

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: P195865

Luminaire Tested: **NAV-AF-01-D-UNV-T4FT-7050-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195865
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24256)
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-T4FT-7050-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 5000K, 615mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE IV FORWARD THROW OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4057 lumens
Efficiency: N/A
Efficacy: 119.3 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B1 - U0 - G1

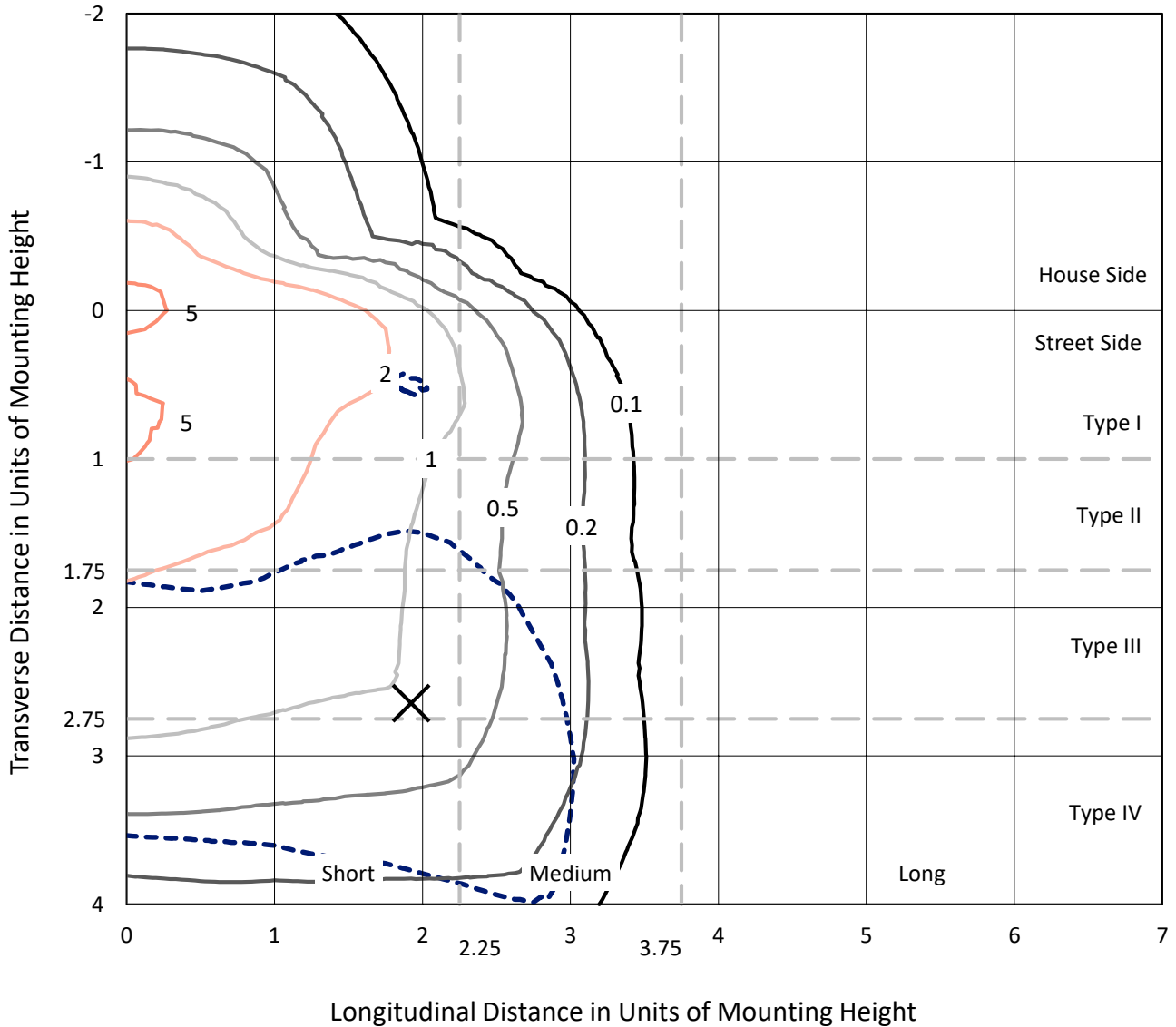
Input Watts (W): 34
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

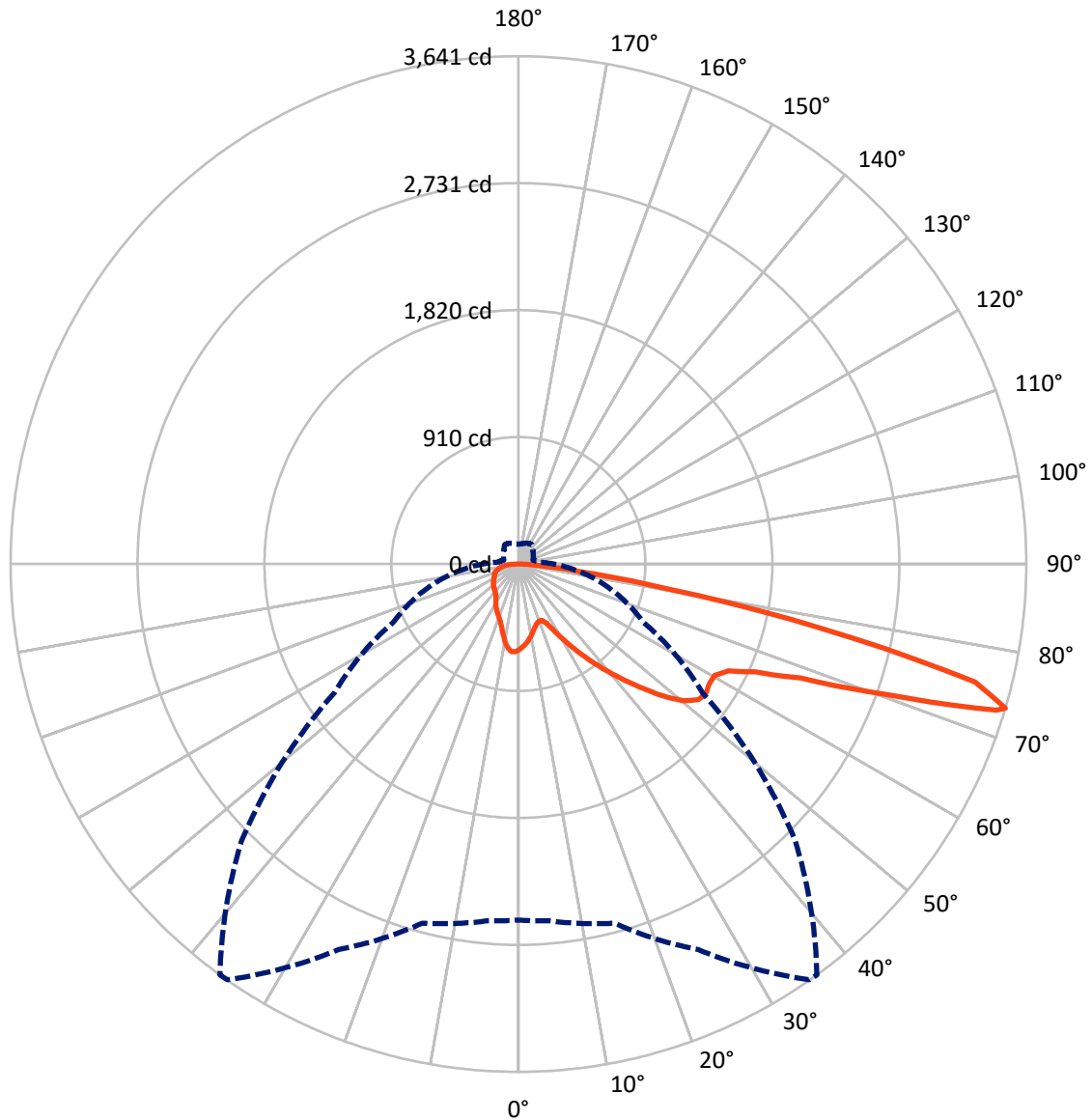
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 6.1 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 36-Deg Lateral - - - Horizontal Cone Through 73-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	782.3	0.0	782.3
	% Fixture	19.3	0.0	19.3
Street Side	Lumens	3274.7	0.0	3274.7
	% Fixture	80.7	0.0	80.7
Total	Lumens	4057.0	0.0	4057.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	55.8	1.4
10°-20°	140.2	3.5
20°-30°	224.8	5.5
30°-40°	371.8	9.2
40°-50°	575.2	14.2
50°-60°	770.1	19.0
60°-70°	1006.0	24.8
70°-80°	821.7	20.3
80°-90°	91.5	2.3
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°	4057.0	100.0
0°-180°	4057.0	100.0



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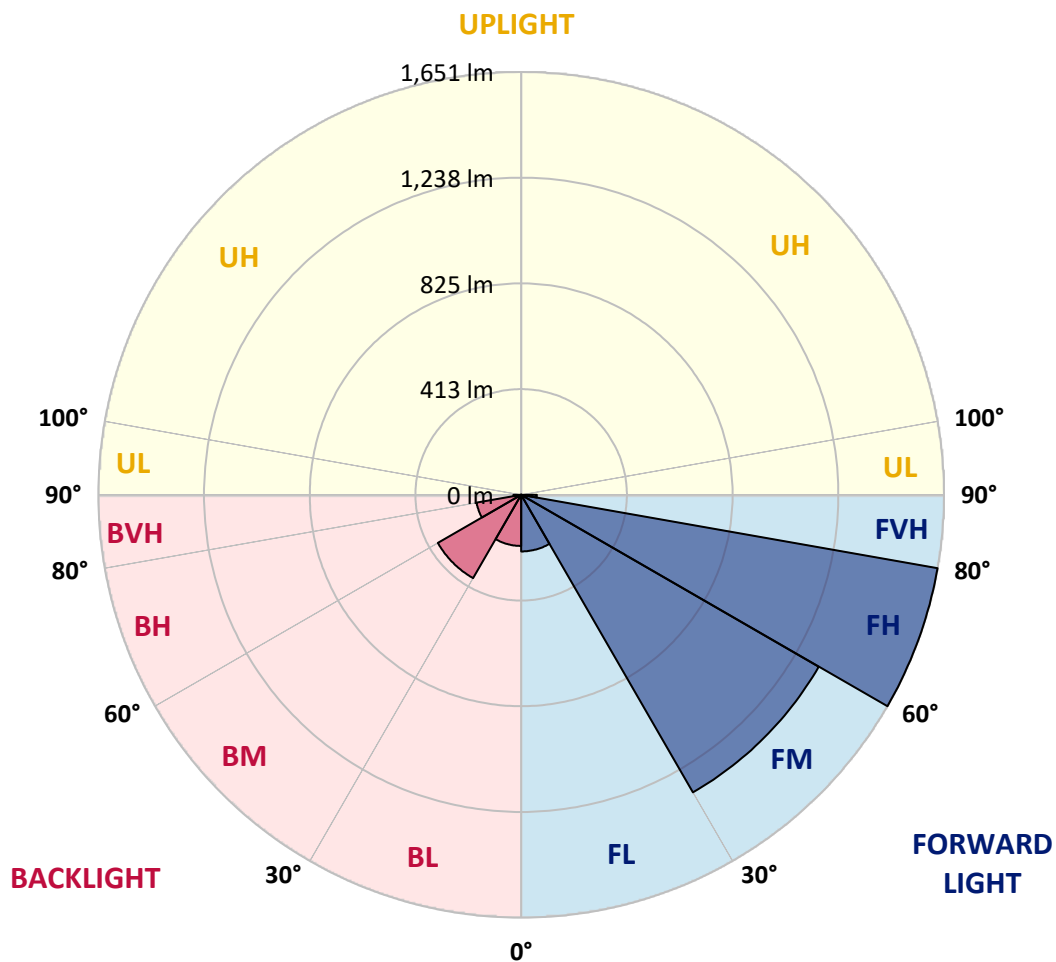
