

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: P196969

Luminaire Tested: **NAV-AF-01-D-UNV-AFL-8030-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196969
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24160)
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-AFL-8030-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 80 CRI, 3000K, 615mA LIGHTSQUARE WITH 16 LEDS EACH AND AUTOMOTIVE FRONTLINE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3365 lumens
Efficiency: N/A
Efficacy: 99.0 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type II - Short - Full Cutoff
BUG Rating: B1 - U0 - G1

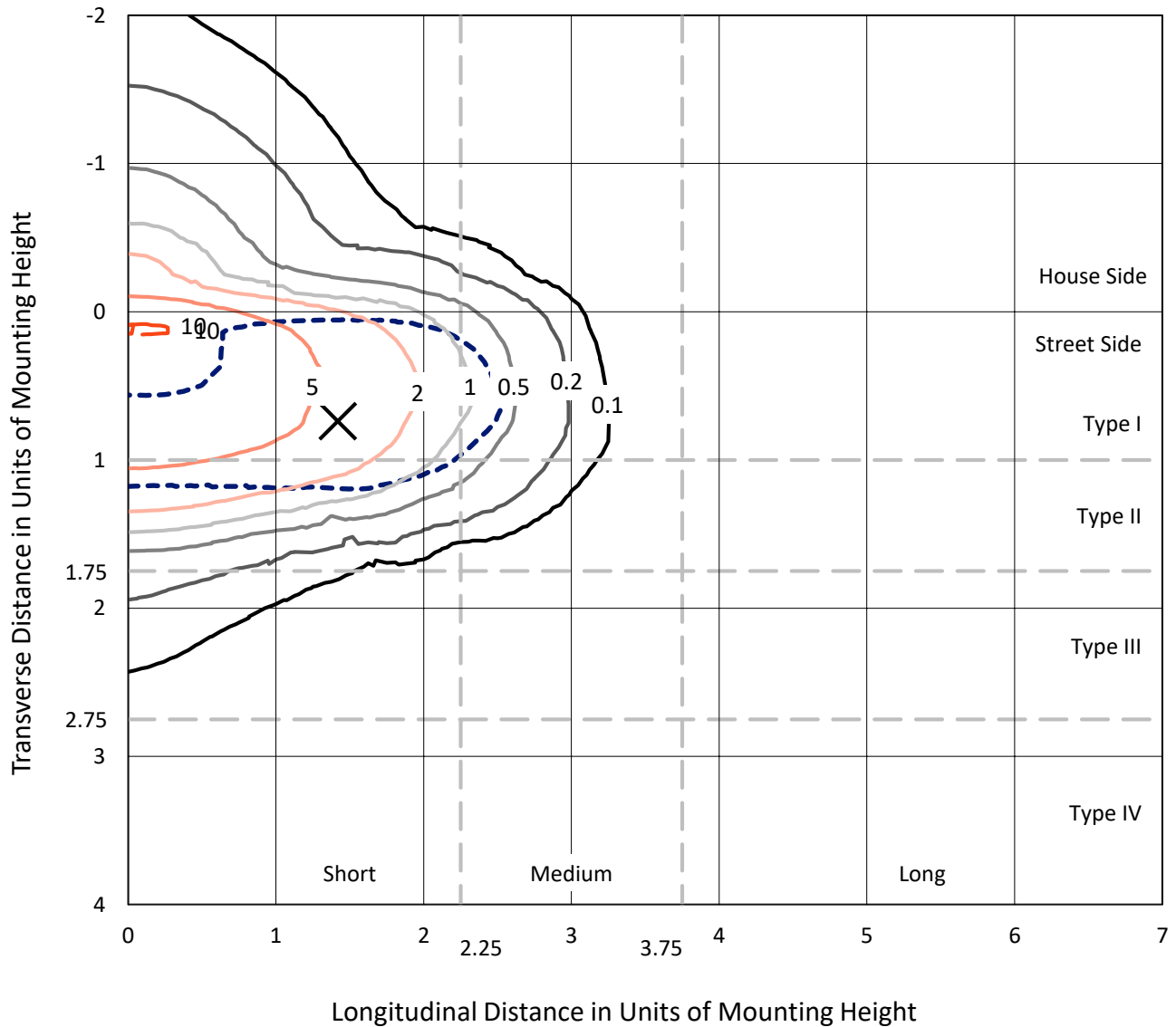
Input Watts (W): 34
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

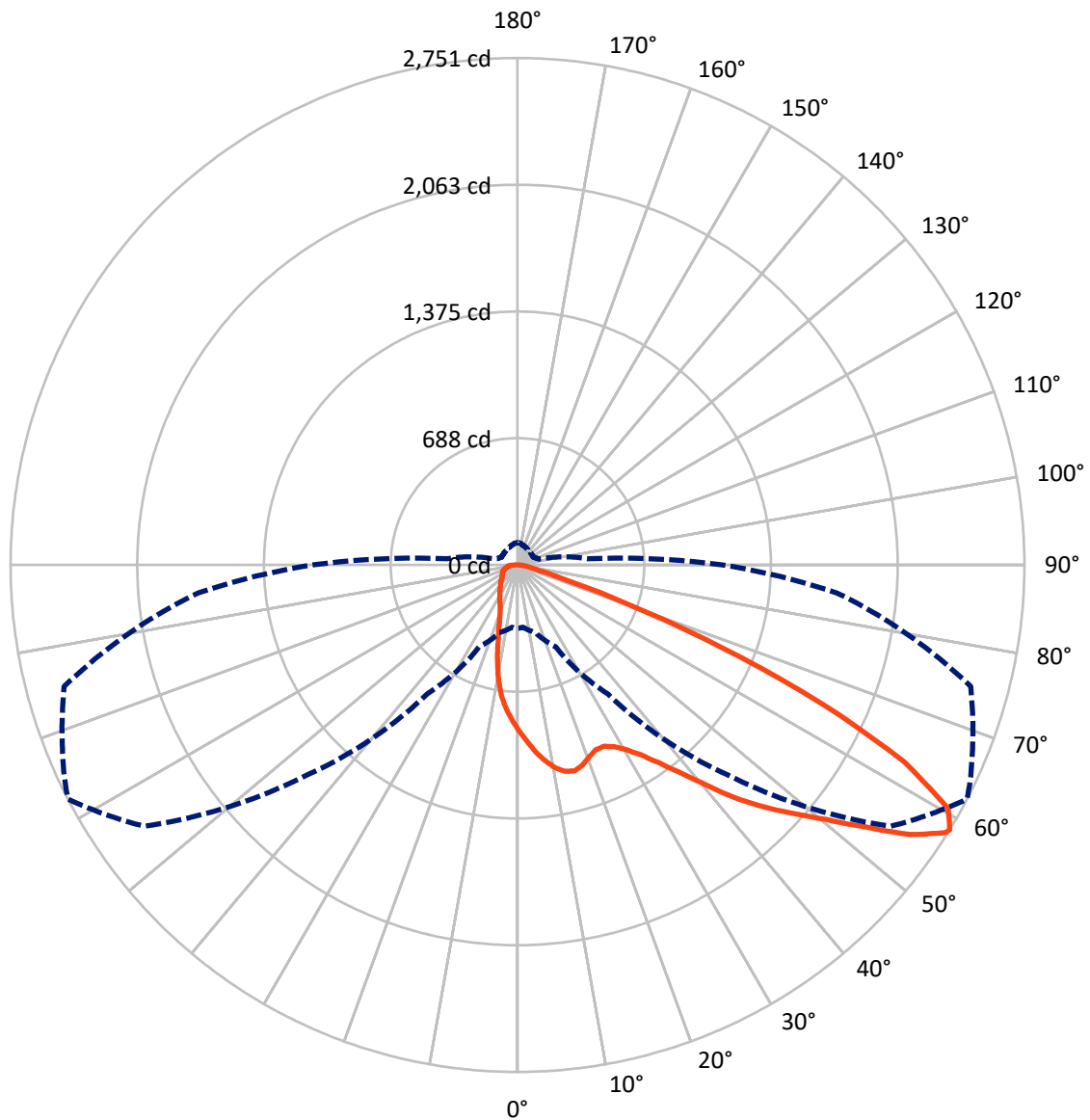


Based on 10 foot mounting height. Maximum calculated value = 10.5 fc
 Type II - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 62.5-Deg Lateral - - - Horizontal Cone Through 58-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	516.7	0.0	516.7
	% Fixture	15.4	0.0	15.4
Street Side	Lumens	2848.3	0.0	2848.3
	% Fixture	84.6	0.0	84.6
Total	Lumens	3365.0	0.0	3365.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	80.3	2.4
10°-20°	202.7	6.0
20°-30°	328.4	9.8
30°-40°	524.4	15.6
40°-50°	762.8	22.7
50°-60°	798.2	23.7
60°-70°	486.6	14.5
70°-80°	136.1	4.0
80°-90°	45.6	1.4
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°	3365.0	100.0
0°-180°	3365.0	100.0



