

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: P195199

Luminaire Tested: **NAV-AF-01-D-UNV-SL4-7060-800-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195199
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24285)
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-SL4-7060-800-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 5700K, 800mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE IV SPILL
LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4022 lumens
Efficiency: N/A
Efficacy: 91.4 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B0 - 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

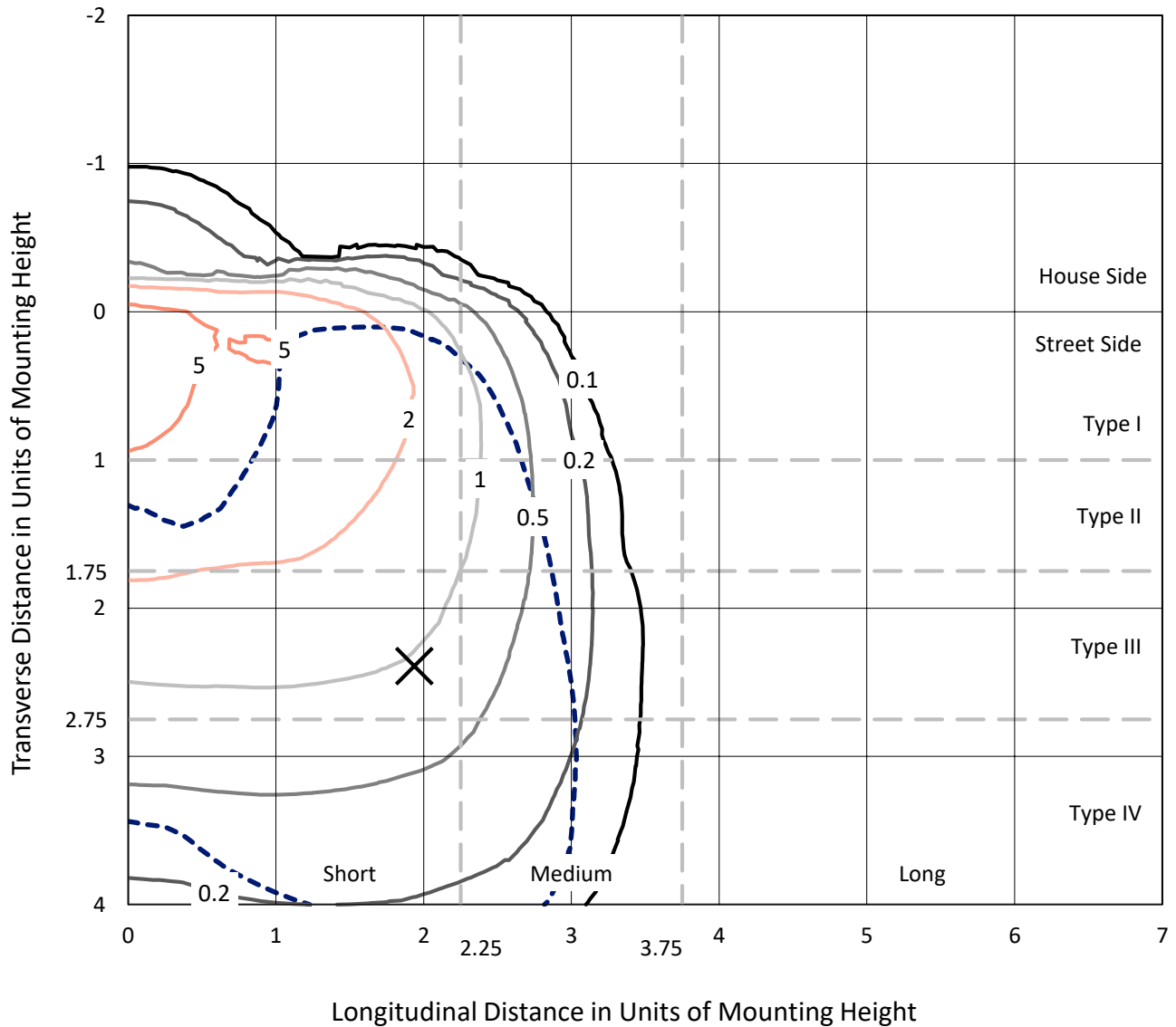


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

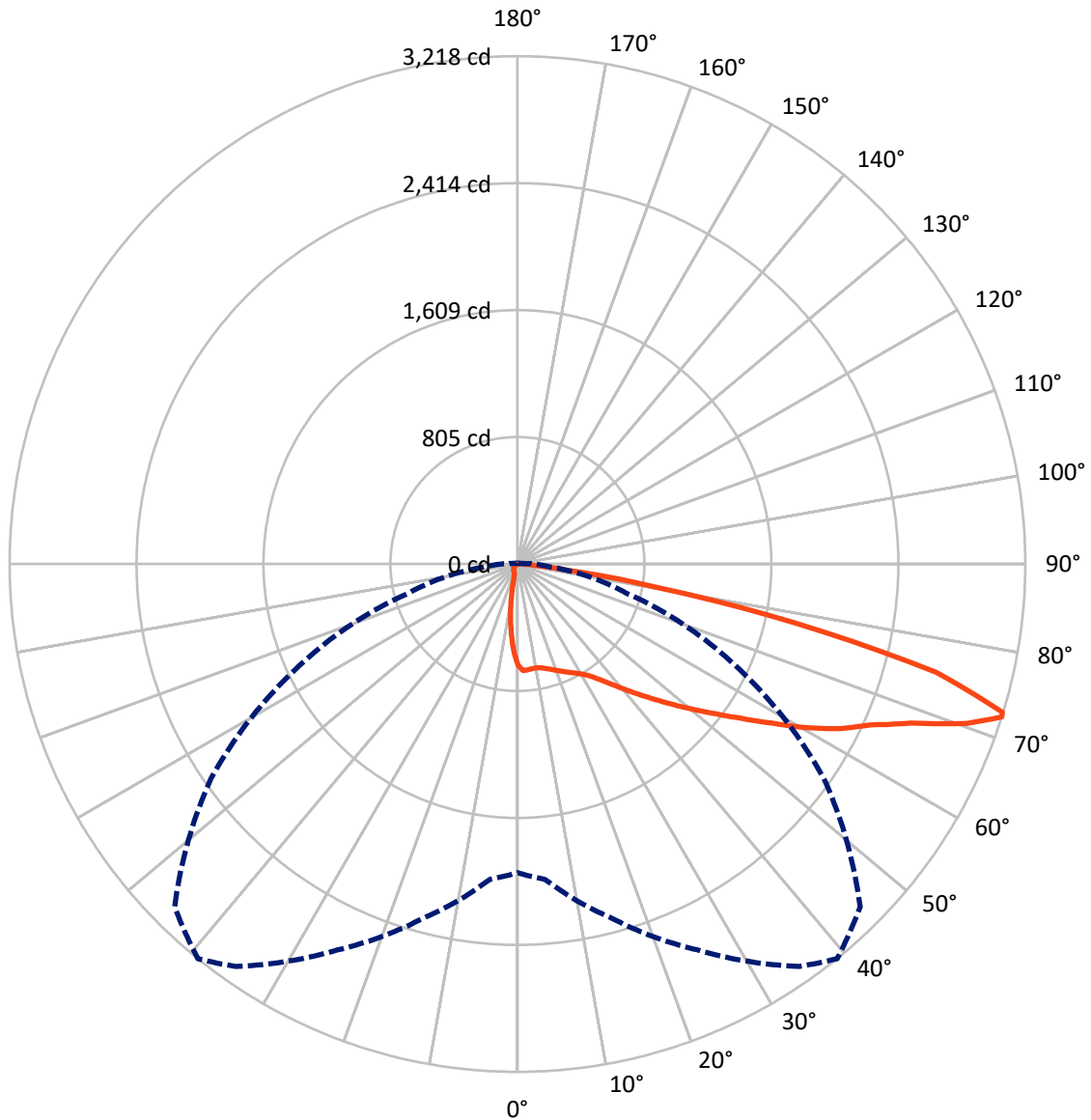


Based on 10 foot mounting height. Maximum calculated value = 6.8 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 39-Deg Lateral - - - Horizontal Cone Through 72-Deg Vertical

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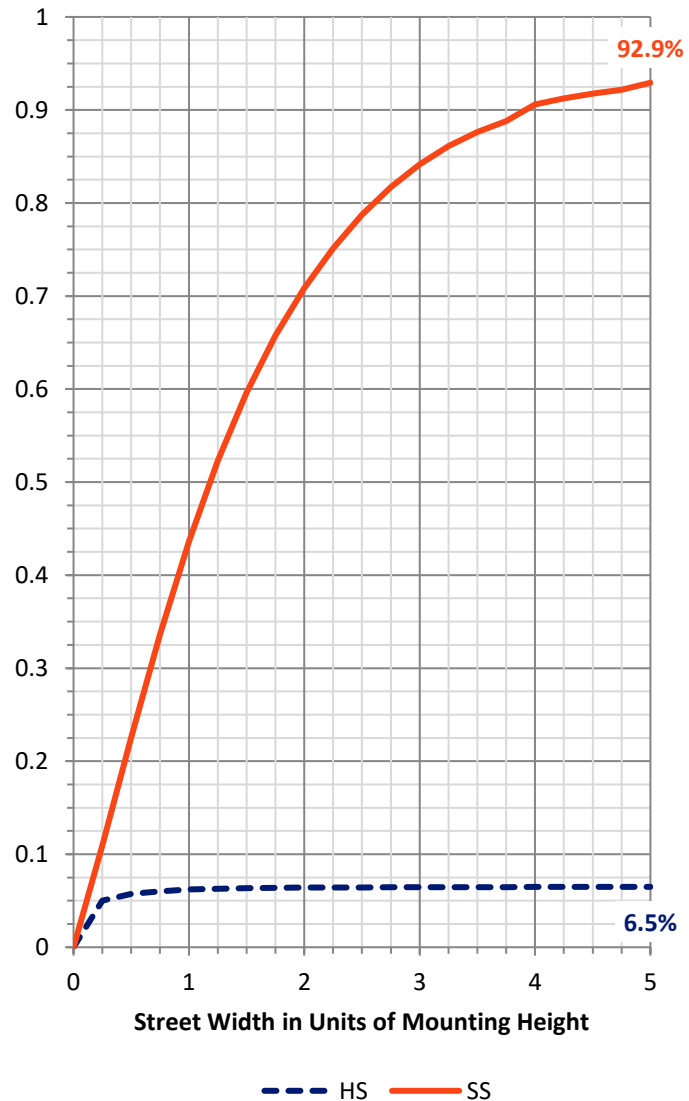
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	263.6	0.0	263.6
	% Fixture	6.6	0.0	6.6
Street Side	Lumens	3758.4	0.0	3758.4
	% Fixture	93.4	0.0	93.4
