

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: P270269

Luminaire Tested: **NAV-AF-01-D-UNV-SL2-7027-800-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270269
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24258)
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-SL2-7027-800-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 2700K, 800mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE II SPILL
LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3498 lumens
Efficiency: N/A
Efficacy: 79.5 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 - G1

Input Watts (W): 44
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

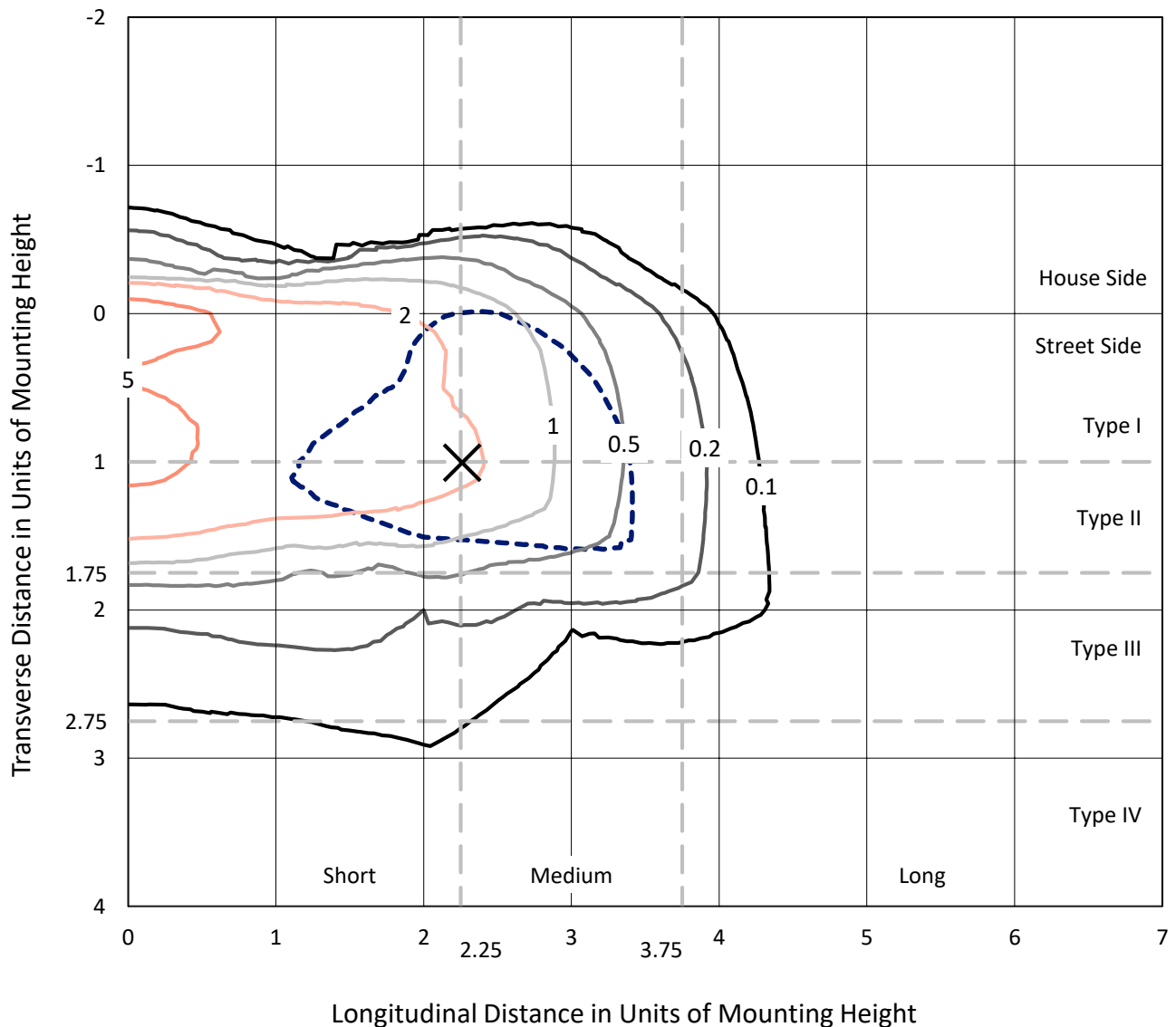


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

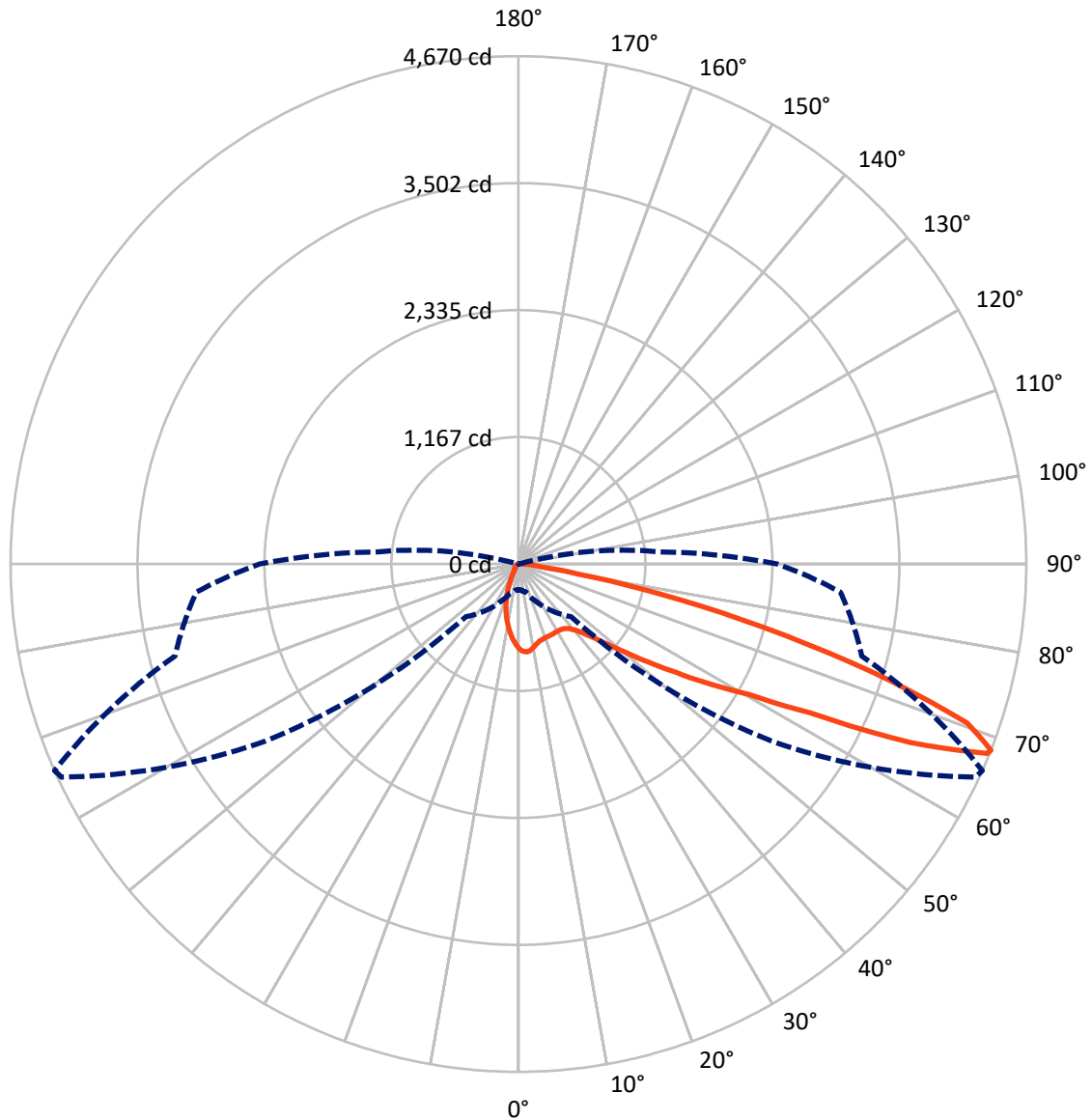


Based on 10 foot mounting height. Maximum calculated value = 7.8 fc
 Type II - Medium - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 66-Deg Lateral - - - Horizontal Cone Through 68-Deg Vertical

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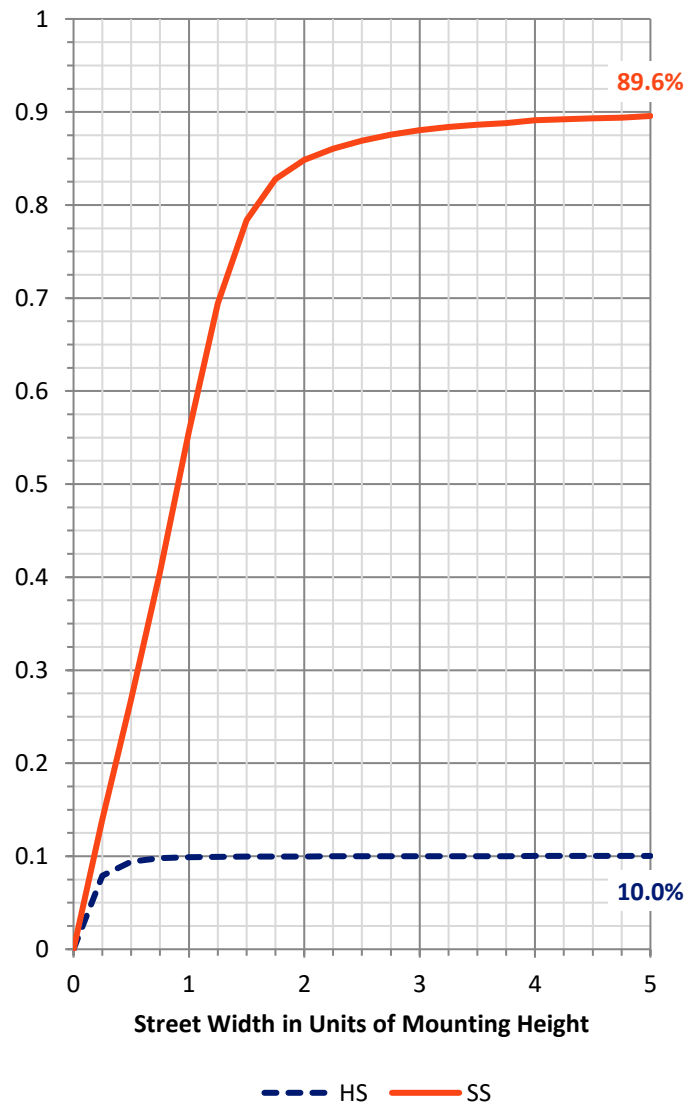
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	354.3	0.0	354.3
	% Fixture	10.1	0.0	10.1