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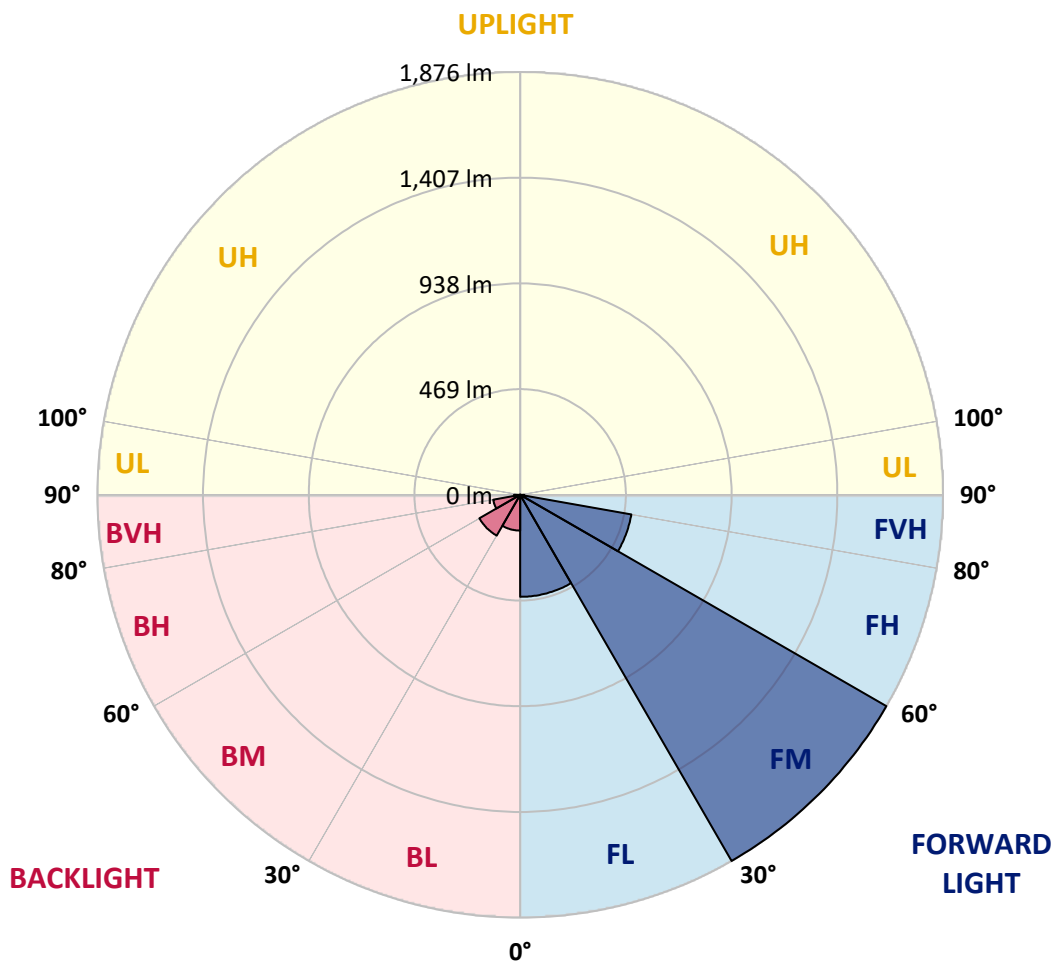
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	452.6	13.5			
FM	(30°-60°)	1876.4	55.8			
FH	(60°-80°)	501.0	14.9			G0/660
FVH	(80°-90°)	18.3	0.5			G1/100
BL	(0°-30°)	158.8	4.7	B1/500		
BM	(30°-60°)	208.9	6.2	B0/220		
BH	(60°-80°)	121.6	3.6	B1/500		G1/500
BVH	(80°-90°)	27.3	0.8			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 II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	62.5°	65°	75°	85°
0°	898.4	898.4	898.4	898.4	898.4	898.4	898.4	898.4	898.4	898.4	898.4
2.5°	1019.8	1019.1	1010.5	1004.8	998.1	982.6	967.0	955.4	949.5	927.0	905.2
5°	1104.1	1101.6	1096.8	1090.7	1081.8	1062.3	1037.7	1016.4	1008.0	968.0	927.9
7.5°	1059.5	1063.5	1078.5	1095.3	1112.9	1114.2	1096.8	1071.5	1062.3	1008.8	950.0
10°	936.1	934.4	953.1	985.9	1044.2	1101.8	1130.6	1118.2	1108.5	1047.5	972.0
12.5°	898.6	898.2	901.4	909.8	946.4	1025.5	1122.0	1148.9	1145.5	1088.6	995.6
15°	910.0	910.4	910.2	911.3	921.4	959.0	1073.8	1159.2	1169.7	1129.1	1019.6
17.5°	946.4	944.9	940.3	935.2	936.7	950.2	1021.9	1141.5	1173.1	1165.3	1039.8
20°	1002.5	1002.5	990.1	976.0	966.8	969.7	1000.2	1111.3	1157.5	1196.0	1054.9
22.5°	1073.0	1074.0	1055.7	1030.1	1009.1	1001.1	1012.6	1088.8	1138.6	1224.4	1068.4
25°	1160.5	1160.3	1133.6	1096.8	1063.5	1044.4	1044.2	1089.8	1132.7	1257.6	1082.5
27.5°	1268.8	1258.9	1227.8	1175.4	1128.5	1099.3	1086.0	1116.3	1145.1	1298.4	1101.4
30°	1391.0	1380.9	1340.1	1272.8	1209.3	1166.6	1144.7	1162.2	1183.0	1350.4	1130.0