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	221.1	5.4			
FM (30°-60°)	1341.4	33.1			
FH (60°-80°)	1650.9	40.7			G1/1800
FVH (80°-90°)	61.3	1.5			G1/100
BL (0°-30°)	199.7	4.9	B1/500		
BM (30°-60°)	375.7	9.3	B1/1000		
BH (60°-80°)	176.8	4.4	B1/500		G1/500
BVH (80°-90°)	30.1	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 IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	614.5	614.5	614.5	614.5	614.5	614.5	614.5	614.5	614.5	614.5	614.5
2.5°	591.1	592.6	592.9	594.7	594.7	594.4	595.2	598.3	599.8	603.4	606.5
5°	561.9	563.7	564.5	567.6	571.5	571.7	574.6	580.5	586.2	594.2	600.9
7.5°	529.2	531.3	533.3	539.8	545.4	546.0	551.4	560.9	568.4	578.2	590.3
10°	497.5	498.0	500.1	508.3	515.8	516.6	524.3	535.1	545.2	558.8	572.5
12.5°	471.5	473.0	472.5	478.7	485.1	485.6	495.9	509.6	524.3	539.8	556.0
15°	462.4	462.2	456.8	456.5	459.3	459.9	469.9	485.9	502.4	521.5	542.3
17.5°	468.6	466.6	452.4	443.6	441.8	442.3	449.8	467.3	484.9	506.8	531.8
20°	502.6	494.7	461.4	440.3	434.3	434.3	438.7	452.9	472.2	497.7	529.2
22.5°	583.3	571.0	500.1	462.4	441.6	439.5	436.1	447.0	468.4	499.0	539.8
25°	684.9	679.0	571.0	521.5	478.4	471.7	449.5	453.4	476.4	513.0	568.6
27.5°	779.0	768.7	664.0	607.3	546.5	536.2	489.2	473.5	495.4	538.7	610.4
30°	833.9	826.9	759.6	705.5	633.1	619.9	552.7	513.2	529.5	581.3	669.7
32.5°	893.7	889.6	855.5	806.3	726.9	711.7	634.6	577.9	581.5	637.7	741.1
35°	951.7	957.1	937.8	901.7	827.9	813.8	744.7	662.5	645.7	701.1	817.4
