

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: P197311

Luminaire Tested: **NAV-AF-01-D-UNV-T4FT-8030-800**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P197311  
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-8030-800  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(1) 80 CRI, 3000K, 800mA 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: 4060 lumens  
Efficiency: N/A  
Efficacy: 92.3 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): 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

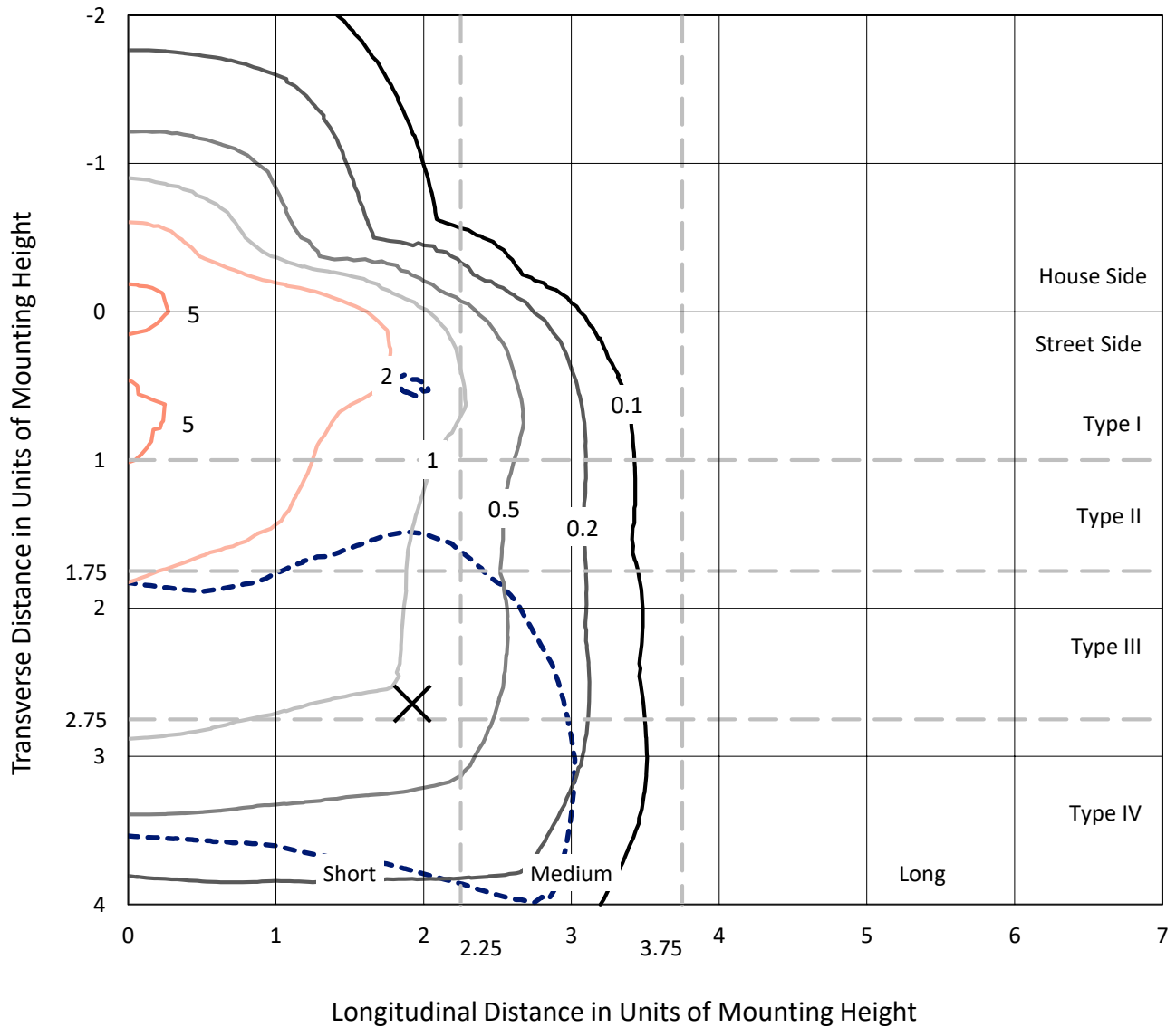


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### Iso-Footcandle Lines of Horizontal Illumination

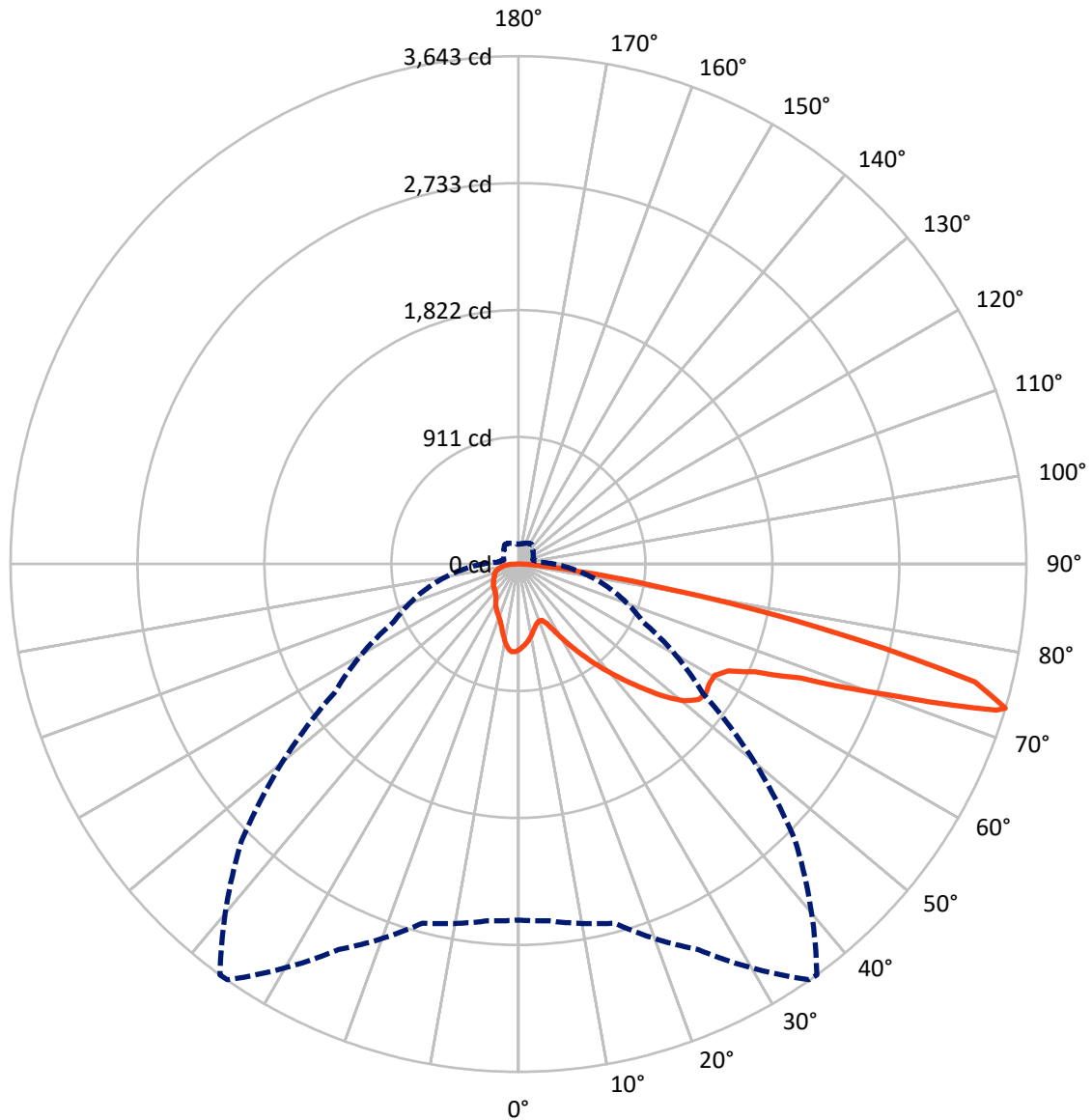
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 6.2 fc  
 Type 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
<b>House Side</b>	Lumens	782.9	0.0	782.9
	% Fixture	19.3	0.0	19.3
<b>Street Side</b>	Lumens	3277.1	0.0	3277.1
	% Fixture	80.7	0.0	80.7
<b>Total</b>	Lumens	4060.0	0.0	4060.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	55.9	1.4
10°-20°	140.3	3.5
20°-30°	224.9	5.5
30°-40°	372.0	9.2
40°-50°	575.7	14.2
50°-60°	770.7	19.0
60°-70°	1006.7	24.8
70°-80°	822.3	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°	4060.0	100.0
0°-180°	4060.0	100.0

**Coefficient of Utilization**



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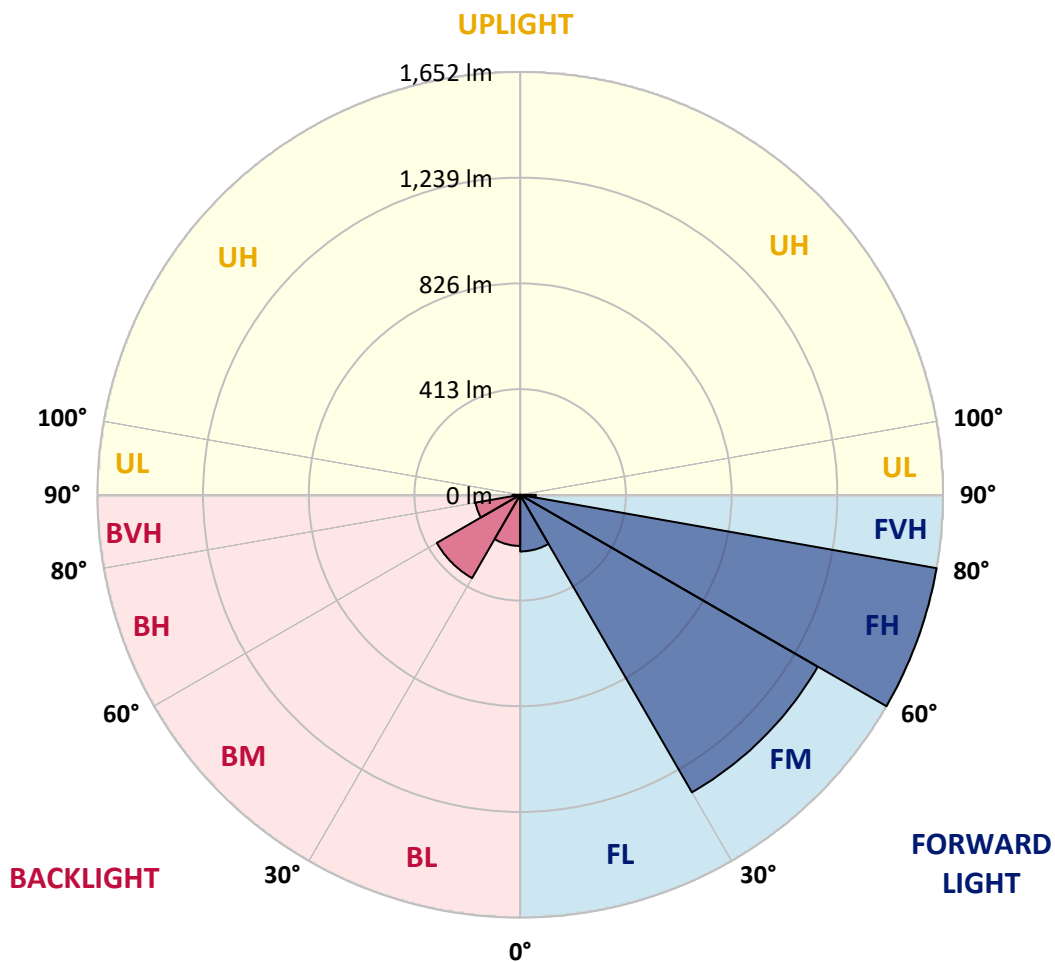