32.5°	1511.9	1514.2	1466.3	1390.3	1308.7	1248.6	1216.2	1226.9	1241.4	1413.9	1168.7
35°	1689.0	1688.8	1626.1	1531.2	1434.3	1351.0	1310.0	1315.7	1328.9	1503.5	1222.9
37.5°	1821.1	1818.9	1778.6	1694.7	1585.5	1485.6	1426.3	1427.1	1438.5	1616.0	1294.4
40°	1834.5	1834.1	1833.9	1821.9	1747.2	1653.0	1578.8	1563.4	1568.1	1735.5	1370.4
42.5°	1731.7	1747.0	1791.2	1858.9	1879.7	1830.3	1760.1	1725.8	1715.7	1872.6	1450.7
45°	1585.1	1592.9	1670.3	1822.5	1946.4	1996.9	1944.1	1871.7	1854.5	2005.9	1516.1
47.5°	1516.9	1513.6	1558.4	1724.3	1939.9	2129.4	2133.1	2014.5	1985.3	2120.9	1571.8
50°	1370.8	1366.4	1422.9	1579.8	1868.8	2195.2	2327.3	2170.2	2116.1	2230.3	1622.3
52.5°	1079.5	1075.3	1151.2	1353.3	1709.8	2170.6	2490.9	2361.1	2269.0	2335.7	1669.4
55°	702.4	702.8	775.2	983.6	1383.6	2027.2	2567.6	2581.7	2478.5	2441.0	1707.5
57.5°	386.8	383.2	434.7	562.8	951.9	1701.4	2503.7	2740.7	2686.9	2531.5	1735.0
58°	343.9	339.6	379.4	489.8	853.4	1609.5	2471.5	2750.8	2713.6	2546.4	1739.0
60°	245.0	237.9	231.8	276.1	491.7	1160.5	2257.0	2685.4	2721.4	2576.3	1735.2
62.5°	206.5	198.3	176.4	174.8	231.5	567.6	1784.9	2358.4	2459.1	2507.5	1674.3
65°	191.8	183.6	154.8	144.5	157.1	245.0	1103.7	1821.1	1955.6	2268.4	1520.7
67.5°	181.3	171.6	140.7	127.2	129.8	146.6	468.4	1191.0	1347.0	1768.9	1220.0
70°	171.8	161.1	129.5	114.0	111.9	111.5	183.0	621.9	772.2	1157.5	817.3
72.5°	161.1	150.6	119.7	103.1	98.4	90.4	110.0	257.0	352.3	567.4	374.6
75°	145.5	136.9	108.7	94.0	86.0	73.4	81.2	123.2	151.8	217.2	173.9