Street Side	Lumens	3143.7	0.0	3143.7
	% Fixture	89.9	0.0	89.9
Total	Lumens	3498.0	0.0	3498.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	63.9	1.8
10°-20°	137.5	3.9
20°-30°	199.2	5.7
30°-40°	304.9	8.7
40°-50°	521.6	14.9
50°-60°	815.9	23.3
60°-70°	939.5	26.9
70°-80°	470.1	13.4
80°-90°	45.5	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°	3498.0	100.0
0°-180°	3498.0	100.0



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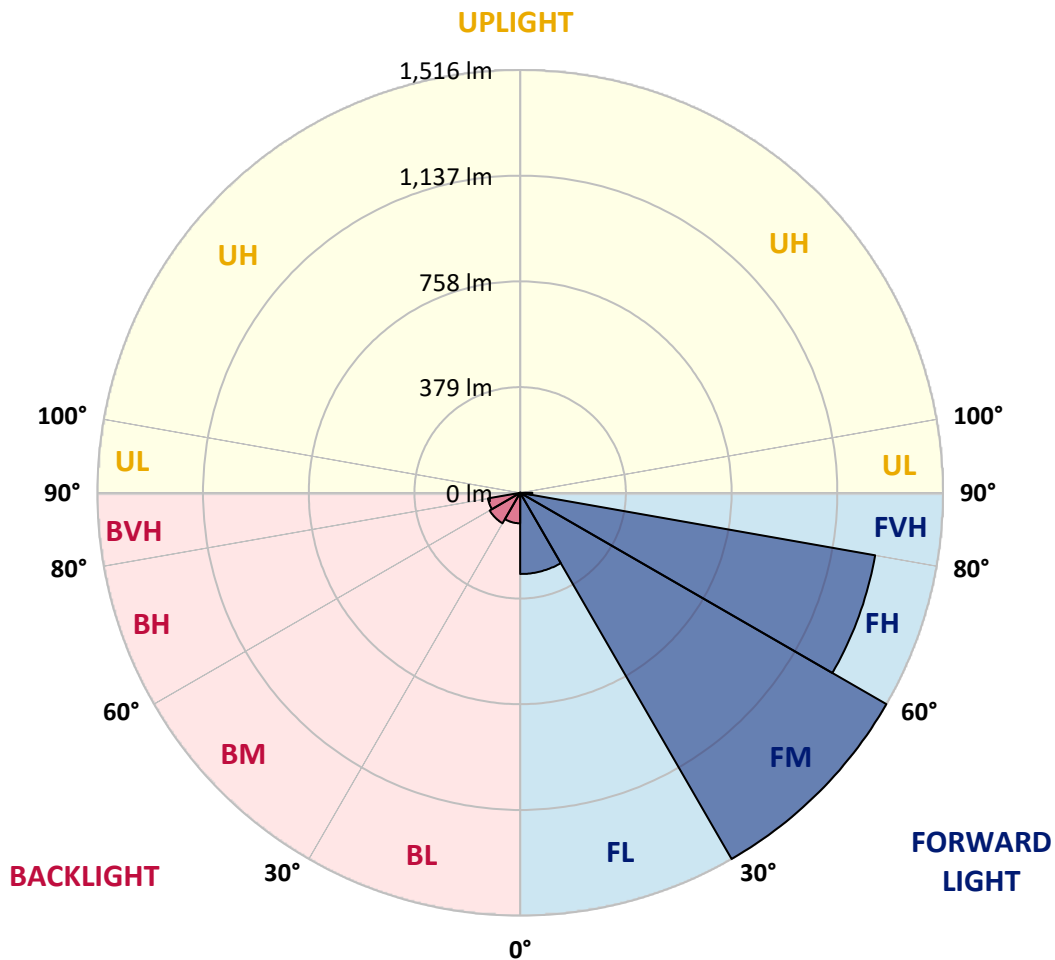
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	291.2	8.3			
FM	(30°-60°)	1516.2	43.3			
FH	(60°-80°)	1292.5	36.9			G1/1800
FVH	(80°-90°)	43.8	1.3			G1/100
BL	(0°-30°)	109.4	3.1	B0/110		
BM	(30°-60°)	126.2	3.6	B0/220		
BH	(60°-80°)	117.1	3.3	B1/500		G1/500
BVH	(80°-90°)	1.7	0.0			G0/10
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 Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	66°	75°	85°
0°	779.3	779.3	779.3	779.3	779.3	779.3	779.3	779.3	779.3	779.3	779.3
2.5°	819.8	820.2	820.0	820.8	820.2	816.1	811.7	802.4	803.3	791.1	777.7
5°	762.0	766.8	771.4	776.0	787.3	797.2	809.0	811.7	811.7	801.3	781.5
7.5°	703.3	703.6	708.8	715.1	730.1	748.3	775.7	800.5	801.0	803.8	782.1
