
62.5°	2622.4	2073.1	375.2	160.6	170.4	211.1	228.5	214.0	202.6	211.8	209.6
65°	2562.1	1984.9	267.4	149.5	161.5	197.9	223.1	206.7	198.8	218.1	215.6
67.5°	2345.2	1744.7	194.1	139.7	153.0	184.3	213.0	200.1	195.0	222.8	217.1
69°	2114.8	1506.4	168.1	134.0	147.0	177.0	206.4	196.6	192.2	216.2	208.0
70°	1923.3	1322.8	155.2	130.5	141.9	172.9	201.3	194.4	189.3	208.3	198.5
72.5°	1379.0	855.0	130.5	120.1	128.6	163.7	190.3	186.2	178.6	188.1	181.7
75°	833.2	446.3	110.9	109.4	114.7	151.1	177.3	172.3	164.7	165.6	162.5
77.5°	382.8	206.1	92.9	96.7	100.2	135.3	161.5	155.8	148.9	146.3	146.7
80°	167.8	120.4	77.8	82.5	84.4	121.7	144.4	138.1	130.5	144.1	133.7
82.5°	90.7	69.9	60.7	63.8	69.2	105.9	125.5	117.3	110.0	128.0	103.4
85°	36.7	35.7	41.1	44.2	48.0	76.2	104.9	96.4	87.6	78.4	76.5
87.5°	15.8	17.1	20.2	21.5	25.6	47.4	70.5	61.6	61.9	53.1	52.2
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)