77.5°	128.1	121.1	97.6	86.4	75.7	59.9	62.0	83.5	93.8	122.4	100.7
80°	90.6	93.2	85.2	76.1	66.7	48.4	47.7	61.2	67.3	82.2	67.7
82.5°	62.5	64.4	69.4	60.1	53.8	37.6	35.1	42.5	45.6	49.6	32.8
85°	44.6	43.3	48.2	43.1	39.5	24.0	22.5	26.9	28.8	30.3	15.8
87.5°	27.1	26.9	27.8	22.3	20.6	12.2	11.1	12.8	13.7	13.2	7.6
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°	898.4	898.4	898.4	898.4	898.4	898.4	898.4	898.4	898.4	898.4	898.4
2.5°	897.0	886.7	864.2	846.1	826.5	811.6	796.6	788.2	779.0	773.7	773.1
5°	906.8	885.8	837.9	793.3	747.4	706.2	665.8	636.0	611.6	597.7	596.9
7.5°	917.8	884.8	810.7	733.6	652.0	570.8	499.1	448.4	415.8	400.6	399.6
10°	926.2	880.3	777.7	657.6	528.3	421.0	355.8	326.0	316.1	313.6	313.1
12.5°	936.3	877.2	736.1	560.3	403.8	320.5	300.7	298.8	300.9	302.2	302.4
15°	945.8	871.1	679.9	452.4	316.1	286.4	286.9	290.9	295.1	297.0	297.2
17.5°	950.2	856.2	606.1	356.5	276.6	271.1	275.9	281.2	285.0	286.4	286.4
20°	950.2	832.2	520.5	288.8	255.9	257.0	262.9	266.9	267.7	266.5	265.8
22.5°	946.2	802.5	437.2	251.9	239.1	243.1	247.7	245.0	235.1	227.6	226.1
25°	942.6	767.4	357.1	229.4	224.4	229.7	227.8	209.0	193.9	186.1	184.9
27.5°	936.7	724.9	290.2	210.9	210.1	214.3	195.6	177.5	169.9	165.7	164.9
30°	935.2	678.9	242.9	194.5	196.0	190.1	168.7	162.8	161.1	158.8	157.7
32.5°	940.1	632.8	213.3	181.1	182.5	163.2	155.0	155.8	155.6	152.7	151.6
35°	953.3	588.0	194.3	168.9	164.7	146.2	147.2	149.7	149.7	146.2	144.9
37.5°	976.5	546.4	182.3	158.6	144.1	137.3	140.1	143.4	143.4	140.9	139.9
