

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: P270316

Luminaire Tested: **NAV-AF-01-D-UNV-T4FT-7027-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270316
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-7027-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 2700K, 1200mA 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: 5868.3 lumens
Efficiency: N/A
Efficacy: 87.6 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

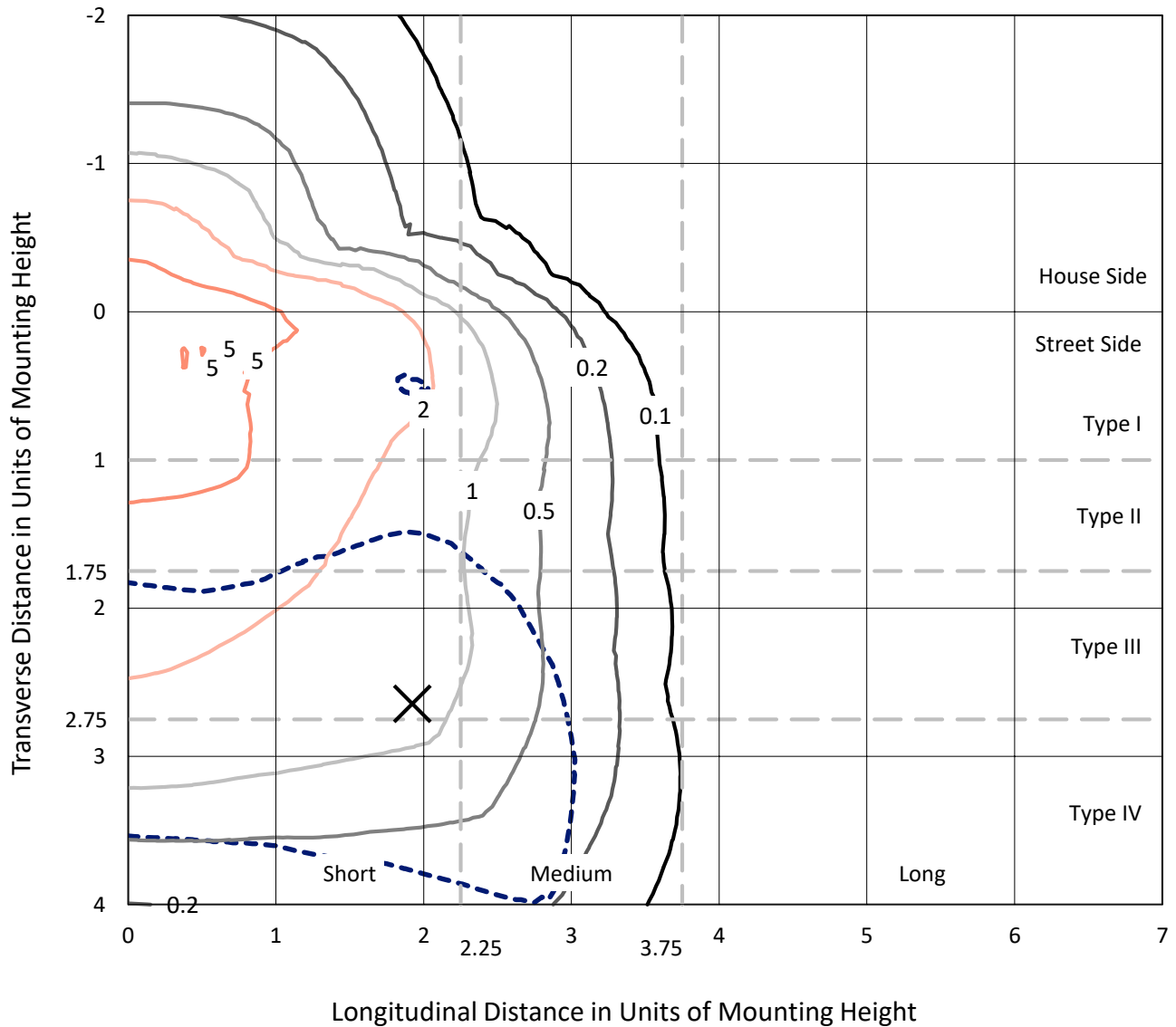
Input Watts (W): 67
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

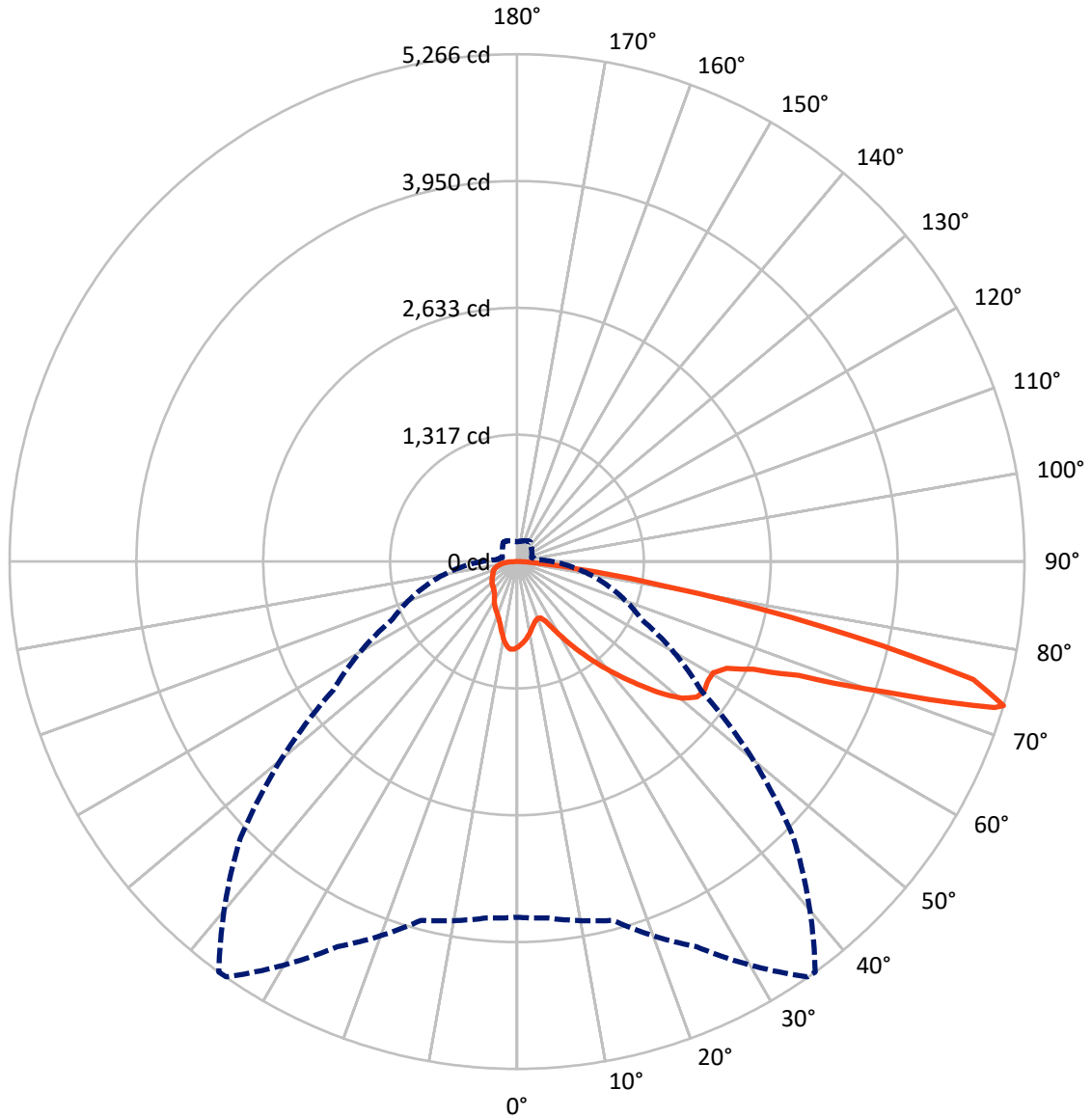
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 8.9 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	1131.6	0.0	1131.6
	% Fixture	19.3	0.0	19.3
Street Side	Lumens	4736.7	0.0	4736.7
	% Fixture	80.7	0.0	80.7
Total	Lumens	5868.3	0.0	5868.3
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	80.7	1.4
10°-20°	202.8	3.5
20°-30°	325.1	5.5
30°-40°	537.7	9.2
40°-50°	832.1	14.2
50°-60°	1113.9	19.0
60°-70°	1455.1	24.8
70°-80°	1188.6	20.3
80°-90°	132.3	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°	5868.3	100.0
0°-180°	5868.3	100.0



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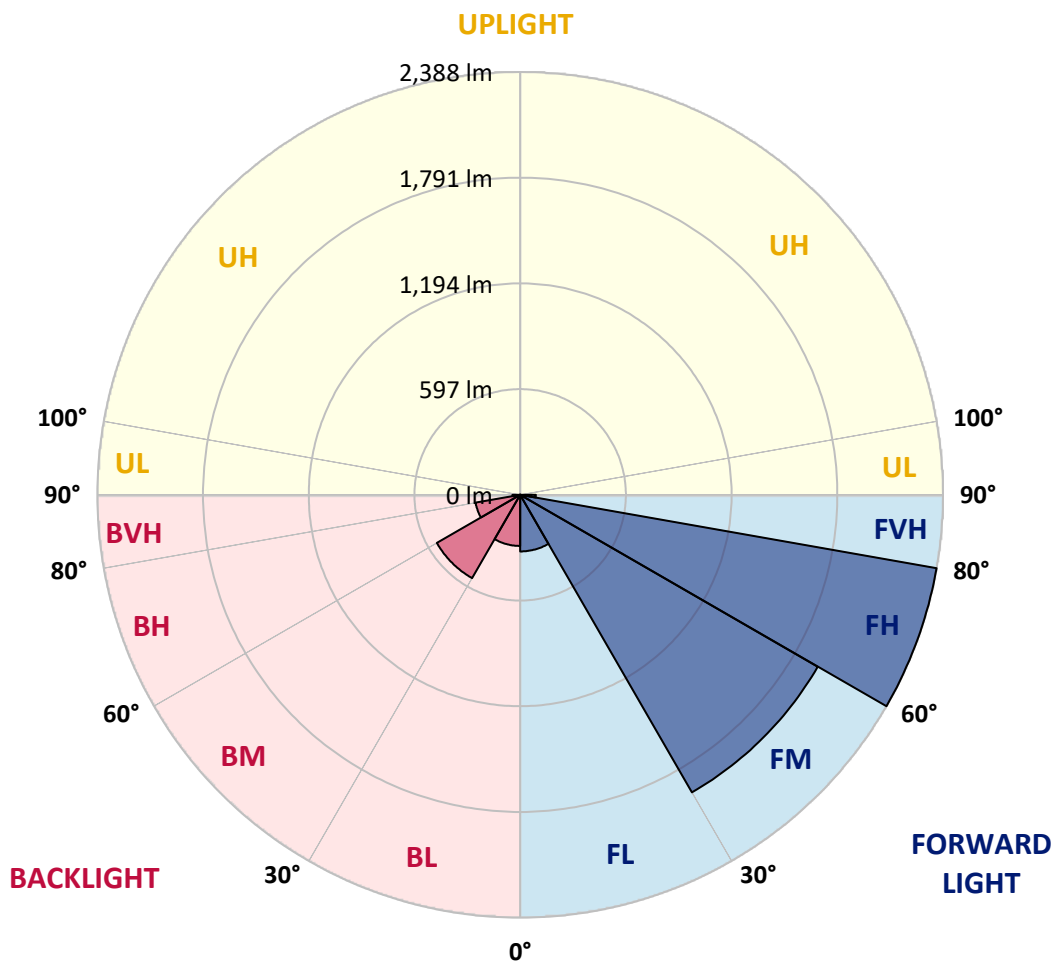
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	319.8	5.4			
FM (30°-60°)	1940.3	33.1			
FH (60°-80°)	2388.0	40.7			G2/5000
FVH (80°-90°)	88.7	1.5			G1/100
