

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: P270265

Luminaire Tested: **NAV-AF-01-D-UNV-SL2-7027**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270265
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24257)
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-SL2-7027
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 2700K, 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE II SPILL
LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5202.8 lumens
Efficiency: N/A
Efficacy: 88.2 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type II - Medium - Semi-Cutoff
BUG Rating: B1 - U0 - G2

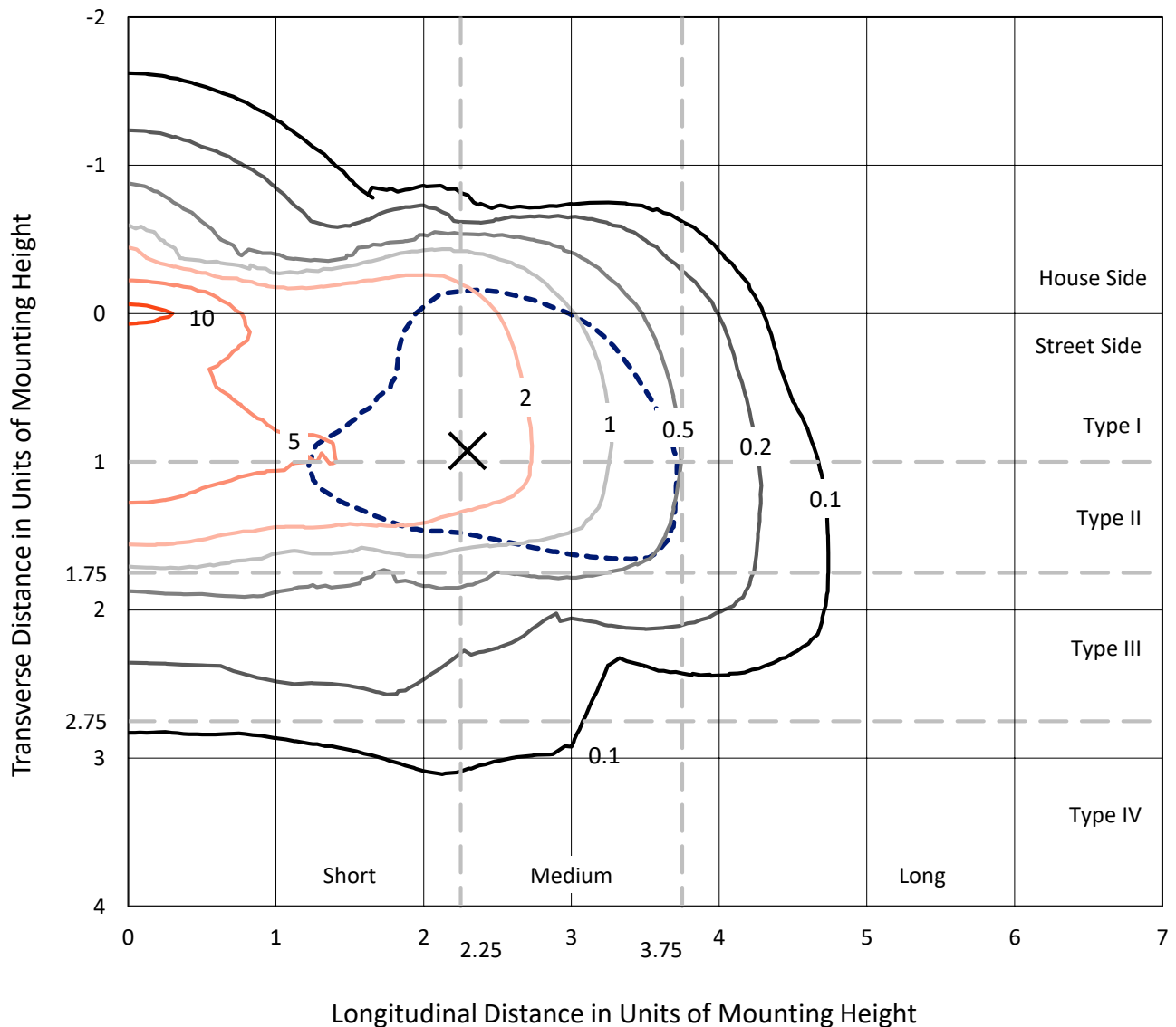
Input Watts (W): 59
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

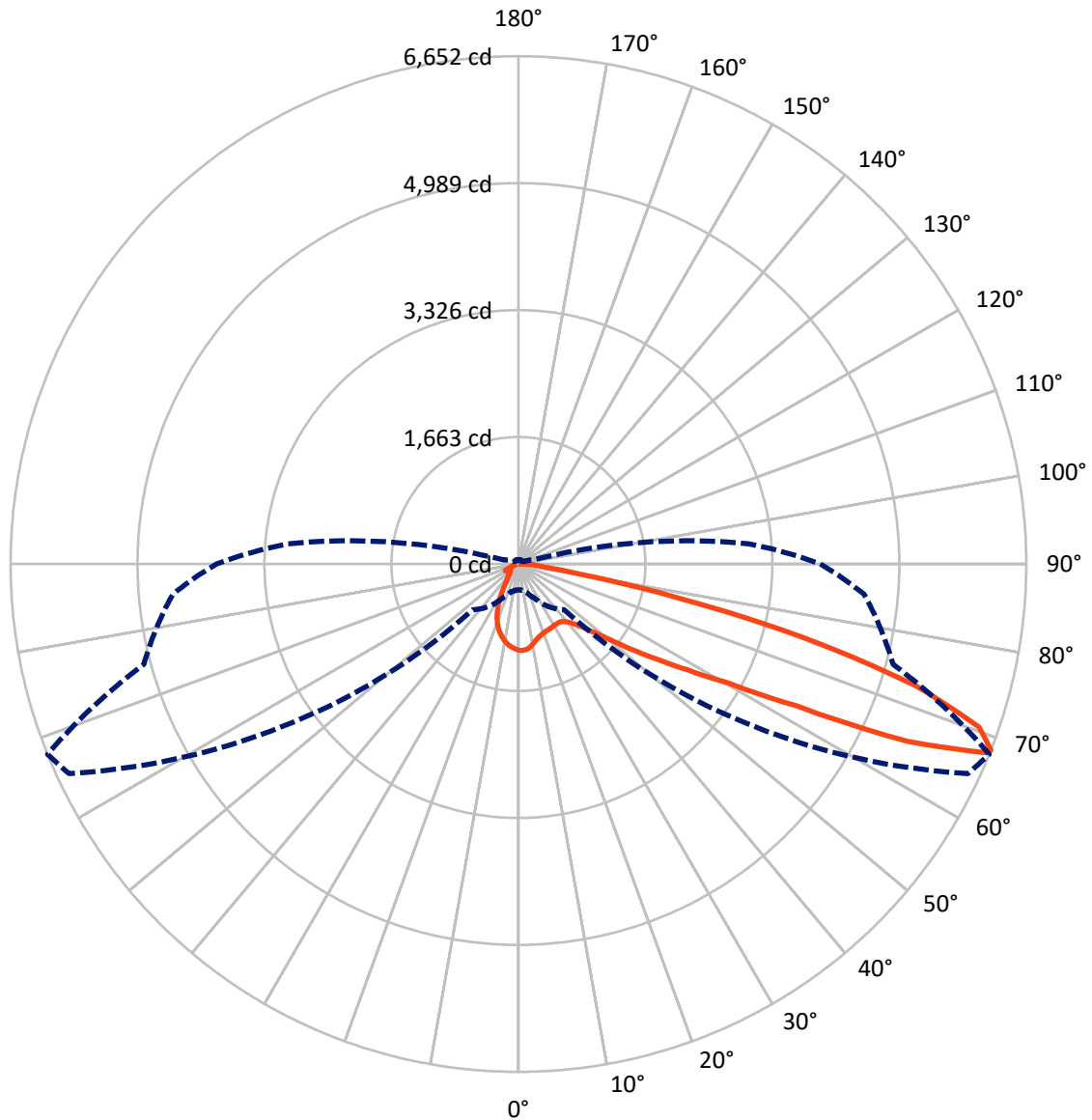
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 11.3 fc
 Type II - Medium - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 68-Deg Lateral - - - Horizontal Cone Through 68-Deg Vertical

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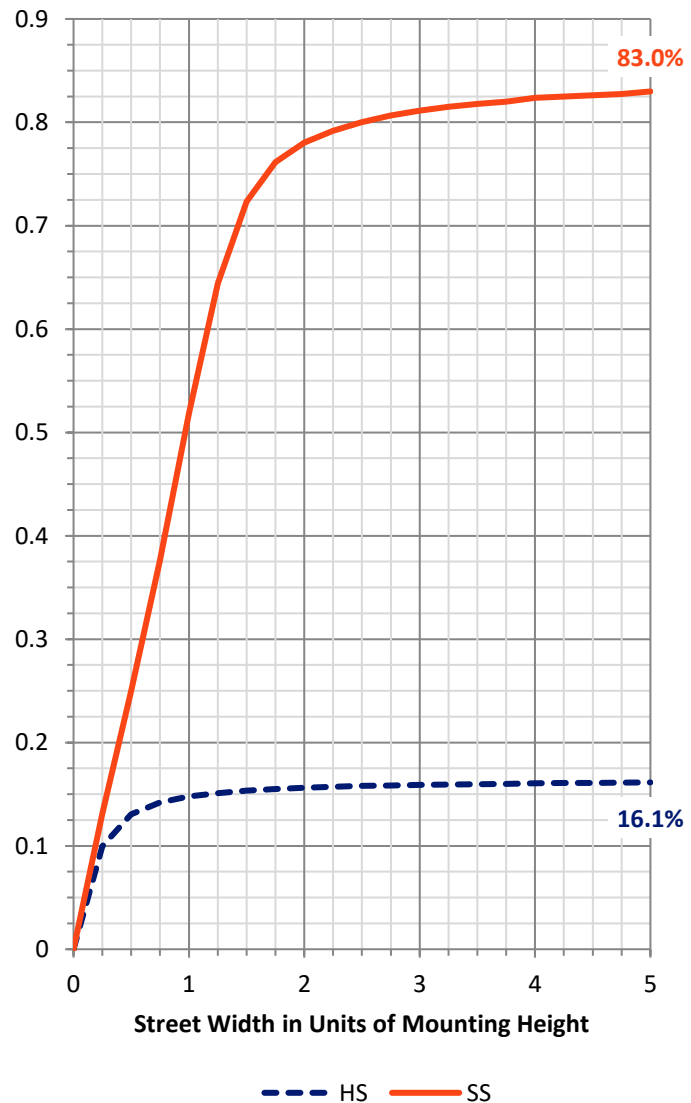
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	851.2	0.0	851.2
	% Fixture	16.4	0.0	16.4
Street Side	Lumens	4351.6	0.0	4351.6
	% Fixture	83.6	0.0	83.6
Total	Lumens	5202.8	0.0	5202.8