40°	1001.1	505.8	173.3	150.4	131.0	131.2	134.0	136.5	137.5	138.0	137.1
42.5°	1023.4	463.7	163.6	141.5	125.1	126.6	127.9	129.8	134.2	137.1	136.7
45°	1036.4	421.5	153.1	130.6	121.1	121.8	121.3	124.7	130.0	134.4	134.4
47.5°	1048.4	386.8	144.5	119.7	117.1	117.1	115.9	119.2	124.1	129.3	129.8
50°	1059.7	364.3	138.4	111.3	112.1	111.5	111.0	114.2	120.7	127.0	128.1
52.5°	1071.3	356.7	132.9	105.2	106.8	106.0	106.4	110.8	118.2	124.7	125.8
55°	1087.5	361.5	127.2	100.9	101.8	101.6	103.3	108.3	114.8	121.3	121.8
57.5°	1107.5	379.2	122.4	97.8	97.0	98.2	100.9	105.8	112.1	119.9	120.5
58°	1111.5	383.4	121.6	97.0	95.9	97.8	100.5	105.2	111.7	119.9	120.5
60°	1117.6	398.3	119.5	95.3	92.3	95.7	99.1	103.7	110.8	120.9	122.2
62.5°	1088.1	401.3	118.8	93.4	88.5	92.7	96.7	102.0	110.0	124.5	127.2
65°	986.1	371.0	114.4	90.2	85.4	90.4	94.6	100.7	112.5	135.2	136.5
67.5°	791.6	308.1	103.7	85.4	81.8	87.7	93.0	100.7	113.6	136.9	137.8
70°	544.3	231.5	90.2	80.1	77.6	84.3	92.3	103.1	110.0	129.5	127.0
72.5°	284.3	161.1	79.1	74.0	72.6	81.4	98.4	100.7	105.8	120.9	118.4
75°	143.2	109.6	69.6	67.1	66.9	80.3	110.2	97.0	101.4	113.8	119.2
77.5°	84.5	85.8	62.0	60.6	61.6	78.4	110.4	93.2	96.3	104.7	110.6
80°	57.8	70.9	56.2	55.7	56.6	72.1	101.8	88.5	90.4	99.1	105.4
82.5°	32.6	39.1	49.2	51.9	51.5	59.1	87.9	80.5	82.9	117.1	123.9
85°	15.8	23.6	41.2	48.6	44.0	39.3	71.5	71.5	72.1	83.9	85.0
87.5°	5.9	10.5	27.8	38.5	30.7	23.6	48.6	50.7	56.4	58.0	59.3
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)