

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: P270309

Luminaire Tested: **NAV-AF-01-D-UNV-T3R-7027**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270309
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24250)
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-T3R-7027
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 2700K, 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE III
ROADWAY OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5399.1 lumens
Efficiency: N/A
Efficacy: 91.5 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Medium - Full Cutoff
BUG Rating: B1 - U0 - G2

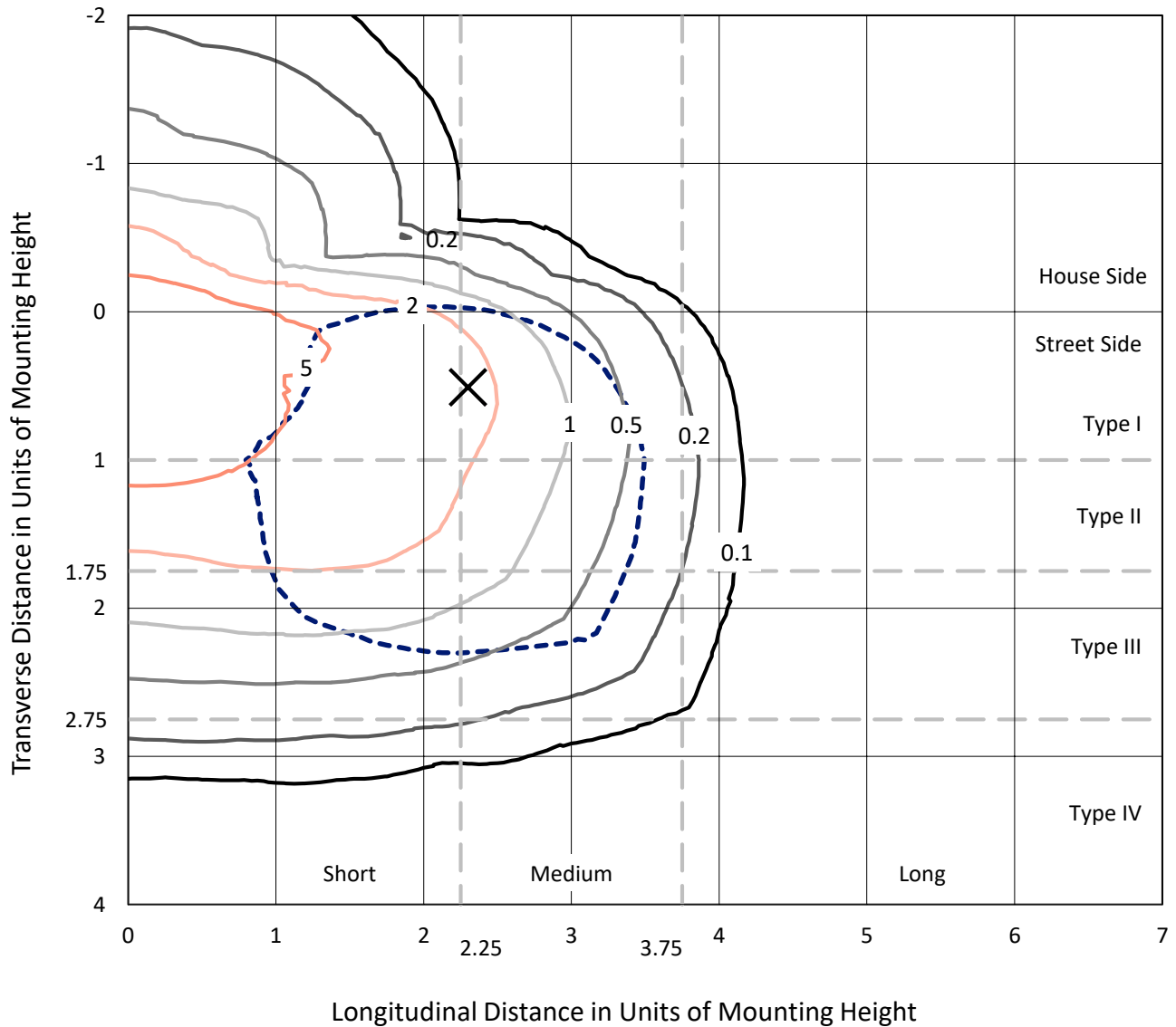
Input Watts (W): 59
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P270309
 CATALOG NUMBER: NAV-AF-01-D-UNV-T3R-7027

