

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: P195877

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195877
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
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 5000K, 1050mA 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: 6157 lumens
Efficiency: N/A
Efficacy: 104.4 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 - G2

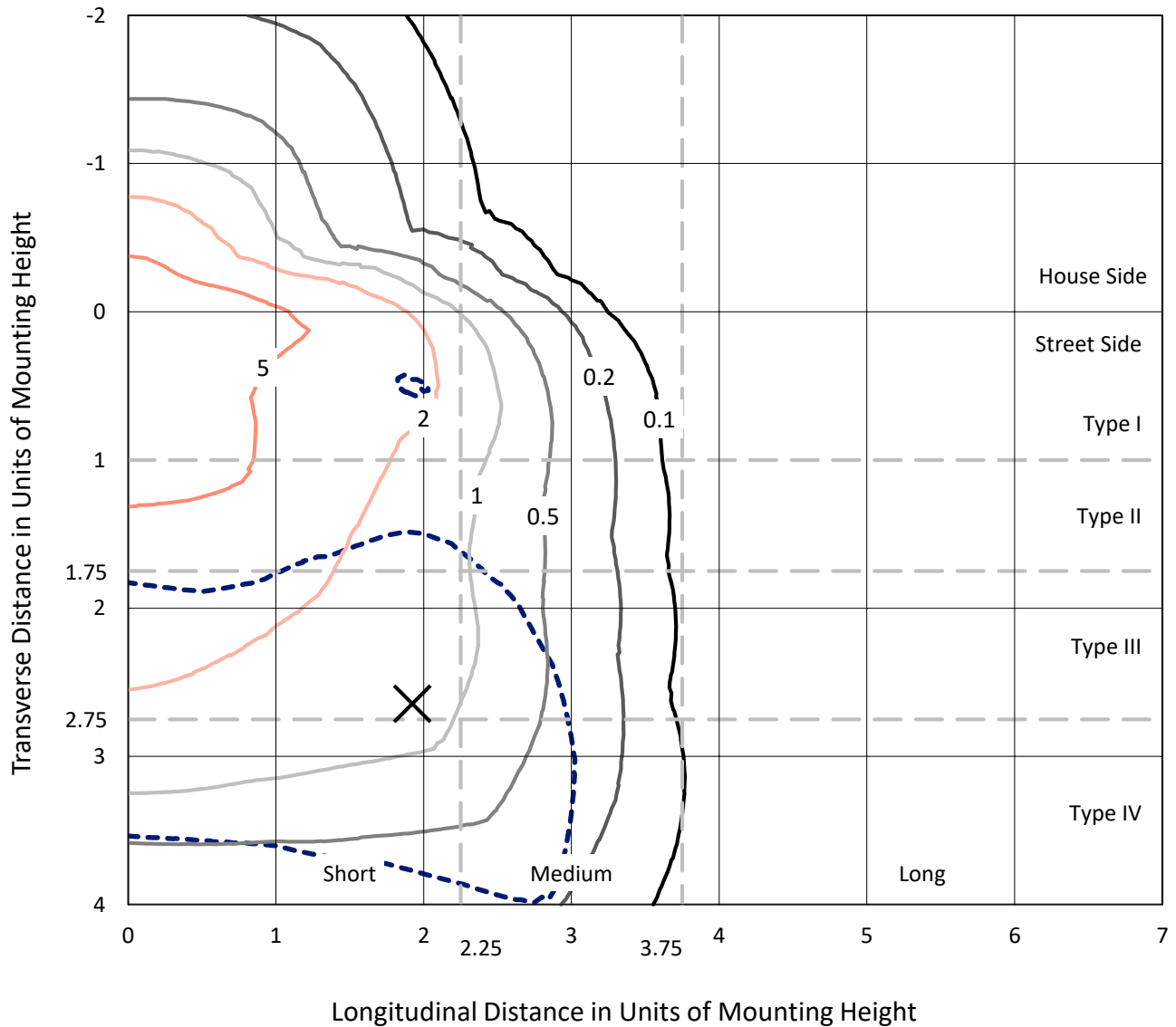
Input Watts (W): 59
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

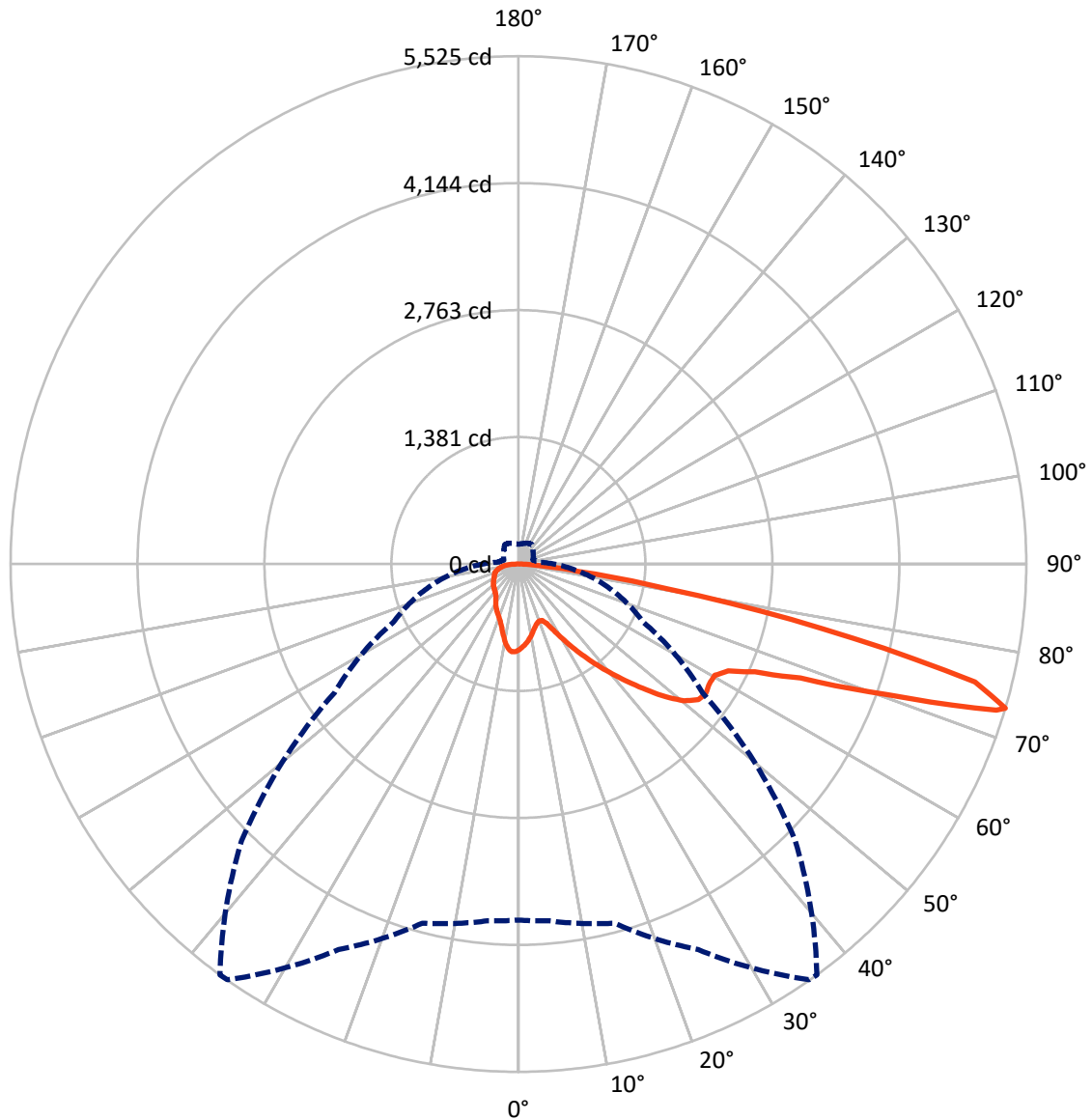
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 9.3 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	1187.3	0.0	1187.3
	% Fixture	19.3	0.0	19.3
Street Side	Lumens	4969.7	0.0	4969.7
	% Fixture	80.7	0.0	80.7
Total	Lumens	6157.0	0.0	6157.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	84.7	1.4
10°-20°	212.7	3.5
20°-30°	341.1	5.5
30°-40°	564.2	9.2
40°-50°	873.0	14.2
50°-60°	1168.7	19.0
60°-70°	1526.7	24.8
70°-80°	1247.0	20.3
80°-90°	138.8	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°	6157.0	100.0
0°-180°	6157.0	100.0



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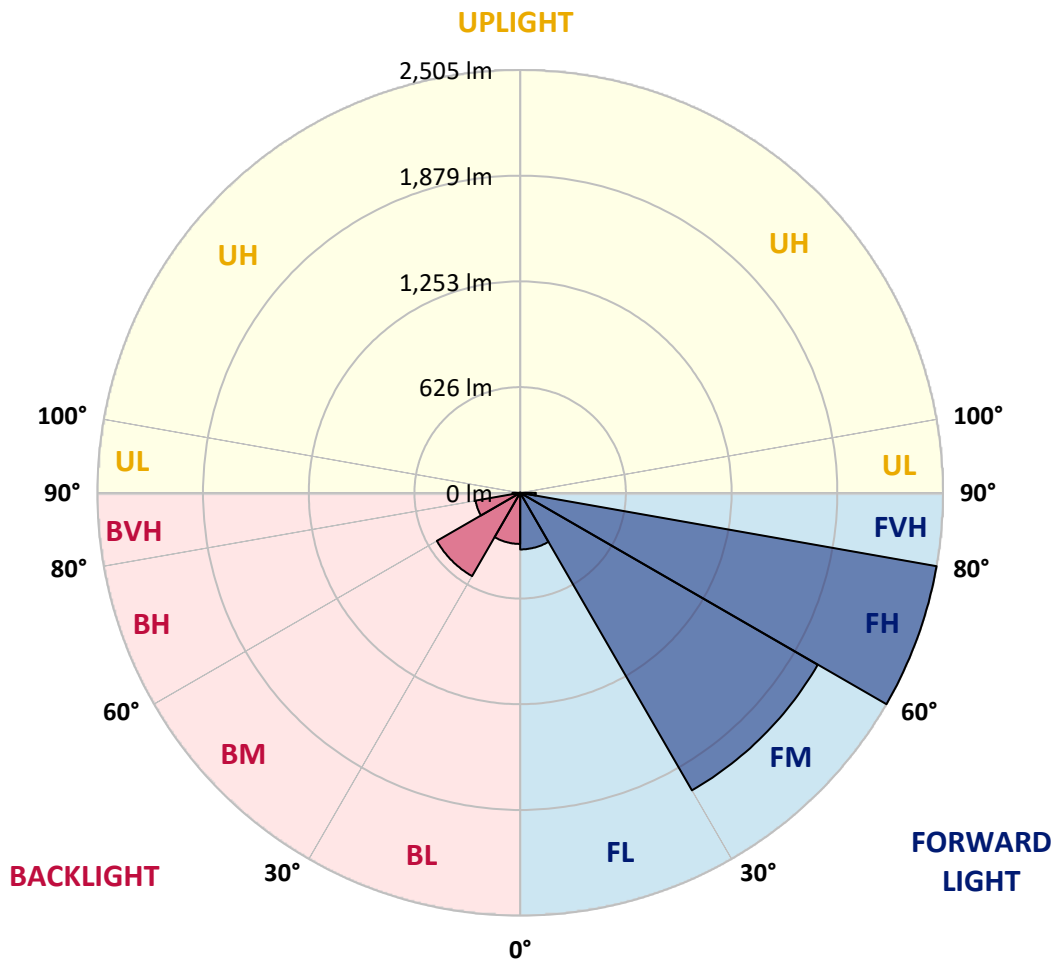
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	335.5	5.4			
FM (30°-60°)	2035.7	33.1			
FH (60°-80°)	2505.4	40.7			G2/5000
FVH (80°-90°)	93.1	1.5			G1/100
BL (0°-30°)	303.1	4.9	B1/500		
BM (30°-60°)	570.2	9.3	B1/1000		