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	97.0	1.9
10°-20°	225.0	4.3
20°-30°	304.3	5.8
30°-40°	429.0	8.2
40°-50°	705.5	13.6
50°-60°	1093.5	21.0
60°-70°	1417.8	27.3
70°-80°	813.6	15.6
80°-90°	117.1	2.2
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°	5202.8	100.0
0°-180°	5202.8	100.0



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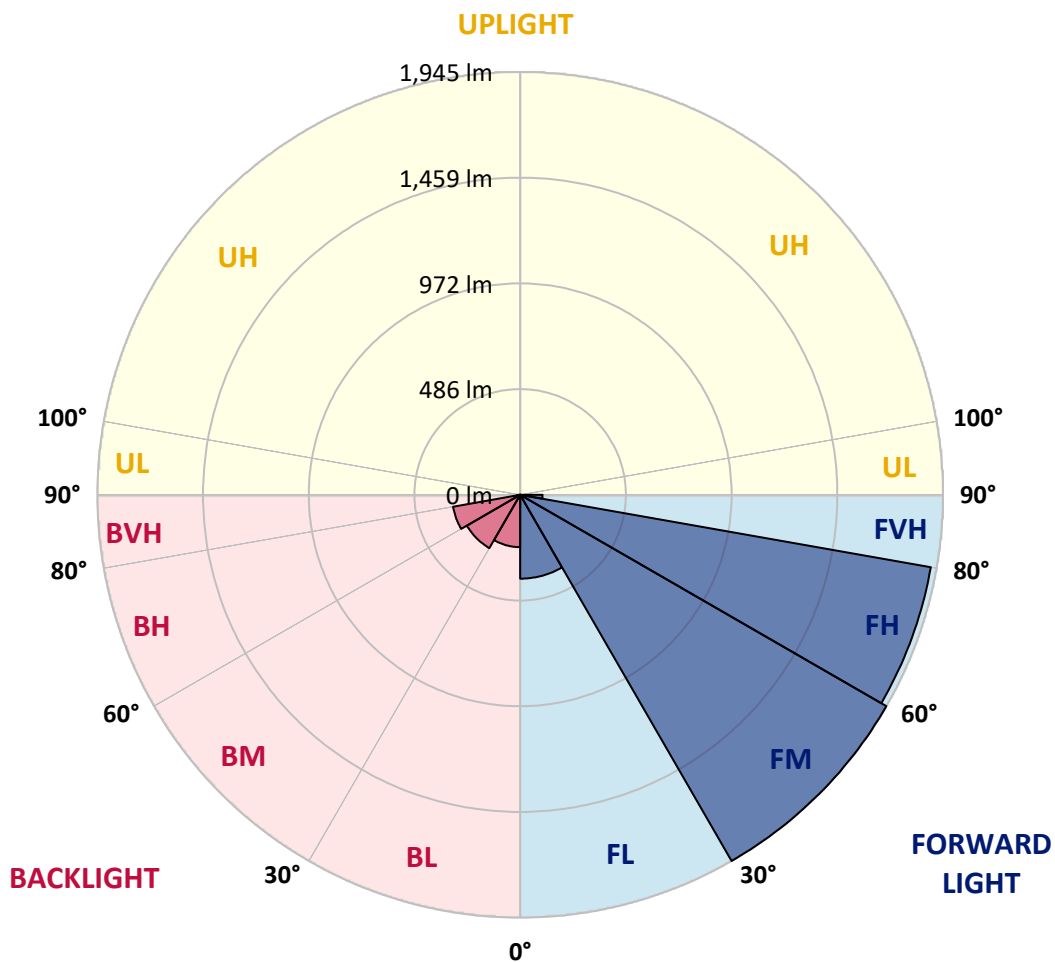
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	385.6	7.4			
FM	(30°-60°)	1944.9	37.4			
FH	(60°-80°)	1918.0	36.9			G2/5000
FVH	(80°-90°)	103.1	2.0			G2/225
BL	(0°-30°)	240.6	4.6	B1/500		
BM	(30°-60°)	283.1	5.4	B1/1000		
BH	(60°-80°)	313.5	6.0	B1/500		G1/500
BVH	(80°-90°)	14.0	0.3			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 II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	68°	75°	85°
0°	1132.1	1132.1	1132.1	1132.1	1132.1	1132.1	1132.1	1132.1	1132.1	1132.1	1132.1
2.5°	1101.9	1110.7	1110.7	1117.1	1122.9	1127.6	1131.8	1131.8	1131.8	1129.0	1126.7
5°	986.0	997.8	999.5	1015.9	1037.3	1063.5	1092.7	1118.5	1123.6	1133.1	1136.8
7.5°	905.4	909.2	915.6	926.8	948.6	980.9	1026.8	1084.6	1098.4	1128.4	1144.0
10°	848.3	851.4	856.9	868.0	887.7	917.0	962.2	1037.3	1060.4	1113.4	1144.4
12.5°	806.5	808.8	814.0	824.1	844.2	870.4	916.6	994.9	1023.3	1098.4	1149.1