Total	Lumens	4022.0	0.0	4022.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	52.4	1.3
10°-20°	126.8	3.2
20°-30°	210.5	5.2
30°-40°	335.5	8.3
40°-50°	553.9	13.8
50°-60°	836.4	20.8
60°-70°	1089.6	27.1
70°-80°	736.2	18.3
80°-90°	80.6	2.0
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°	4022.0	100.0
0°-180°	4022.0	100.0



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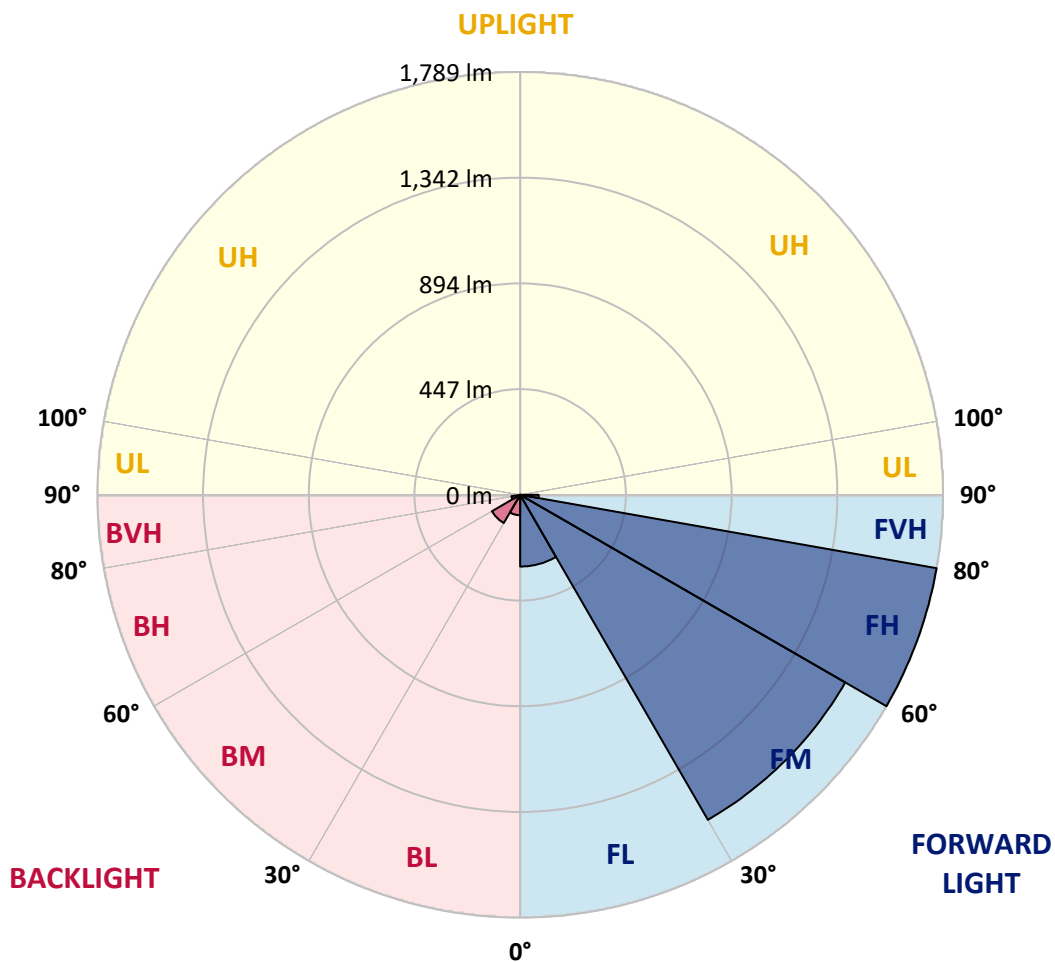
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	303.4	7.5			
FM	(30°-60°)	1587.9	39.5			
FH	(60°-80°)	1788.8	44.5			G1/1800
FVH	(80°-90°)	78.3	1.9			G1/100
BL	(0°-30°)	86.3	2.1	B0/110		
BM	(30°-60°)	137.9	3.4	B0/220		
BH	(60°-80°)	37.0	0.9	B0/110		G0/110
BVH	(80°-90°)	2.3	0.1			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B0-U0-G1

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	39°	45°	55°	65°	75°	85°
0°	643.7	643.7	643.7	643.7	643.7	643.7	643.7	643.7	643.7	643.7	643.7
2.5°	685.5	686.7	685.2	682.3	678.2	675.7	672.2	664.6	655.1	646.9	637.4
5°	690.9	691.5	689.6	684.2	677.9	674.4	670.0	661.8	652.0	640.6	623.5
7.5°	692.4	692.1	689.9	683.3	673.5	669.0	661.5	651.3	641.2	630.8	611.5
10°	691.8	691.8	690.2	683.9	672.8	668.7	660.2	649.4	636.8	626.4	605.8