10°	659.0	660.4	663.9	670.9	685.9	703.8	734.5	773.4	776.2	796.6	776.6
12.5°	624.7	626.4	630.3	638.2	651.9	670.3	702.7	746.9	751.1	789.8	774.9
15°	598.4	600.5	603.7	611.6	626.4	645.9	681.3	729.3	734.3	787.0	780.2
17.5°	587.4	587.4	587.1	592.6	607.4	627.1	664.2	720.0	726.3	789.3	788.9
20°	592.1	591.3	585.4	584.1	593.2	613.0	650.8	714.0	721.1	793.4	799.6
22.5°	616.7	615.1	602.3	591.5	588.7	602.0	641.7	709.8	718.4	801.8	814.0
25°	669.1	664.2	646.4	622.3	600.5	599.2	635.5	707.7	716.7	811.7	829.6
27.5°	737.2	735.9	707.3	674.9	633.2	608.2	633.6	706.0	715.1	818.9	842.3
30°	821.9	822.5	789.5	747.2	684.0	633.8	639.6	705.2	714.5	819.4	847.7
32.5°	909.3	909.8	882.2	837.0	753.5	677.7	656.7	709.0	717.6	817.2	847.5
35°	993.3	994.1	977.5	941.1	846.4	738.6	688.7	722.1	728.3	818.5	846.9
37.5°	1099.5	1102.8	1082.5	1048.4	962.8	828.1	741.1	748.8	753.8	829.9	851.0
40°	1280.8	1276.3	1218.1	1160.5	1089.0	937.2	817.0	794.7	796.3	859.0	866.7
42.5°	1491.9	1486.4	1386.8	1287.4	1219.0	1068.8	913.8	865.0	864.7	907.8	900.7
45°	1673.7	1670.4	1565.4	1432.8	1362.9	1214.0	1033.3	966.3	963.1	992.4	962.8
47.5°	1802.8	1800.1	1720.7	1587.8	1529.3	1373.9	1182.3	1104.5	1097.5	1103.1	1063.6