BL (0°-30°)	288.8	4.9	B1/500		
BM (30°-60°)	543.4	9.3	B1/1000		
BH (60°-80°)	255.7	4.4	B1/500		G1/500
BVH (80°-90°)	43.6	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°	888.9	888.9	888.9	888.9	888.9	888.9	888.9	888.9	888.9	888.9	888.9
2.5°	854.9	857.3	857.5	860.1	860.1	859.8	860.9	865.3	867.7	872.9	877.4
5°	812.7	815.4	816.5	821.1	826.6	827.0	831.1	839.6	847.9	859.4	869.1
7.5°	765.4	768.4	771.5	780.7	788.9	789.7	797.5	811.3	822.0	836.3	853.7
10°	719.6	720.4	723.3	735.3	746.0	747.2	758.3	774.0	788.6	808.4	828.1
12.5°	682.0	684.1	683.4	692.4	701.7	702.5	717.3	737.1	758.3	780.7	804.3
15°	668.9	668.5	660.8	660.3	664.4	665.1	679.7	702.8	726.6	754.2	784.5
17.5°	677.9	674.8	654.3	641.7	639.1	639.9	650.6	676.0	701.3	733.0	769.2
20°	727.1	715.5	667.4	636.8	628.3	628.3	634.7	655.1	683.0	720.0	765.4
22.5°	843.8	825.8	723.3	668.9	638.6	635.7	630.9	646.5	677.5	721.9	780.7
25°	990.7	982.0	825.8	754.2	692.1	682.4	650.3	655.9	689.0	742.0	822.5
27.5°	1126.7	1111.8	960.5	878.5	790.5	775.5	707.7	684.9	716.6	779.3	882.9
30°	1206.2	1196.2	1098.7	1020.5	915.7	896.7	799.4	742.4	765.9	840.8	968.6
32.5°	1292.8	1286.7	1237.4	1166.3	1051.5	1029.5	918.0	836.0	841.2	922.4	1071.9
35°	1376.6	1384.4	1356.4	1304.2	1197.6	1177.0	1077.2	958.2	934.0	1014.1	1182.3
37.5°	1477.3	1479.1	1461.5	1427.6	1351.2	1334.4	1252.1	1088.7	1035.0	1111.8	1289.0
40°	1678.3	1648.7	1580.2	1553.3	1507.8	1497.4	1403.4	1208.4	1129.0	1212.2	1389.6