12.5°	689.6	690.9	689.9	686.4	678.2	675.0	667.5	656.7	644.7	633.9	612.1
15°	692.4	694.3	696.2	695.0	690.2	687.4	680.4	669.4	659.6	648.2	624.8
17.5°	703.8	707.9	712.4	712.7	707.6	702.6	694.7	683.3	673.8	663.4	638.1
20°	725.3	728.5	736.7	738.3	728.2	720.9	709.8	696.5	687.1	678.2	650.4
22.5°	757.3	760.7	767.4	765.2	748.1	739.6	725.6	710.5	700.7	695.6	664.6
25°	805.6	806.6	808.2	798.4	770.2	760.7	743.7	726.6	718.7	718.0	684.9
27.5°	862.5	863.8	856.9	835.0	794.9	782.6	763.3	747.8	744.0	748.7	710.5
30°	927.7	928.0	908.7	873.3	823.3	809.7	789.8	772.7	776.2	787.9	743.3
32.5°	994.4	991.2	964.7	918.5	862.2	845.8	828.7	811.6	821.8	845.5	791.4
35°	1055.4	1054.2	1022.8	969.1	912.8	898.3	885.9	867.9	884.4	922.9	856.9
37.5°	1116.4	1115.5	1079.8	1023.8	975.1	964.7	955.5	941.6	968.5	1025.1	944.4
40°	1183.8	1182.2	1138.3	1084.5	1047.5	1041.8	1036.4	1030.4	1076.3	1155.0	1053.5
42.5°	1266.9	1260.0	1200.2	1150.6	1127.2	1128.8	1129.1	1135.1	1206.9	1309.6	1182.2
45°	1362.4	1346.9	1262.5	1221.4	1214.8	1224.3	1233.7	1258.7	1359.0	1487.6	1324.5
47.5°	1455.1	1430.1	1334.3	1297.6	1311.2	1330.8	1353.6	1402.3	1529.7	1673.9	1453.5
50°	1534.7	1509.1	1405.4	1375.1	1418.4	1447.5	1488.0	1561.6	1709.9	1831.3	1534.7