50°	1815.4	1812.4	1784.7	1699.2	1723.7	1608.3	1366.7	1285.5	1276.6	1268.0	1215.9
52.5°	1697.3	1697.1	1711.6	1706.2	1859.9	1910.2	1592.7	1509.2	1498.8	1477.2	1425.3
55°	1456.0	1454.5	1509.7	1589.9	1856.8	2221.5	1937.4	1775.6	1761.8	1718.5	1650.4
57.5°	1063.9	1056.6	1172.0	1342.0	1726.5	2357.7	2484.6	2106.4	2083.7	1946.1	1841.2
60°	587.4	590.1	738.3	939.6	1417.4	2330.8	2988.2	2492.3	2432.4	2142.5	2036.7
62.5°	329.3	336.1	446.5	610.7	903.8	2112.5	3258.4	3156.3	3012.0	2371.4	2283.9
65°	249.1	253.2	308.7	471.3	569.9	1476.3	3301.5	4084.8	3960.3	2718.6	2677.4
67.5°	234.5	237.8	265.0	390.8	519.0	765.5	2977.0	4633.8	4649.5	3191.9	2982.2
68°	236.2	240.2	267.4	375.9	518.2	684.9	2838.6	4636.6	4669.8	3268.4	2971.8
70°	216.9	218.0	282.8	368.8	502.2	539.6	2053.4	4319.0	4378.5	3359.2	2697.7
72.5°	83.0	83.3	126.9	319.3	526.1	542.7	1034.4	3413.6	3416.7	2923.4	2103.2
75°	43.1	36.2	39.9	99.9	502.5	528.9	519.0	2330.8	2316.3	1977.1	1288.7
77.5°	29.6	25.2	26.6	34.7	208.9	528.7	374.9	1340.4	1337.2	841.2	367.6
80°	16.8	14.6	15.9	29.1	73.3	496.3	349.4	576.2	542.8	147.7	59.6
82.5°	8.5	7.1	8.5	24.4	45.5	312.3	339.6	226.1	201.3	35.2	38.6
85°	2.2	2.2	4.1	17.0	28.2	102.4	304.5	163.1	146.7	15.5	27.5