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	221.2	5.4			
FM (30°-60°)	1342.4	33.1			
FH (60°-80°)	1652.1	40.7			G1/1800
FVH (80°-90°)	61.4	1.5			G1/100
BL (0°-30°)	199.8	4.9	B1/500		
BM (30°-60°)	376.0	9.3	B1/1000		
BH (60°-80°)	176.9	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°	615.0	615.0	615.0	615.0	615.0	615.0	615.0	615.0	615.0	615.0	615.0
2.5°	591.5	593.0	593.3	595.1	595.1	594.9	595.6	598.7	600.3	603.9	607.0
5°	562.3	564.2	564.9	568.0	571.9	572.2	575.0	580.9	586.6	594.6	601.3
7.5°	529.6	531.7	533.7	540.2	545.8	546.4	551.8	561.3	568.8	578.6	590.7
10°	497.9	498.4	500.4	508.7	516.2	516.9	524.7	535.5	545.6	559.3	572.9
12.5°	471.8	473.4	472.8	479.0	485.5	486.0	496.3	510.0	524.7	540.2	556.4
15°	462.8	462.5	457.1	456.8	459.7	460.2	470.3	486.3	502.8	521.8	542.7
17.5°	469.0	466.9	452.7	443.9	442.1	442.7	450.1	467.7	485.2	507.1	532.2
20°	503.0	495.0	461.7	440.6	434.7	434.7	439.0	453.2	472.6	498.1	529.6
22.5°	583.8	571.4	500.4	462.8	441.9	439.8	436.5	447.3	468.7	499.4	540.2
25°	685.4	679.5	571.4	521.8	478.8	472.1	449.9	453.7	476.7	513.3	569.1
27.5°	779.5	769.2	664.5	607.7	546.9	536.6	489.6	473.9	495.8	539.1	610.8
30°	834.5	827.5	760.2	706.0	633.5	620.4	553.1	513.6	529.8	581.7	670.2
32.5°	894.3	890.2	856.2	806.9	727.4	712.2	635.1	578.3	582.0	638.2	741.6
35°	952.4	957.8	938.5	902.3	828.6	814.4	745.2	663.0	646.2	701.6	818.0
37.5°	1022.0	1023.3	1011.2	987.7	934.8	923.2	866.2	753.2	716.1	769.2	891.8