15°	773.9	777.9	782.1	791.9	812.2	837.4	884.3	963.8	994.9	1086.5	1157.9
17.5°	761.0	763.0	763.6	768.8	787.2	812.5	859.5	942.1	974.0	1077.1	1164.7
20°	769.0	769.5	762.7	759.2	769.8	793.3	838.7	925.9	958.4	1068.5	1167.4
22.5°	804.8	804.8	787.2	772.2	765.0	779.6	824.9	914.6	949.9	1062.1	1167.4
25°	872.8	869.6	842.3	812.5	780.9	774.9	816.0	907.5	943.5	1058.7	1163.0
27.5°	962.2	959.4	924.4	880.6	823.4	785.1	813.0	901.7	937.0	1053.6	1153.6
30°	1070.9	1068.5	1028.7	971.3	887.0	817.4	820.2	897.5	931.9	1045.1	1137.6
32.5°	1179.4	1177.9	1146.3	1087.6	974.8	872.1	838.7	896.9	929.1	1034.8	1118.2
35°	1288.3	1288.3	1269.0	1219.4	1092.7	954.3	877.9	909.4	934.2	1029.5	1101.5
37.5°	1449.5	1443.0	1407.0	1355.7	1241.2	1061.1	941.1	935.9	954.0	1038.6	1096.0
40°	1699.0	1680.3	1590.2	1503.9	1403.3	1197.7	1033.5	987.2	998.1	1069.9	1109.0
42.5°	1960.0	1930.5	1811.2	1673.2	1570.9	1366.2	1155.0	1070.6	1070.2	1130.3	1150.1
45°	2184.0	2168.7	2039.5	1864.5	1762.1	1556.0	1308.1	1194.2	1182.1	1224.2	1229.3
47.5°	2314.2	2304.0	2226.1	2067.1	1989.2	1779.9	1502.5	1366.0	1342.7	1367.9	1360.2
50°	2278.1	2288.0	2265.5	2184.3	2233.2	2094.6	1750.3	1601.0	1557.2	1582.5	1563.4
52.5°	2088.5	2115.0	2135.0	2150.6	2373.6	2515.7	2061.6	1894.7	1858.4	1853.9	1835.5