87.5°	0.5	0.3	1.6	6.3	10.2	22.3	168.9	90.9	78.2	7.9	15.9
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°	779.3	779.3	779.3	779.3	779.3	779.3	779.3	779.3	779.3	779.3	779.3
2.5°	772.3	764.5	749.4	732.4	720.4	707.1	699.4	690.1	682.9	676.7	681.3
5°	769.5	754.5	721.1	683.5	651.9	621.6	599.2	577.8	561.6	551.4	555.5
7.5°	762.3	740.4	685.9	627.1	575.5	526.9	487.4	451.9	424.4	409.6	414.4
10°	750.3	719.3	646.2	564.6	492.5	423.7	364.9	312.3	272.4	253.7	258.2
12.5°	741.5	700.5	605.0	504.2	409.2	311.7	233.6	173.3	142.2	123.5	125.3
15°	737.6	685.9	566.6	440.4	318.3	200.2	126.3	91.4	80.8	76.8	77.2
17.5°	738.1	674.4	530.0	374.2	226.6	115.1	77.4	69.8	68.1	67.3	67.3
20°	739.6	662.9	492.1	305.3	144.9	74.1	64.5	62.1	61.3	60.1	60.5
22.5°	743.6	654.1	454.0	236.2	89.2	60.5	57.1	54.9	53.5	51.9	52.2
25°	749.9	647.5	416.4	170.0	62.9	52.7	49.6	46.7	44.1	42.3	42.6
27.5°	753.8	638.2	376.2	115.9	52.2	46.2	42.0	37.9	35.2	33.4	33.2
30°	751.1	623.1	330.7	76.0	46.2	39.9	34.9	30.3	27.5	26.1	26.1
32.5°	743.6	603.7	280.5	55.4	41.0	34.3	28.2	24.2	22.3	21.4	21.6
35°	735.2	583.3	226.8	46.9	36.8	29.1	23.0	19.8	19.0	18.7	18.7
37.5°	730.4	565.8	175.4	42.6	33.0	24.2	19.0	17.0	16.2	16.2	16.2
40°	735.6	552.2	129.8	39.3	29.1	20.0	15.9	14.6	14.3	14.3	14.3