Iso-Footcandle Lines of Horizontal Illumination

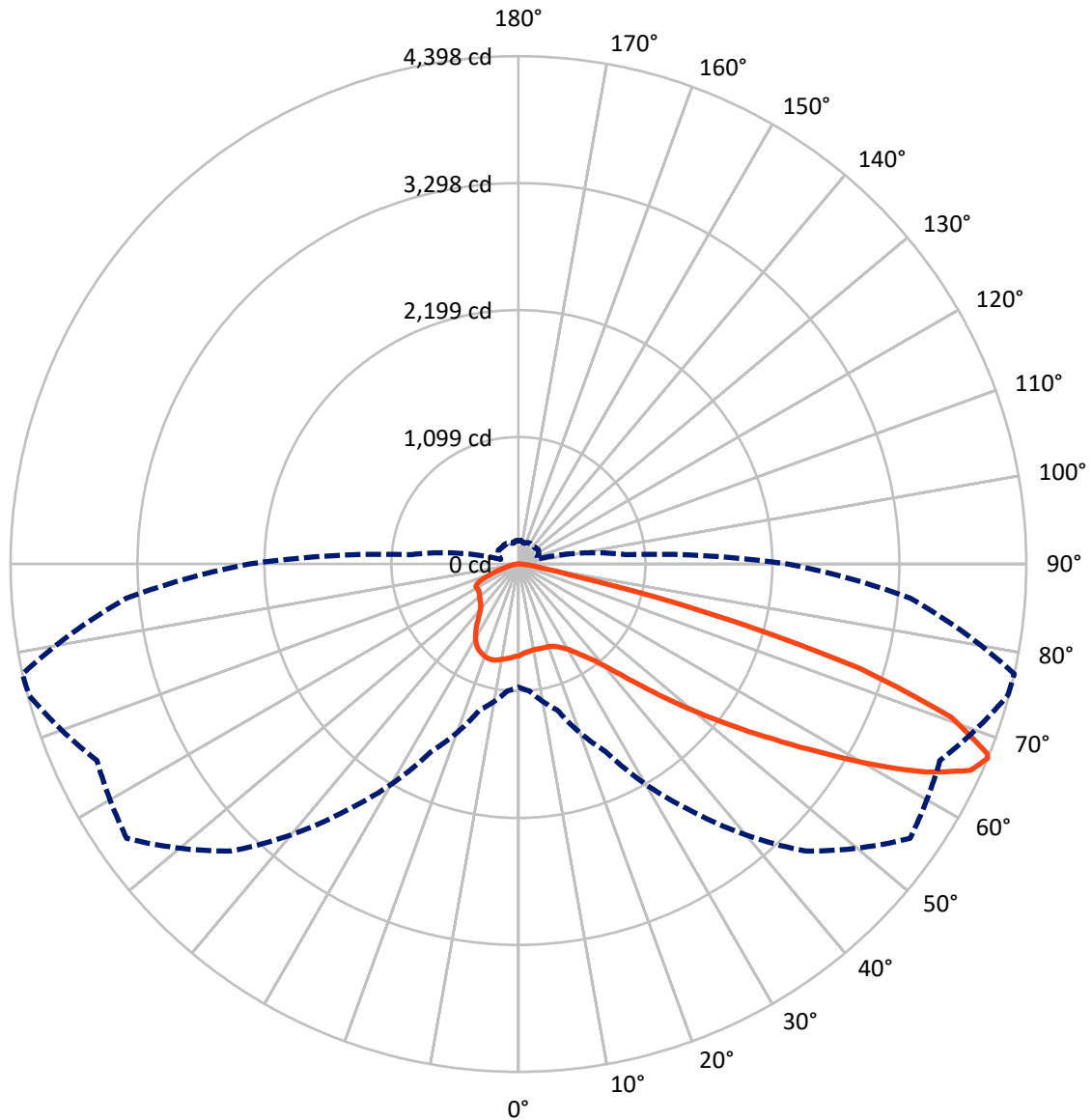
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 9.6 fc
 Type III - Medium - Full Cutoff

REPORT NUMBER: P270309
CATALOG NUMBER: NAV-AF-01-D-UNV-T3R-7027

Luminous Intensity Polar Plot



— Vertical Plane Through 77.5-Deg Lateral - - - Horizontal Cone Through 67-Deg Vertical

REPORT NUMBER: P270309

CATALOG NUMBER: NAV-AF-01-D-UNV-T3R-7027

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	927.8	0.0	927.8
	% Fixture	17.2	0.0	17.2
Street Side	Lumens	4471.3	0.0	4471.3
	% Fixture	82.8	0.0	82.8
Total	Lumens	5399.1	0.0	5399.1
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	70.8	1.3
10°-20°	196.0	3.6
20°-30°	333.0	6.2
30°-40°	532.7	9.9
40°-50°	820.2	15.2
50°-60°	1137.9	21.1
60°-70°	1517.9	28.1
70°-80°	722.3	13.4
80°-90°	68.4	1.3
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°	5399.1	100.0
0°-180°	5399.1	100.0