37.5°	1021.3	1022.6	1010.4	987.0	934.1	922.5	865.6	752.7	715.6	768.7	891.1
40°	1160.2	1139.8	1092.4	1073.9	1042.4	1035.2	970.2	835.4	780.5	838.0	960.7
42.5°	1310.5	1278.8	1204.5	1174.1	1161.5	1154.8	1057.4	890.6	841.4	907.3	1029.0
45°	1431.6	1405.9	1333.2	1295.5	1297.1	1286.3	1133.4	939.8	907.3	976.9	1105.3
47.5°	1551.0	1507.9	1426.5	1421.1	1439.1	1423.1	1206.1	989.1	976.2	1052.7	1181.6
50°	1558.7	1519.5	1486.5	1529.8	1560.8	1540.9	1272.1	1053.5	1047.6	1144.5	1280.1
52.5°	1464.6	1459.0	1509.2	1582.2	1633.5	1615.7	1326.0	1119.7	1120.5	1259.2	1399.9
55°	1430.4	1423.1	1483.5	1573.2	1642.5	1631.9	1366.2	1194.5	1201.5	1398.4	1528.6
57.5°	1488.1	1470.0	1481.9	1556.1	1621.4	1615.2	1407.9	1277.5	1290.1	1558.7	1647.4
60°	1667.2	1630.4	1567.5	1581.4	1622.1	1618.5	1467.7	1370.0	1391.2	1725.8	1722.7
62.5°	1935.6	1893.8	1765.7	1703.8	1694.8	1687.9	1566.5	1483.7	1494.3	1846.4	1678.8
65°	2229.9	2185.1	2032.8	1931.5	1878.4	1863.4	1725.8	1620.8	1554.6	1846.1	1508.2
67.5°	2560.4	2513.0	2361.1	2264.5	2207.0	2181.5	1984.3	1731.7	1535.0	1689.9	1206.9
70°	2898.9	2853.7	2784.1	2817.9	2843.2	2804.3	2391.6	1768.5	1394.3	1324.9	810.4
72.5°	2719.2	2715.6	2768.4	3088.6	3575.5	3583.2	2798.3	1664.4	1077.2	787.5	432.0
73°	2552.4	2567.6	2665.6	3048.6	3638.1	3640.7	2806.3	1610.5	989.1	678.4	379.4
75°	1322.3	1425.5	1788.9	2472.0	3368.8	3380.9	2473.8	1219.2	589.5	376.9	255.7
77.5°	354.2	349.5	576.4	1204.3	2245.9	2229.9	1563.1	590.3	282.5	236.4	179.4