42.5°	757.9	547.5	95.0	36.6	25.2	16.8	13.7	12.7	12.3	12.7	12.7
45°	801.3	557.7	72.0	33.7	21.6	13.7	11.8	11.0	11.0	11.3	11.3
47.5°	874.9	583.8	59.1	31.0	18.1	11.6	10.2	9.6	9.6	9.9	9.9
50°	989.2	632.1	53.0	27.9	15.1	9.9	8.5	8.3	8.3	8.5	8.9
52.5°	1162.6	724.2	49.9	25.1	12.3	8.3	7.1	6.8	7.1	7.5	7.5
55°	1355.7	841.9	46.4	22.0	10.4	6.8	5.7	5.7	6.1	6.6	6.6
57.5°	1535.6	955.5	43.1	18.1	9.1	5.5	4.8	4.8	5.2	5.7	5.7
60°	1725.6	1067.0	38.6	14.6	7.6	4.4	3.9	3.9	4.8	5.2	5.5
62.5°	1960.5	1196.7	33.0	11.6	6.1	3.4	2.8	3.6	4.4	5.2	5.2
65°	2299.8	1357.9	25.8	9.1	4.8	2.4	2.2	3.4	4.1	4.9	5.2
67.5°	2423.1	1337.2	19.6	7.5	3.6	1.9	1.9	3.1	4.1	4.9	4.9
68°	2378.1	1292.3	18.7	7.1	3.4	1.9	1.9	3.1	4.1	4.9	4.9
70°	2072.1	1056.3	15.5	5.5	2.8	1.6	1.6	2.8	4.1	4.8	4.9
72.5°	1551.6	701.8	13.1	3.6	2.4	1.6	1.3	2.8	3.9	4.8	4.8
75°	890.0	291.4	11.3	2.8	2.2	1.3	1.3	2.4	3.9	4.8	4.8
77.5°	251.5	68.1	9.1	2.2	1.9	1.3	1.1	2.4	3.6	4.4	4.4
80°	46.2	20.3	7.1	1.9	1.6	1.3	1.1	2.4	3.6	4.4	4.4
82.5°	30.5	9.6	5.2	1.9	1.6	1.3	1.1	2.2	3.4	4.1	4.1
85°	22.7	6.8	3.4	1.9	1.6	1.3	1.1	2.2	3.4	4.1	4.1
87.5°	12.7	3.1	2.4	2.2	1.9	1.3	1.1	1.9	3.1	3.9	3.9
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)