55°	1746.9	1789.1	1852.2	1967.2	2336.0	2853.8	2605.4	2250.0	2196.8	2169.0	2176.1
57.5°	1188.8	1252.7	1389.0	1607.5	2139.9	2998.0	3409.5	2708.7	2619.0	2519.7	2542.8
60°	655.0	708.3	870.4	1090.6	1692.1	2976.5	4122.2	3454.4	3171.9	2908.9	2956.5
62.5°	423.8	435.4	556.1	745.0	1038.6	2627.8	4518.1	4700.7	4102.2	3422.2	3489.0
65°	340.5	348.7	407.8	600.8	723.6	1690.5	4535.8	5993.5	5599.0	4119.4	4121.6
67.5°	332.7	336.4	370.8	505.3	678.7	920.4	3920.7	6503.3	6594.7	4942.7	4544.6
68°	337.6	342.0	376.6	489.8	678.4	848.3	3623.7	6495.6	6652.2	5080.4	4544.6
70°	297.7	303.2	384.0	506.7	649.5	729.3	2481.4	6150.5	6402.7	5396.7	4312.3
72.5°	155.6	151.3	190.0	400.0	731.0	760.0	1310.8	5138.5	5432.7	4998.1	3725.6
75°	121.4	110.4	106.4	158.0	643.0	788.2	761.4	3652.1	3874.5	3602.9	2490.2
77.5°	114.2	100.9	93.2	93.5	283.1	820.2	615.9	2149.4	2149.4	1718.6	794.6
80°	91.7	79.5	74.4	85.0	136.6	755.8	642.6	979.5	835.5	444.2	218.8
82.5°	60.5	54.1	54.3	69.0	103.7	504.7	744.2	483.6	363.4	196.8	128.7
85°	38.4	33.0	36.7	48.2	77.6	224.9	736.8	336.1	240.7	110.4	64.1
87.5°	19.4	14.9	18.3	25.2	47.3	64.6	606.6	300.2	178.5	45.9	35.0
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°	1132.1	1132.1	1132.1	1132.1	1132.1	1132.1	1132.1	1132.1	1132.1	1132.1	1132.1