80°	121.4	123.0	196.2	440.5	1048.3	1085.7	678.4	257.5	185.9	164.7	127.1
82.5°	61.9	63.9	102.6	187.4	438.5	429.2	218.3	151.6	124.5	100.0	71.1
85°	33.0	34.0	56.5	97.2	160.8	162.7	76.8	80.9	79.1	56.7	35.1
87.5°	16.2	16.8	27.1	42.8	59.5	57.5	26.8	35.1	38.9	32.0	19.3
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°	614.5	614.5	614.5	614.5	614.5	614.5	614.5	614.5	614.5	614.5	614.5
2.5°	610.4	610.4	613.7	619.4	623.5	627.4	630.0	634.1	636.4	636.2	635.9
5°	606.3	608.8	615.5	622.5	627.1	630.2	630.2	632.0	632.0	631.3	630.2
7.5°	596.7	601.1	610.9	617.1	618.4	615.0	608.3	603.2	596.7	593.4	592.1
10°	581.5	587.2	599.6	602.4	595.7	583.8	567.6	553.7	541.3	535.6	533.8
12.5°	566.6	574.0	585.6	581.3	565.3	542.1	517.1	498.0	484.1	478.7	476.9
15°	554.2	563.2	572.2	558.6	530.7	498.5	470.9	453.2	442.6	438.5	437.4
17.5°	546.0	556.5	559.6	534.1	495.4	459.3	434.9	423.3	418.6	416.8	416.3
20°	546.5	558.3	550.8	510.4	461.4	425.1	408.8	405.5	405.5	405.5	405.2
22.5°	560.6	571.0	547.2	488.2	428.7	396.2	389.2	392.1	394.1	394.1	393.9
25°	590.0	595.7	549.8	466.8	398.0	371.2	371.4	376.9	378.7	378.7	378.1
27.5°	634.9	630.2	554.5	443.1	367.8	348.5	352.1	357.0	358.3	357.5	357.3
30°	691.1	672.5	558.3	415.3	339.5	327.4	330.5	333.3	332.3	330.5	330.2
32.5°	754.0	715.6	556.0	384.1	314.5	305.5	307.3	308.8	307.3	302.9	302.9
35°	816.3	754.5	543.4	350.0	294.6	284.3	284.1	289.0	288.7	283.5	283.8
37.5°	871.0	785.2	518.9	318.9	277.6	268.9	269.9	273.0	274.5	267.6	266.8
40°	918.7	806.3	484.3	292.3	264.0	264.5	261.6	256.7	254.9	251.8	251.3