52.5°	1597.4	1577.1	1480.7	1460.4	1537.3	1577.1	1640.7	1737.4	1880.0	1935.0	1591.7
55°	1643.5	1633.4	1552.8	1555.6	1669.4	1727.0	1806.0	1915.4	2023.6	2015.7	1634.3
57.5°	1695.7	1687.8	1628.3	1667.9	1828.5	1902.8	1994.2	2082.1	2127.9	2080.5	1676.1
60°	1749.1	1751.6	1720.0	1803.8	2025.1	2107.4	2187.0	2208.8	2217.4	2146.2	1720.0
62.5°	1789.6	1800.3	1803.2	1950.5	2226.9	2297.1	2331.5	2316.0	2314.1	2234.5	1716.6
65°	1836.1	1864.2	1911.0	2111.5	2410.3	2456.4	2481.1	2503.5	2456.1	2260.7	1547.7
67.5°	1916.4	1960.6	2065.9	2308.8	2622.1	2690.4	2760.3	2736.6	2477.3	1994.2	1179.0
70°	2024.5	2078.6	2264.5	2566.5	2909.5	3024.0	3082.5	2717.9	2103.2	1377.9	621.9
72°	1956.2	2005.2	2325.8	2698.0	3113.1	3218.1	3071.7	2370.7	1524.6	714.3	208.4
72.5°	1889.8	1940.4	2306.2	2696.4	3133.4	3213.7	3001.8	2233.8	1349.1	555.8	143.5
75°	1311.2	1375.1	1977.1	2423.9	2829.5	2741.3	2296.7	1352.6	488.8	95.5	47.4
77.5°	677.9	727.2	1199.3	1712.8	1972.0	1806.0	1357.4	586.8	135.3	50.6	31.3
80°	420.2	444.6	560.9	843.9	1024.4	896.1	598.8	237.1	86.6	30.0	25.0
82.5°	217.5	236.2	353.2	340.5	378.5	314.6	221.0	198.6	53.4	18.7	25.6
85°	71.5	75.9	216.9	226.4	161.9	108.8	98.0	189.4	15.5	12.0	21.8