2.5°	1126.7	1119.2	1115.4	1109.2	1101.9	1094.3	1089.3	1086.9	1085.5	1086.2	1086.0
5°	1134.7	1124.9	1109.0	1086.2	1062.8	1037.9	1018.9	1004.2	995.1	992.4	991.6
7.5°	1140.9	1126.7	1096.7	1055.2	1015.2	971.6	934.6	905.0	885.0	875.8	875.5
10°	1139.9	1121.5	1074.4	1013.2	954.3	890.4	832.3	782.8	746.8	729.3	728.6
12.5°	1140.9	1115.8	1046.7	963.8	879.6	788.2	701.8	624.7	571.0	545.5	544.5
15°	1145.0	1109.6	1018.6	908.7	792.2	663.0	539.7	442.9	393.8	377.3	377.3
17.5°	1144.7	1099.4	986.0	844.9	688.6	515.5	368.5	308.6	303.8	319.2	321.6
20°	1137.9	1083.1	943.8	769.0	566.9	356.8	249.8	241.4	279.4	321.6	326.3
22.5°	1127.4	1062.1	895.3	681.0	425.2	232.5	192.6	205.6	257.3	309.6	317.1
25°	1112.7	1036.6	839.5	578.8	282.7	167.3	160.7	176.7	213.1	248.1	253.5
27.5°	1091.4	1004.2	778.7	467.9	180.5	137.6	140.0	151.3	166.8	181.8	185.0
30°	1064.4	966.5	712.4	345.3	136.9	123.1	127.1	133.8	140.8	150.2	152.3
32.5°	1037.3	928.2	643.4	237.2	119.7	115.3	119.3	123.1	128.7	135.3	136.6
35°	1012.7	892.5	572.3	165.5	112.2	110.1	112.2	114.5	120.4	126.8	127.5
37.5°	995.1	863.2	498.2	130.9	107.7	105.7	106.7	107.7	114.5	124.1	125.0
40°	992.7	843.9	423.1	117.6	104.4	101.6	100.9	101.6	110.4	121.4	122.3
42.5°	1015.9	844.9	349.7	112.2	101.6	98.5	95.8	97.1	105.0	113.5	114.2