40°	1161.1	1140.7	1093.2	1074.7	1043.2	1036.0	971.0	836.0	781.1	838.6	961.4
42.5°	1311.5	1279.7	1205.4	1175.0	1162.4	1155.7	1058.1	891.2	842.0	908.0	1029.8
45°	1432.7	1406.9	1334.2	1296.5	1298.0	1287.2	1134.2	940.5	908.0	977.7	1106.1
47.5°	1552.1	1509.1	1427.5	1422.1	1440.2	1424.2	1207.0	989.8	976.9	1053.5	1182.5
50°	1559.9	1520.7	1487.6	1531.0	1561.9	1542.1	1273.0	1054.3	1048.3	1145.3	1281.0
52.5°	1465.7	1460.0	1510.3	1583.3	1634.7	1616.9	1326.9	1120.6	1121.3	1260.1	1401.0
55°	1431.4	1424.2	1484.5	1574.3	1643.7	1633.1	1367.2	1195.4	1202.3	1399.4	1529.7
57.5°	1489.2	1471.1	1483.0	1557.3	1622.6	1616.4	1409.0	1278.4	1291.1	1559.9	1648.6
60°	1668.5	1631.6	1568.6	1582.6	1623.3	1619.7	1468.8	1371.0	1392.2	1727.0	1723.9
62.5°	1937.0	1895.2	1767.0	1705.1	1696.1	1689.1	1567.6	1484.8	1495.4	1847.8	1680.1
65°	2231.6	2186.7	2034.3	1932.9	1879.7	1864.8	1727.0	1622.0	1555.7	1847.5	1509.3
67.5°	2562.3	2514.8	2362.9	2266.2	2208.6	2183.1	1985.8	1733.0	1536.1	1691.2	1207.8
70°	2901.0	2855.9	2786.2	2820.0	2845.3	2806.3	2393.3	1769.8	1395.3	1325.9	811.0
72.5°	2721.2	2717.6	2770.5	3090.9	3578.1	3585.9	2800.4	1665.6	1078.0	788.1	432.3
73°	2554.3	2569.5	2667.5	3050.9	3640.8	3643.4	2808.4	1611.7	989.8	678.9	379.7
75°	1323.3	1426.5	1790.2	2473.8	3371.3	3383.4	2475.6	1220.1	589.9	377.1	255.9
77.5°	354.4	349.8	576.8	1205.2	2247.6	2231.6	1564.3	590.7	282.7	236.5	179.5
80°	121.5	123.0	196.3	440.9	1049.1	1086.5	678.9	257.7	186.0	164.8	127.2
