

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: P270363

Luminaire Tested: **NAV-AF-02-D-UNV-SL4-7027-600-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270363
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-02-D-UNV-SL4-7027-600-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 2700K, 615mA LIGHTSQUARES 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: 5679.8 lumens
Efficiency: N/A
Efficacy: 86.1 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B1 - U0 - G2

Input Watts (W): 66
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

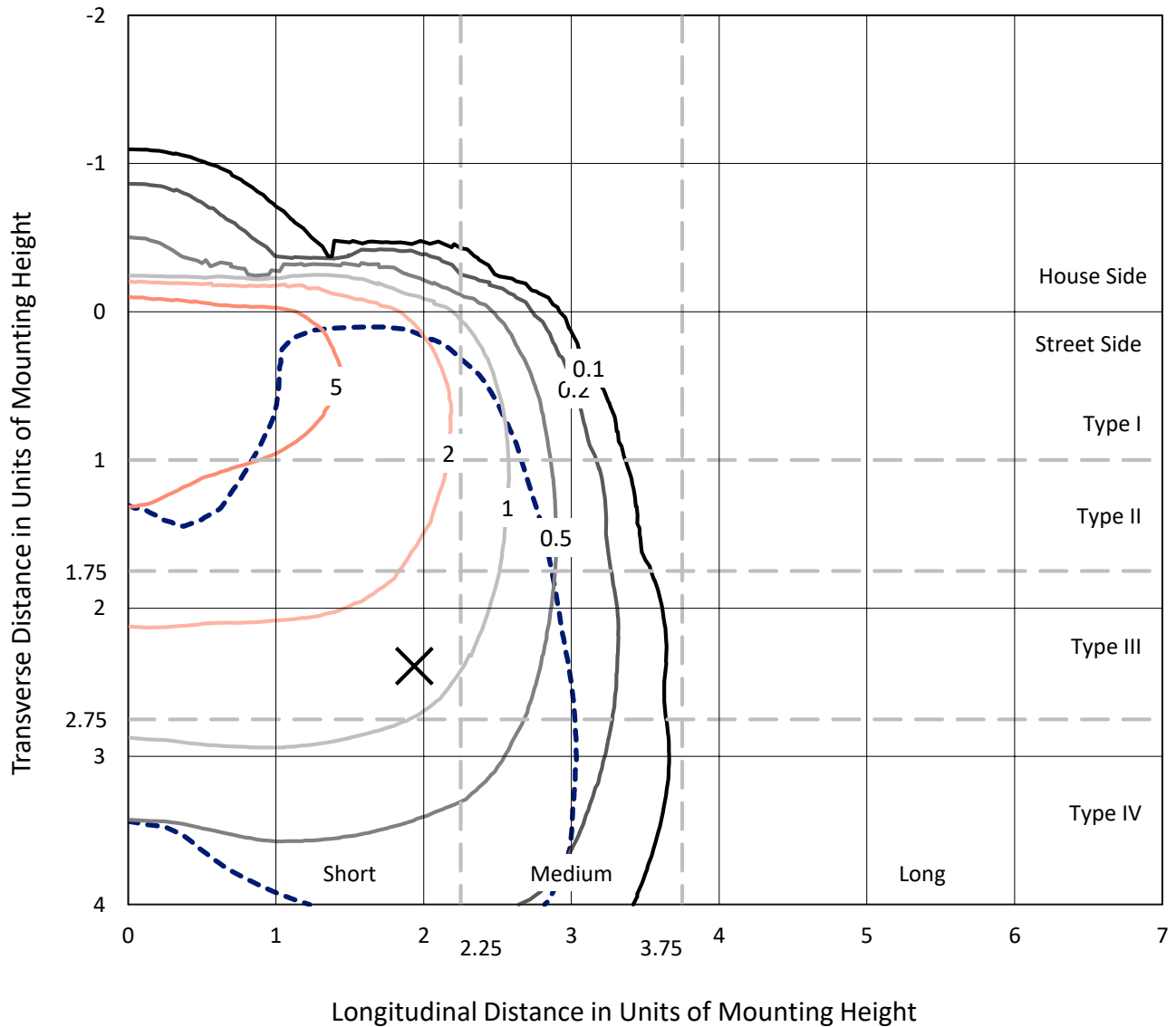


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

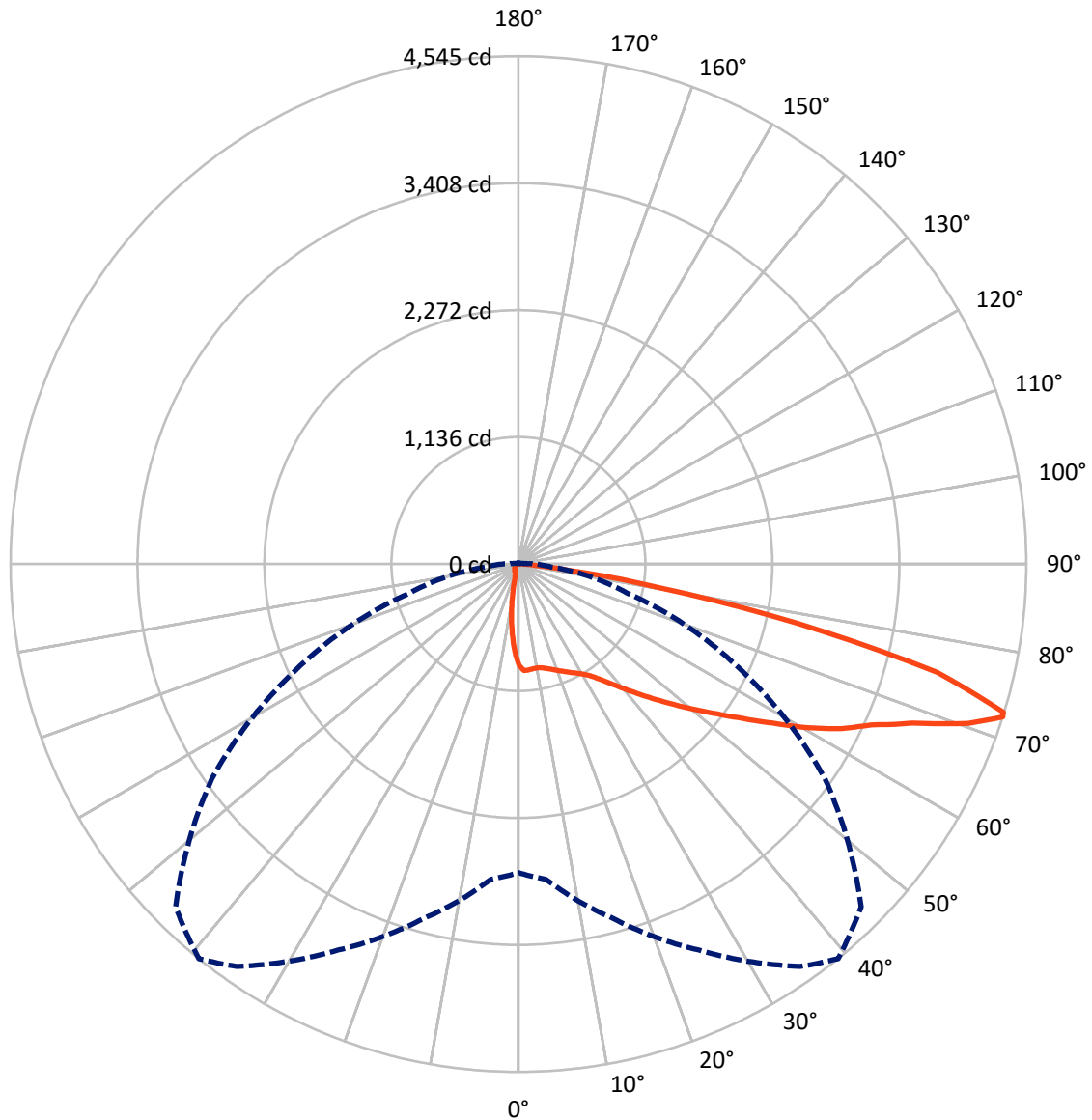


Based on 10 foot mounting height. Maximum calculated value = 9.5 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