87.5°	9.5	11.1	76.2	129.6	79.7	49.3	58.8	66.7	5.4	6.6	6.0
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°	643.7	643.7	643.7	643.7	643.7	643.7	643.7	643.7	643.7	643.7	643.7
2.5°	631.1	627.0	614.0	601.1	586.2	572.6	561.9	554.9	558.1	547.6	549.2
5°	613.1	602.6	574.2	543.5	510.3	479.3	454.7	436.3	432.9	417.0	417.7
7.5°	595.7	578.6	532.5	481.9	426.8	382.3	341.8	306.4	293.7	280.8	273.2
10°	586.2	562.8	497.4	423.7	346.2	280.8	223.9	179.3	160.6	147.0	140.4
12.5°	589.0	558.1	471.1	370.9	269.1	185.9	126.5	93.9	82.5	76.2	74.0
15°	598.5	559.0	447.4	319.3	195.7	112.6	74.3	63.6	62.6	62.3	62.0
17.5°	607.4	560.0	422.4	265.6	130.9	71.8	59.8	58.8	58.8	58.8	58.8
20°	616.6	560.3	394.9	209.3	86.0	58.8	56.3	55.6	56.3	56.3	56.3
22.5°	627.3	562.5	368.4	154.6	63.6	55.3	53.8	53.4	53.8	53.8	53.4
25°	640.6	567.2	339.6	110.7	57.5	53.1	51.5	51.2	51.5	51.2	51.2
27.5°	658.3	573.6	306.1	79.4	55.0	50.9	49.3	49.3	49.3	49.0	49.0
30°	681.1	581.1	261.2	62.6	52.5	48.7	47.4	47.4	47.1	46.8	46.8
32.5°	713.6	593.5	212.2	56.6	49.6	45.8	44.6	44.9	44.6	44.3	43.9
35°	759.8	612.8	163.8	53.4	46.8	43.0	41.7	41.7	41.7	41.1	41.1
37.5°	825.2	642.2	122.7	50.3	43.9	40.2	38.6	38.6	38.3	37.6	37.9
40°	906.2	679.2	88.8	47.4	41.1	37.0	35.7	35.1	34.5	33.8	33.8