BH (60°-80°)	268.3	4.4	B1/500		G1/500
BVH (80°-90°)	45.7	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-G2

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	932.6	932.6	932.6	932.6	932.6	932.6	932.6	932.6	932.6	932.6	932.6
2.5°	897.0	899.4	899.7	902.5	902.5	902.1	903.3	908.0	910.3	915.8	920.5
5°	852.8	855.5	856.7	861.4	867.3	867.7	872.0	881.0	889.6	901.7	911.9
7.5°	803.1	806.3	809.4	819.2	827.8	828.5	836.8	851.2	862.6	877.4	895.8
10°	755.0	755.8	758.9	771.4	782.8	784.0	795.7	812.1	827.4	848.1	868.8
12.5°	715.5	717.8	717.1	726.4	736.2	737.0	752.7	773.4	795.7	819.2	843.8
15°	701.8	701.4	693.2	692.8	697.1	697.9	713.1	737.4	762.4	791.4	823.1
17.5°	711.2	708.1	686.5	673.2	670.5	671.3	682.6	709.2	735.8	769.1	807.0
20°	762.8	750.7	700.2	668.2	659.2	659.2	665.8	687.3	716.7	755.4	803.1
22.5°	885.3	866.5	758.9	701.8	670.1	667.0	661.9	678.3	710.8	757.4	819.2
25°	1039.4	1030.4	866.5	791.4	726.1	715.9	682.2	688.1	722.9	778.5	863.0
27.5°	1182.2	1166.5	1007.7	921.7	829.3	813.7	742.5	718.6	751.9	817.6	926.3
30°	1265.5	1255.0	1152.8	1070.7	960.8	940.8	838.7	778.9	803.5	882.1	1016.3
32.5°	1356.3	1350.0	1298.4	1223.7	1103.2	1080.1	963.1	877.1	882.5	967.8	1124.7
35°	1444.3	1452.5	1423.2	1368.4	1256.5	1235.0	1130.2	1005.4	979.9	1064.0	1240.5
37.5°	1549.9	1551.9	1533.5	1497.9	1417.7	1400.1	1313.6	1142.3	1086.0	1166.5	1352.4
40°	1760.8	1729.9	1657.9	1629.7	1582.0	1571.0	1472.5	1267.9	1184.5	1271.8	1458.0