42.5°	1895.6	1849.7	1742.4	1698.3	1680.1	1670.4	1529.5	1288.2	1216.9	1312.5	1488.4
45°	2070.9	2033.6	1928.4	1874.0	1876.2	1860.5	1639.4	1359.5	1312.5	1413.2	1598.8
47.5°	2243.4	2181.2	2063.3	2055.5	2081.6	2058.5	1744.6	1430.6	1412.0	1522.6	1709.1
50°	2254.7	2198.0	2150.3	2212.9	2257.6	2228.9	1840.0	1523.9	1515.4	1655.4	1851.5
52.5°	2118.6	2110.3	2183.1	2288.5	2362.7	2337.0	1917.9	1619.6	1620.8	1821.4	2025.0
55°	2068.9	2058.5	2145.7	2275.4	2375.7	2360.4	1976.1	1727.8	1737.9	2022.8	2211.0
57.5°	2152.5	2126.4	2143.5	2251.0	2345.3	2336.3	2036.5	1847.9	1866.0	2254.7	2382.8
60°	2411.6	2358.3	2267.3	2287.4	2346.4	2341.2	2123.1	1981.8	2012.3	2496.2	2491.8
62.5°	2799.7	2739.3	2554.1	2464.5	2451.5	2441.5	2265.9	2146.1	2161.4	2670.8	2428.4
65°	3225.5	3160.6	2940.3	2793.8	2717.0	2695.4	2496.2	2344.4	2248.6	2670.3	2181.5
67.5°	3703.5	3634.9	3415.3	3275.5	3192.3	3155.4	2870.3	2504.8	2220.3	2444.4	1745.6
70°	4193.1	4127.8	4027.1	4076.0	4112.5	4056.2	3459.4	2558.2	2016.8	1916.4	1172.3
72.5°	3933.1	3928.0	4004.5	4467.5	5171.8	5183.0	4047.7	2407.5	1558.1	1139.1	625.0
73°	3691.9	3714.0	3855.6	4409.7	5262.5	5266.1	4059.3	2329.6	1430.6	981.4	548.9
75°	1912.8	2061.9	2587.6	3575.7	4872.8	4890.4	3578.3	1763.6	852.8	545.1	369.8
77.5°	512.4	505.6	833.6	1742.0	3248.6	3225.5	2260.9	853.7	408.6	342.0	259.5
80°	175.6	177.9	283.8	637.2	1516.3	1570.4	981.4	372.4	268.9	238.2	183.9
82.5°	89.6	92.4	148.4	271.1	634.3	620.8	315.8	219.2	180.1	144.6	102.9