45°	1070.6	868.8	286.2	109.8	99.3	96.8	92.7	93.5	97.1	101.6	102.2
47.5°	1167.1	920.8	237.5	108.4	97.1	95.2	90.1	88.0	88.4	90.8	90.8
50°	1321.3	1007.7	208.0	107.1	95.5	91.7	86.0	81.9	80.8	82.3	82.6
52.5°	1551.6	1156.8	193.8	104.4	92.4	87.3	80.8	76.8	75.1	76.4	76.4
55°	1862.5	1395.2	186.9	100.6	88.8	81.9	76.1	72.8	71.3	72.5	72.5
57.5°	2216.9	1704.8	198.4	95.5	83.9	76.1	72.0	69.7	68.6	69.7	70.0
60°	2638.1	2109.8	278.0	89.0	78.8	71.1	68.6	67.4	66.7	67.6	67.6
62.5°	3197.7	2648.9	430.3	83.9	73.4	66.3	65.5	64.9	64.1	65.2	65.2
65°	3802.0	3139.3	442.9	80.8	68.6	62.3	62.5	62.5	61.9	62.9	62.9
67.5°	3994.5	3096.8	247.5	77.2	62.9	58.1	59.5	59.5	59.2	60.1	59.7
68°	3953.6	3029.5	215.5	76.1	61.9	57.1	58.5	58.7	58.5	59.5	59.2
70°	3649.9	2659.8	141.8	70.3	57.4	53.7	55.8	56.1	55.8	57.1	56.8
72.5°	3012.8	1995.0	104.7	61.5	52.0	49.2	51.4	51.7	52.0	53.4	53.0
75°	1913.4	1101.9	82.6	52.3	46.5	44.1	46.3	47.3	47.9	49.9	49.0
77.5°	524.2	334.3	67.0	44.6	40.2	39.0	40.5	41.9	42.5	44.8	43.2
80°	183.6	147.9	55.8	37.6	33.2	33.0	34.3	35.8	36.4	38.4	36.4
82.5°	111.5	96.5	44.6	29.6	26.2	25.8	27.5	28.8	29.6	29.6	28.1
85°	58.1	50.9	32.6	20.8	18.1	17.0	20.0	21.7	22.1	21.7	20.8
87.5°	32.6	28.8	17.3	9.8	8.2	8.5	10.5	12.9	14.0	13.7	12.9
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)