REPORT NUMBER: P270309

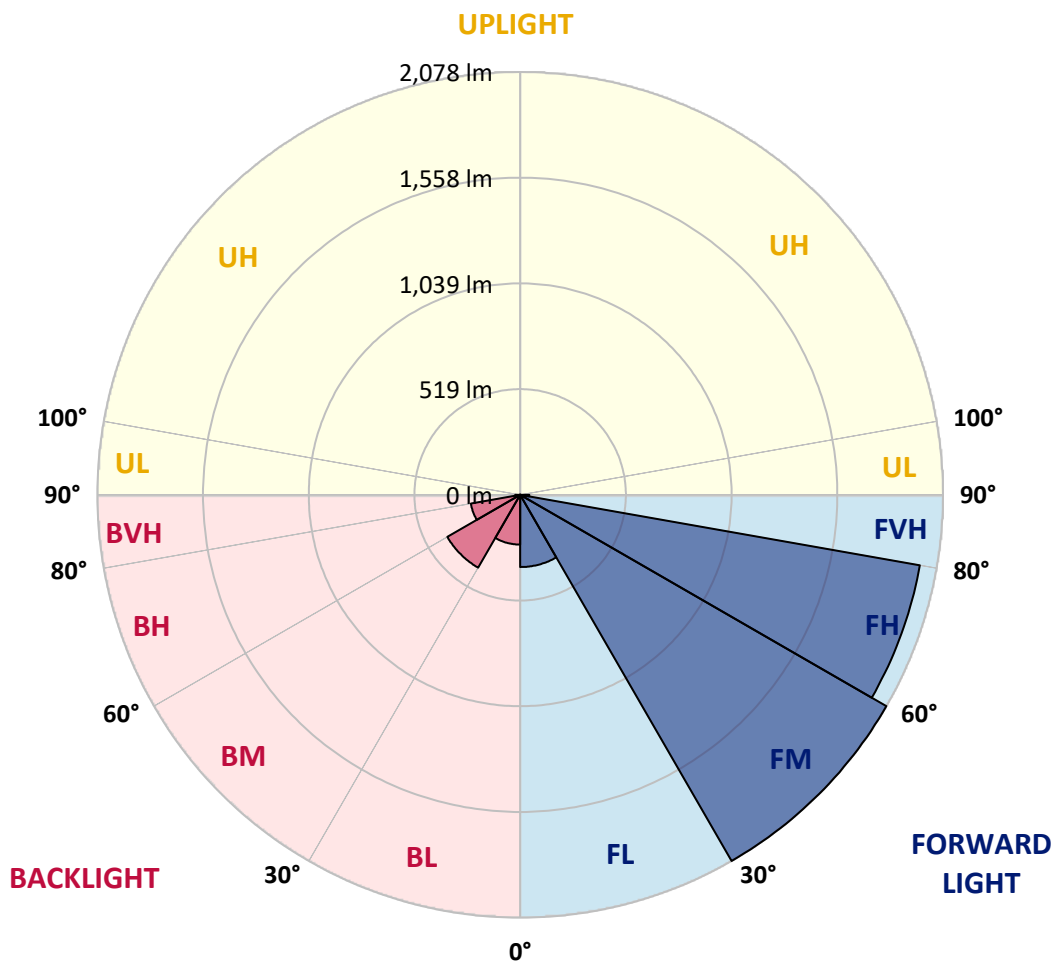
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	355.0	6.6			
FM	(30°-60°)	2077.6	38.5			
FH	(60°-80°)	1994.2	36.9			G2/5000
FVH	(80°-90°)	44.4	0.8			G1/100
BL	(0°-30°)	244.7	4.5	B1/500		
BM	(30°-60°)	413.1	7.7	B1/1000		
BH	(60°-80°)	246.0	4.6	B1/500		G1/500
BVH	(80°-90°)	24.0	0.4			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 III Medium