82.5°	61.9	64.0	102.7	187.5	438.8	429.5	218.5	151.7	124.6	100.1	71.2
85°	33.0	34.1	56.5	97.3	161.0	162.8	76.9	81.0	79.2	56.8	35.1
87.5°	16.3	16.8	27.1	42.8	59.6	57.5	26.8	35.1	39.0	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°	615.0	615.0	615.0	615.0	615.0	615.0	615.0	615.0	615.0	615.0	615.0
2.5°	610.8	610.8	614.2	619.9	624.0	627.9	630.4	634.6	636.9	636.6	636.4
5°	606.7	609.3	616.0	623.0	627.6	630.7	630.7	632.5	632.5	631.7	630.7
7.5°	597.2	601.6	611.4	617.6	618.8	615.5	608.8	603.6	597.2	593.8	592.5
10°	582.0	587.6	600.0	602.8	596.1	584.3	568.0	554.1	541.7	536.0	534.2
12.5°	567.0	574.5	586.1	581.7	565.7	542.5	517.5	498.4	484.4	479.0	477.2
15°	554.6	563.6	572.7	559.0	531.1	498.9	471.3	453.5	442.9	438.8	437.8
17.5°	546.4	556.9	560.0	534.5	495.8	459.7	435.2	423.6	418.9	417.1	416.6
20°	546.9	558.7	551.3	510.8	461.7	425.4	409.1	405.8	405.8	405.8	405.5
22.5°	561.1	571.4	547.6	488.6	429.0	396.5	389.5	392.4	394.4	394.4	394.2
25°	590.5	596.1	550.2	467.2	398.3	371.5	371.7	377.1	378.9	378.9	378.4
27.5°	635.4	630.7	554.9	443.4	368.1	348.8	352.4	357.3	358.6	357.8	357.5
30°	691.6	673.0	558.7	415.6	339.7	327.6	330.7	333.5	332.5	330.7	330.4
32.5°	754.5	716.1	556.4	384.4	314.7	305.7	307.5	309.0	307.5	303.1	303.1
35°	817.0	755.0	543.8	350.3	294.8	284.5	284.3	289.2	288.9	283.8	284.0
37.5°	871.6	785.7	519.3	319.1	277.8	269.1	270.1	273.2	274.7	267.8	267.0