42.5°	1003.6	715.2	66.7	44.6	38.3	34.5	32.9	32.3	31.0	30.4	30.0
45°	1112.6	753.5	55.3	41.1	35.1	31.6	30.4	29.1	27.5	26.6	26.2
47.5°	1204.7	776.9	49.3	37.6	31.9	28.8	27.5	25.6	23.7	23.1	23.1
50°	1260.0	767.1	44.3	34.1	28.8	25.9	24.3	21.8	20.6	19.9	19.6
52.5°	1291.0	738.0	40.2	31.3	25.9	22.8	20.6	18.3	17.7	17.1	17.1
55°	1312.2	695.9	35.7	28.5	23.4	19.9	17.4	15.8	15.2	14.9	14.5
57.5°	1332.4	644.7	31.6	25.9	20.9	17.7	14.9	14.2	13.0	12.6	12.6
60°	1338.4	574.2	27.8	23.1	18.7	15.5	13.0	12.0	10.8	10.4	10.4
62.5°	1261.9	456.9	24.7	19.6	16.4	13.3	11.4	10.1	8.9	8.9	8.9
65°	1054.5	310.2	21.2	17.1	14.5	11.4	9.8	8.2	7.6	7.6	7.6
67.5°	734.5	173.0	18.0	14.5	12.3	9.5	8.2	7.0	6.6	7.0	7.0
70°	331.0	68.6	15.2	12.0	10.1	7.9	7.0	6.0	6.6	6.6	6.6
72°	99.3	36.7	12.6	9.8	8.2	7.0	6.0	5.7	6.3	6.6	6.6
72.5°	73.7	32.9	12.0	9.5	8.2	6.6	5.7	5.7	6.3	6.6	6.6
75°	37.9	22.4	9.2	7.0	6.0	5.4	4.7	5.4	6.3	6.3	6.3
77.5°	29.7	18.3	7.6	5.4	5.1	4.7	4.4	5.1	5.7	5.7	5.7
80°	27.8	12.0	6.0	5.1	4.4	4.1	4.1	4.4	5.1	5.4	5.4
82.5°	28.1	9.8	5.4	4.7	4.1	3.8	3.8	4.1	4.7	5.1	5.1
85°	18.0	6.6	4.7	4.1	3.8	3.5	3.5	3.8	4.4	4.7	4.7
87.5°	6.0	5.1	4.1	3.8	3.2	3.2	3.2	3.2	3.8	4.1	4.4
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)