REPORT NUMBER: P270309

CATALOG NUMBER: NAV-AF-01-D-UNV-T3R-7027

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	77.5°	85°
0°	794.6	794.6	794.6	794.6	794.6	794.6	794.6	794.6	794.6	794.6	794.6
2.5°	712.5	715.9	716.2	725.9	730.2	741.2	753.1	763.9	773.3	776.6	782.7
5°	641.1	641.1	642.1	648.4	660.9	678.5	703.6	731.0	759.5	766.6	784.3
7.5°	603.8	604.4	605.1	611.3	621.1	636.8	661.8	699.2	746.9	758.6	789.6
10°	607.1	606.0	602.8	601.3	605.4	615.3	637.1	675.4	736.3	754.2	799.3
12.5°	659.4	657.5	646.4	630.4	615.7	612.0	627.0	663.5	731.2	754.2	815.7
15°	749.2	750.5	728.9	695.5	657.1	631.1	629.1	659.1	729.6	756.3	834.6
17.5°	866.1	866.7	836.6	788.3	724.6	670.9	642.7	659.1	729.6	758.2	853.0
20°	990.2	985.5	951.5	890.7	807.9	725.9	667.8	663.0	731.5	761.3	870.4
22.5°	1096.7	1092.2	1056.5	992.8	898.0	791.0	701.4	676.5	742.5	773.6	894.7
25°	1189.7	1192.4	1157.7	1086.0	987.9	864.3	751.9	707.1	765.5	796.0	924.7
27.5°	1302.9	1298.0	1257.8	1189.4	1080.3	940.4	814.9	746.0	792.9	822.9	961.5
30°	1433.8	1431.4	1377.3	1306.9	1182.1	1025.5	877.4	787.6	828.6	859.9	1007.4
32.5°	1592.5	1592.2	1534.1	1447.7	1296.6	1121.7	951.1	844.6	880.7	912.4	1068.7
35°	1772.4	1772.0	1712.0	1597.8	1428.3	1228.2	1037.9	914.0	945.1	978.6	1141.3
37.5°	1897.2	1895.2	1863.9	1753.1	1574.2	1351.9	1146.3	1007.4	1018.1	1055.6	1229.2
40°	1921.3	1933.3	1960.3	1895.0	1733.4	1489.4	1255.1	1108.0	1118.0	1166.1	1339.6
42.5°	1895.2	1911.0	2000.7	2019.1	1892.5	1655.9	1391.4	1247.1	1259.9	1319.6	1469.4
45°	1872.5	1886.3	1998.6	2087.8	2049.8	1837.6	1561.2	1417.0	1441.1	1515.1	1617.6
47.5°	1833.8	1846.6	1959.4	2100.1	2139.6	2012.5	1765.8	1621.3	1662.7	1752.5	1786.5
50°	1831.9	1837.6	1905.7	2058.7	2170.6	2145.2	1992.4	1860.2	1923.6	2027.0	1973.3
52.5°	1781.1	1820.9	1882.6	1992.7	2171.3	2222.6	2215.6	2122.2	2220.0	2334.4	2178.3
55°	1470.7	1516.5	1805.9	1960.3	2167.3	2289.1	2419.6	2400.8	2553.7	2674.2	2407.8
57.5°	1373.2	1392.6	1584.3	1970.1	2200.6	2398.8	2623.4	2700.2	2935.5	3067.0	2683.1
60°	1346.6	1367.0	1539.9	1974.7	2291.0	2598.7	2900.1	3038.2	3384.4	3523.8	2995.8
62.5°	1316.8	1343.2	1543.2	1979.1	2449.9	2894.3	3267.2	3405.0	3845.3	3969.7	3289.0
65°	1230.0	1265.2	1481.5	1951.7	2623.8	3265.6	3752.5	3787.6	4226.0	4305.0	3465.8
67°	1065.6	1103.9	1311.9	1793.5	2607.8	3515.4	4140.6	4026.8	4388.0	4397.6	3408.3
67.5°	1013.6	1053.3	1254.6	1727.7	2562.1	3548.2	4209.4	4059.8	4386.6	4375.9	3355.0
70°	682.5	727.2	888.5	1268.4	2055.1	3302.3	4192.7	3958.0	4098.8	3976.3	2882.4
72.5°	338.8	340.1	443.3	694.7	1245.1	2368.6	3497.6	3386.0	3322.7	3091.3	2115.1
75°	163.2	166.1	209.2	307.0	525.0	1222.9	2385.2	2284.7	1945.3	1684.3	1058.7
77.5°	124.4	127.5	162.6	200.0	218.9	398.8	1181.5	954.8	563.6	450.2	298.3
80°	96.1	101.8	137.3	153.5	144.8	159.9	371.4	292.4	219.2	201.2	147.9
82.5°	75.1	78.4	116.5	116.5	100.2	107.1	172.8	168.9	136.2	122.8	79.4
85°	53.1	59.7	93.8	86.7	65.8	66.5	103.5	99.2	70.1	56.5	31.0
87.5°	23.6	30.4	66.7	56.8	35.0	26.9	42.4	36.4	27.7	21.4	14.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P270309