40°	919.4	806.9	484.7	292.5	264.1	264.7	261.8	256.9	255.1	252.0	251.5
42.5°	964.2	821.6	448.1	270.3	257.2	263.1	253.6	242.0	237.1	239.9	241.7
45°	1008.4	838.1	412.7	252.0	248.4	258.5	245.3	232.4	226.7	228.0	229.8
47.5°	1062.3	861.1	370.2	232.4	235.0	250.0	240.2	226.2	217.7	212.6	211.0
50°	1133.2	894.3	315.0	211.3	220.8	240.7	235.8	217.2	207.9	197.6	195.0
52.5°	1221.9	925.8	259.2	194.2	209.2	232.7	228.6	209.5	198.1	185.7	183.7
55°	1310.4	930.2	211.3	179.5	196.0	221.8	219.8	203.3	187.3	177.2	175.2
57.5°	1372.3	888.7	179.0	167.2	183.4	208.4	211.8	195.8	178.2	170.5	169.2
60°	1373.4	789.4	159.4	158.9	173.9	196.8	203.5	187.0	172.6	167.4	166.4
62.5°	1264.3	636.1	146.8	152.7	166.9	187.3	197.3	182.1	171.3	169.2	168.2
65°	1059.7	470.0	136.7	147.0	160.4	179.3	192.2	180.6	170.8	170.0	169.2
67.5°	782.4	322.2	128.2	139.8	153.2	171.0	187.3	178.2	167.7	170.8	169.7
70°	492.2	215.1	120.2	131.6	143.7	161.5	180.8	174.1	163.8	162.0	158.6
72.5°	277.8	155.5	110.7	121.0	131.3	148.8	172.1	167.2	155.0	147.8	144.5
73°	251.0	147.3	108.3	118.4	128.5	146.3	170.0	165.1	152.5	144.5	141.4
75°	183.7	120.5	97.8	107.8	116.6	134.4	160.2	154.8	141.1	131.6	129.5
77.5°	133.1	92.9	84.1	93.1	100.9	117.9	145.5	139.3	125.9	120.7	118.7
80°	96.0	70.4	69.6	78.4	85.1	102.4	129.8	123.3	110.4	125.6	122.3
82.5°	57.3	45.1	51.1	60.9	67.8	85.9	112.7	105.2	92.9	93.9	80.0
85°	27.3	25.5	31.7	40.0	44.9	58.8	93.9	88.0	74.3	60.9	59.6
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)