85°	47.7	49.1	81.7	140.6	232.7	235.3	111.1	117.0	114.4	82.0	50.8
87.5°	23.4	24.3	39.2	62.0	86.1	83.2	38.7	50.8	56.4	46.3	27.9
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°	888.9	888.9	888.9	888.9	888.9	888.9	888.9	888.9	888.9	888.9	888.9
2.5°	882.9	882.9	887.7	896.0	901.9	907.5	911.2	917.2	920.6	920.3	919.9
5°	876.9	880.7	890.4	900.5	907.2	911.6	911.6	914.2	914.2	913.0	911.6
7.5°	863.1	869.5	883.7	892.6	894.4	889.6	879.9	872.4	863.1	858.3	856.4
10°	841.2	849.3	867.3	871.4	861.7	844.4	821.1	800.8	783.1	774.8	772.2
12.5°	819.6	830.4	847.1	840.8	817.6	784.1	747.8	720.4	700.1	692.4	689.8
15°	801.6	814.7	827.7	807.9	767.7	721.1	681.2	655.5	640.2	634.3	632.8
17.5°	789.7	805.1	809.5	772.5	716.6	664.4	629.1	612.3	605.5	602.9	602.1
20°	790.5	807.5	796.7	738.2	667.4	614.8	591.4	586.6	586.6	586.6	586.1
22.5°	810.9	825.8	791.5	706.2	620.0	573.1	563.0	567.1	570.1	570.1	569.7
25°	853.5	861.7	795.3	675.3	575.6	536.8	537.2	545.1	547.7	547.7	547.0
27.5°	918.3	911.6	801.9	640.9	532.1	504.0	509.2	516.3	518.2	517.2	516.7
30°	999.6	972.8	807.5	600.6	491.1	473.5	478.0	482.1	480.7	478.0	477.5
32.5°	1090.6	1035.0	804.3	555.5	454.9	441.8	444.4	446.6	444.4	438.2	438.2
35°	1180.8	1091.4	785.9	506.4	426.2	411.2	410.9	418.0	417.6	410.2	410.5
37.5°	1259.9	1135.6	750.5	461.2	401.5	388.8	390.4	394.9	397.1	387.0	385.9
40°	1328.9	1166.3	700.6	422.8	381.8	382.6	378.5	371.4	368.8	364.3	363.5
42.5°	1393.7	1187.5	647.7	390.8	371.7	380.3	366.5	349.7	342.7	346.7	349.4