42.5°	963.5	821.0	447.7	270.1	257.0	262.9	253.4	241.8	236.9	239.7	241.5
45°	1007.6	837.5	412.4	251.8	248.2	258.3	245.1	232.2	226.6	227.9	229.7
47.5°	1061.5	860.4	369.9	232.2	234.8	249.8	240.0	226.1	217.6	212.4	210.9
50°	1132.4	893.7	314.7	211.1	220.6	240.5	235.6	217.0	207.8	197.4	194.9
52.5°	1221.0	925.1	259.1	194.1	209.0	232.5	228.4	209.3	198.0	185.6	183.5
55°	1309.5	929.5	211.1	179.4	195.9	221.7	219.6	203.1	187.1	177.1	175.0
57.5°	1371.3	888.0	178.9	167.0	183.3	208.3	211.6	195.6	178.1	170.4	169.1
60°	1372.4	788.8	159.3	158.8	173.7	196.7	203.4	186.9	172.4	167.3	166.3
62.5°	1263.3	635.7	146.7	152.6	166.8	187.1	197.2	182.0	171.2	169.1	168.1
65°	1058.9	469.7	136.6	146.9	160.3	179.1	192.0	180.4	170.6	169.9	169.1
67.5°	781.8	322.0	128.1	139.7	153.1	170.9	187.1	178.1	167.5	170.6	169.6
70°	491.8	215.0	120.1	131.5	143.6	161.4	180.7	174.0	163.7	161.9	158.5
72.5°	277.6	155.4	110.6	120.9	131.2	148.7	171.9	167.0	154.9	147.7	144.3
73°	250.8	147.2	108.3	118.3	128.4	146.2	169.9	165.0	152.3	144.3	141.3
75°	183.5	120.4	97.7	107.7	116.5	134.3	160.1	154.7	141.0	131.5	129.4
77.5°	133.0	92.8	84.0	93.1	100.8	117.8	145.4	139.2	125.8	120.6	118.6
80°	95.9	70.4	69.6	78.4	85.1	102.3	129.7	123.2	110.3	125.5	122.2
82.5°	57.2	45.1	51.0	60.8	67.8	85.8	112.6	105.2	92.8	93.8	79.9
85°	27.3	25.5	31.7	40.0	44.9	58.8	93.8	87.9	74.2	60.8	59.5
87.5°	12.1	11.6	15.2	17.8	24.0	35.3	64.2	57.0	53.9	32.2	25.3
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)