42.5°	1988.8	1940.7	1828.0	1781.9	1762.7	1752.5	1604.7	1351.6	1276.9	1377.0	1561.6
45°	2172.7	2133.6	2023.3	1966.1	1968.5	1952.1	1720.1	1426.3	1377.0	1482.6	1677.4
47.5°	2353.8	2288.5	2164.9	2156.7	2184.0	2159.8	1830.4	1501.0	1481.5	1597.6	1793.2
50°	2365.5	2306.1	2256.0	2321.7	2368.7	2338.6	1930.5	1598.8	1589.8	1736.9	1942.7
52.5°	2222.8	2214.2	2290.4	2401.1	2479.0	2452.0	2012.3	1699.3	1700.5	1911.0	2124.6
55°	2170.7	2159.8	2251.3	2387.5	2492.7	2476.6	2073.3	1812.8	1823.4	2122.2	2319.8
57.5°	2258.4	2231.0	2249.0	2361.6	2460.6	2451.2	2136.7	1938.8	1957.9	2365.5	2500.1
60°	2530.2	2474.3	2378.9	2400.0	2461.8	2456.3	2227.5	2079.2	2111.3	2619.0	2614.3
62.5°	2937.5	2874.1	2679.7	2585.8	2572.1	2561.5	2377.3	2251.7	2267.8	2802.1	2547.8
65°	3384.2	3316.2	3085.0	2931.2	2850.6	2827.9	2619.0	2459.8	2359.3	2801.7	2288.9
67.5°	3885.7	3813.8	3583.3	3436.6	3349.4	3310.7	3011.4	2628.0	2329.6	2564.7	1831.6
70°	4399.4	4330.9	4225.3	4276.5	4314.9	4255.8	3629.5	2684.0	2116.0	2010.7	1229.9
72.5°	4126.7	4121.2	4201.4	4687.3	5426.3	5438.0	4246.8	2525.9	1634.8	1195.1	655.6
73°	3873.6	3896.7	4045.3	4626.7	5521.3	5525.2	4258.9	2444.2	1501.0	1029.6	575.8
75°	2006.8	2163.3	2714.9	3751.6	5112.5	5130.9	3754.3	1850.3	894.7	571.9	388.1
77.5°	537.5	530.5	874.7	1827.7	3408.5	3384.2	2372.2	895.8	428.7	358.7	272.3
80°	184.3	186.6	297.7	668.6	1591.0	1647.7	1029.6	390.8	282.1	250.0	192.9
82.5°	93.9	97.0	155.7	284.4	665.4	651.3	331.3	230.0	188.9	151.8	108.0