45°	1457.5	1211.4	596.6	364.3	359.1	373.5	354.7	336.0	327.7	329.6	332.3
47.5°	1535.5	1244.6	535.0	336.0	339.6	361.3	347.1	327.1	314.6	307.2	305.0
50°	1637.9	1292.8	455.3	305.3	319.2	347.9	340.7	314.0	300.6	285.7	281.9
52.5°	1766.2	1338.1	374.8	280.8	302.4	336.3	330.3	302.8	286.4	268.5	265.4
55°	1894.0	1344.6	305.3	259.5	283.3	320.6	317.7	293.7	270.7	256.1	253.1
57.5°	1983.5	1284.4	258.7	241.6	265.1	301.2	306.1	283.0	257.6	246.4	244.6
60°	1985.1	1140.8	230.4	229.6	251.3	284.6	294.1	270.3	249.4	242.0	240.4
62.5°	1827.3	919.4	212.2	220.8	241.3	270.7	285.2	263.3	247.6	244.6	243.1
65°	1531.7	679.3	197.5	212.4	231.9	259.2	277.8	261.0	246.9	245.6	244.6
67.5°	1130.8	465.7	185.3	202.1	221.5	247.3	270.7	257.6	242.4	246.9	245.3
70°	711.4	311.0	173.7	190.1	207.7	233.4	261.3	251.6	236.8	234.2	229.2
72.5°	401.5	224.8	160.0	174.9	189.8	215.1	248.7	241.6	224.0	213.6	208.8
73°	362.7	212.9	156.7	171.1	185.7	211.5	245.6	238.6	220.4	208.8	204.4
75°	265.4	174.1	141.4	155.9	168.5	194.3	231.6	223.7	203.9	190.1	187.1
77.5°	192.3	134.2	121.5	134.6	145.7	170.4	210.4	201.3	181.9	174.5	171.4
80°	138.7	101.8	100.7	113.4	123.1	148.0	187.6	178.3	159.5	181.5	176.7
82.5°	82.7	65.2	73.8	88.0	98.1	124.1	163.0	152.2	134.2	135.7	115.6
85°	39.5	36.9	45.9	57.9	64.9	85.0	135.7	127.1	107.3	88.0	86.1
87.5°	17.5	16.8	22.0	25.7	34.7	51.1	92.9	82.5	78.0	46.6	36.6
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)