CATALOG NUMBER: NAV-AF-01-D-UNV-T3R-7027

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	794.6	794.6	794.6	794.6	794.6	794.6	794.6	794.6	794.6	794.6	794.6
2.5°	789.3	794.6	802.9	807.9	814.7	817.3	820.0	824.6	828.2	827.2	825.6
5°	796.5	805.6	816.0	819.3	819.3	816.0	814.0	814.4	813.2	812.6	810.6
7.5°	807.2	819.7	827.0	823.7	813.2	800.3	788.0	780.5	773.6	769.3	770.6
10°	822.3	836.1	836.3	821.6	796.9	768.6	744.2	728.5	713.6	706.8	708.9
12.5°	844.0	857.7	846.1	814.4	770.9	726.5	681.9	649.5	620.4	613.5	611.3
15°	867.4	878.1	852.0	798.7	733.6	660.4	585.3	536.9	504.6	498.9	496.9
17.5°	887.7	893.8	849.0	770.6	674.4	559.4	471.9	439.2	432.5	435.9	435.9
20°	905.8	903.8	836.1	727.2	581.4	447.1	396.5	396.2	405.1	413.5	414.2
22.5°	928.5	912.8	815.3	662.8	470.3	373.1	364.4	373.1	383.1	392.5	393.5
25°	955.4	922.7	787.6	571.1	378.0	338.8	342.4	349.7	356.1	363.5	363.8
27.5°	982.4	930.5	748.6	463.3	328.1	316.7	320.8	323.7	325.4	330.0	330.0
30°	1013.8	936.5	692.1	371.1	305.1	297.3	295.1	293.7	295.1	301.3	301.7
32.5°	1053.3	947.2	615.1	318.4	294.4	283.7	271.6	265.0	269.6	281.0	283.0
35°	1098.0	959.7	522.6	297.3	290.7	276.9	254.9	244.6	246.2	256.6	258.4
37.5°	1154.1	976.2	431.5	292.4	294.4	276.3	247.4	232.7	225.2	225.7	225.2
40°	1225.7	992.4	359.4	293.7	302.4	277.9	243.6	220.7	205.3	205.9	207.2
42.5°	1300.8	1003.1	313.7	297.7	312.0	280.4	242.4	208.9	195.7	206.9	217.3
45°	1388.6	1000.3	290.1	301.3	319.3	281.3	237.3	207.6	196.5	230.7	250.0
47.5°	1489.4	987.1	276.7	303.0	321.4	281.0	233.6	211.9	205.0	264.0	286.0
50°	1599.0	966.8	266.0	300.4	320.3	279.6	237.6	217.3	208.2	271.3	288.4
52.5°	1718.6	948.2	254.9	294.4	315.3	275.7	242.6	215.0	199.0	250.0	262.9
55°	1860.5	943.8	242.6	284.0	307.0	271.3	239.9	207.6	188.6	221.6	229.5
57.5°	2022.8	970.8	226.6	271.3	295.7	262.7	233.6	203.6	185.0	201.6	205.9
60°	2228.7	1030.5	209.6	258.0	281.7	249.5	227.9	204.5	185.9	198.5	199.6
62.5°	2389.5	1084.3	194.3	241.6	262.9	234.0	221.9	205.6	189.0	202.6	201.0
65°	2447.9	1057.9	175.2	217.3	236.7	216.6	213.5	206.3	189.0	205.0	201.2
67°	2328.0	932.1	157.3	192.9	211.6	201.2	205.6	203.6	185.6	204.5	198.3
67.5°	2271.1	887.7	152.5	189.0	205.0	196.5	203.6	202.3	184.5	203.9	196.5
70°	1872.8	636.8	128.8	158.6	171.5	173.3	191.2	193.6	176.5	191.6	178.3
72.5°	1332.5	398.5	111.1	122.8	138.5	148.2	174.5	181.8	165.8	166.5	155.5
75°	659.4	213.9	99.2	94.9	107.7	123.4	152.3	165.8	150.1	138.9	135.1
77.5°	222.6	121.1	83.7	76.4	83.7	99.2	126.1	144.8	132.5	117.5	115.2
80°	115.2	88.2	65.3	61.4	66.0	76.7	98.8	120.5	113.1	113.7	93.8
82.5°	71.8	53.7	47.0	46.7	50.0	58.7	72.8	97.7	97.0	83.2	60.4
85°	33.3	31.0	30.1	31.0	32.0	33.3	47.4	69.8	73.8	44.7	39.7
87.5°	14.1	13.7	11.9	13.0	14.4	14.1	19.0	29.7	41.4	28.0	25.7
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)