85°	50.1	51.6	85.7	147.5	244.1	246.8	116.6	122.8	120.1	86.1	53.2
87.5°	24.6	25.4	41.1	64.9	90.4	87.2	40.7	53.2	59.1	48.5	29.3
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°	932.6	932.6	932.6	932.6	932.6	932.6	932.6	932.6	932.6	932.6	932.6
2.5°	926.3	926.3	931.4	940.0	946.3	952.2	956.1	962.3	965.9	965.5	965.1
5°	920.1	924.0	934.2	944.7	951.8	956.5	956.5	959.2	959.2	958.0	956.5
7.5°	905.6	912.3	927.1	936.5	938.5	933.4	923.2	915.4	905.6	900.5	898.6
10°	882.5	891.1	909.9	914.2	904.0	886.1	861.4	840.3	821.5	812.9	810.2
12.5°	859.8	871.2	888.8	882.1	857.9	822.7	784.7	755.8	734.7	726.4	723.7
15°	841.1	854.8	868.5	847.7	805.5	756.6	714.7	687.7	671.7	665.4	663.9
17.5°	828.5	844.6	849.3	810.6	751.9	697.1	659.9	642.3	635.3	632.6	631.8
20°	829.3	847.3	836.0	774.6	700.2	645.1	620.4	615.3	615.3	615.3	615.0
22.5°	850.8	866.5	830.5	740.9	650.6	601.3	590.7	595.0	598.1	598.1	597.7
25°	895.4	904.0	834.4	708.5	604.0	563.3	563.7	571.9	574.7	574.7	573.9
27.5°	963.5	956.5	841.5	672.5	558.2	528.9	534.4	541.8	543.8	542.6	542.2
30°	1048.8	1020.6	847.3	630.2	515.2	496.8	501.5	505.8	504.2	501.5	501.1
32.5°	1144.2	1086.0	843.8	582.9	477.3	463.6	466.3	468.7	466.3	459.7	459.7
35°	1238.9	1145.0	824.6	531.2	447.1	431.5	431.1	438.5	438.1	430.3	430.7
37.5°	1321.8	1191.6	787.5	483.9	421.3	408.0	409.6	414.3	416.6	406.1	404.9
40°	1394.2	1223.7	735.1	443.6	400.6	401.4	397.1	389.6	386.9	382.2	381.4
42.5°	1462.3	1246.0	679.5	410.0	390.0	399.0	384.5	366.9	359.5	363.8	366.5
45°	1529.2	1271.0	625.9	382.2	376.7	392.0	372.0	352.5	343.9	345.8	348.6
47.5°	1610.9	1305.8	561.4	352.5	356.4	379.1	364.2	343.1	330.2	322.3	320.0
50°	1718.5	1356.3	477.6	320.4	334.9	365.0	357.6	329.4	315.3	299.7	295.7
52.5°	1853.1	1404.0	393.1	294.6	317.3	352.9	346.6	317.6	300.4	281.7	278.5
55°	1987.3	1410.6	320.4	272.3	297.3	336.4	333.3	308.3	284.0	268.8	265.6
57.5°	2081.2	1347.7	271.5	253.5	278.1	316.1	321.2	296.9	270.3	258.6	256.6
60°	2082.7	1197.1	241.8	241.0	263.7	298.5	308.7	283.6	261.7	253.9	252.3
62.5°	1917.2	964.7	222.6	231.6	253.1	284.0	299.3	276.2	259.8	256.6	255.1
65°	1607.0	712.8	207.3	223.0	243.3	271.9	291.4	273.8	259.0	257.8	256.6
67.5°	1186.5	488.6	194.4	212.0	232.4	259.4	284.0	270.3	254.3	259.0	257.4
70°	746.4	326.3	182.3	199.5	217.9	244.9	274.2	264.1	248.4	245.7	240.6
72.5°	421.3	235.9	167.8	183.5	199.1	225.7	260.9	253.5	235.1	224.2	219.1
73°	380.6	223.4	164.3	179.6	194.8	221.8	257.8	250.4	231.2	219.1	214.4
75°	278.5	182.7	148.3	163.5	176.8	203.8	242.9	234.7	214.0	199.5	196.4
77.5°	201.9	140.8	127.5	141.2	153.0	178.8	220.6	211.2	190.9	183.1	179.9
80°	145.5	106.8	105.6	118.9	129.1	155.3	196.8	187.0	167.4	190.5	185.4
82.5°	86.8	68.5	77.5	92.3	102.9	130.3	171.0	159.6	140.8	142.4	121.3
85°	41.5	38.7	48.1	60.6	68.1	89.2	142.4	133.4	112.7	92.3	90.4
87.5°	18.4	17.6	23.1	27.0	36.4	53.6	97.4	86.5	81.8	48.9	38.3
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)