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

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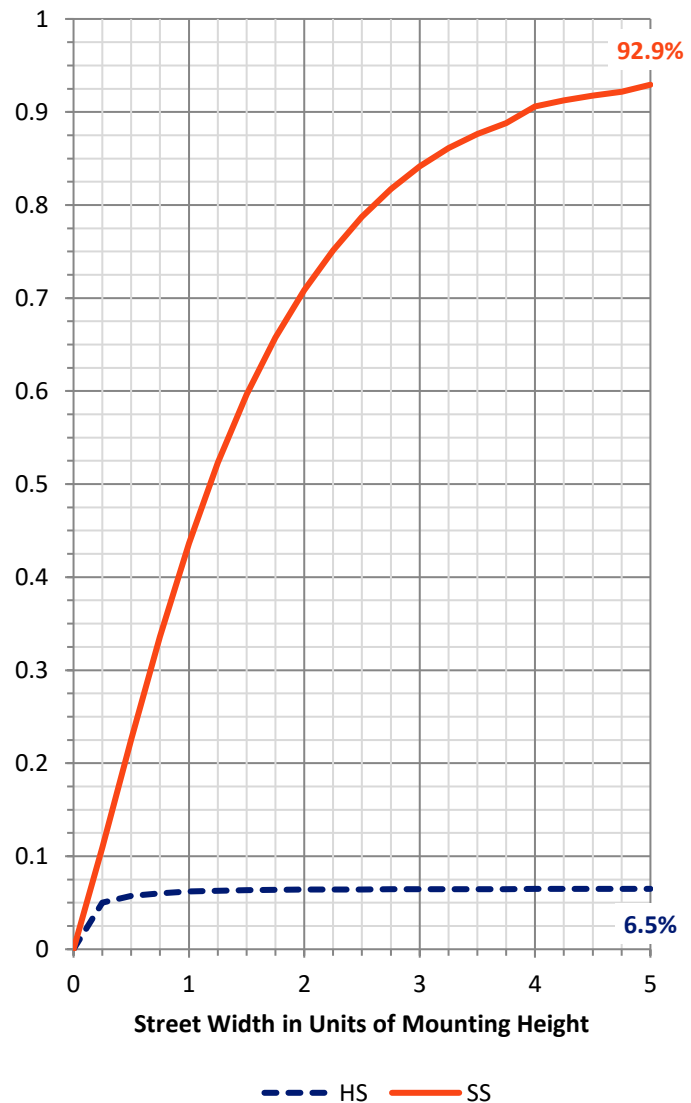
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	372.2	0.0	372.2
	% Fixture	6.6	0.0	6.6
Street Side	Lumens	5307.6	0.0	5307.6
	% Fixture	93.4	0.0	93.4
Total	Lumens	5679.8	0.0	5679.8
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	73.9	1.3
10°-20°	179.0	3.2
20°-30°	297.3	5.2
30°-40°	473.9	8.3
40°-50°	782.2	13.8
50°-60°	1181.2	20.8
60°-70°	1538.7	27.1
70°-80°	1039.7	18.3
80°-90°	113.8	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°	5679.8	100.0
0°-180°	5679.8	100.0

Coefficient of Utilization



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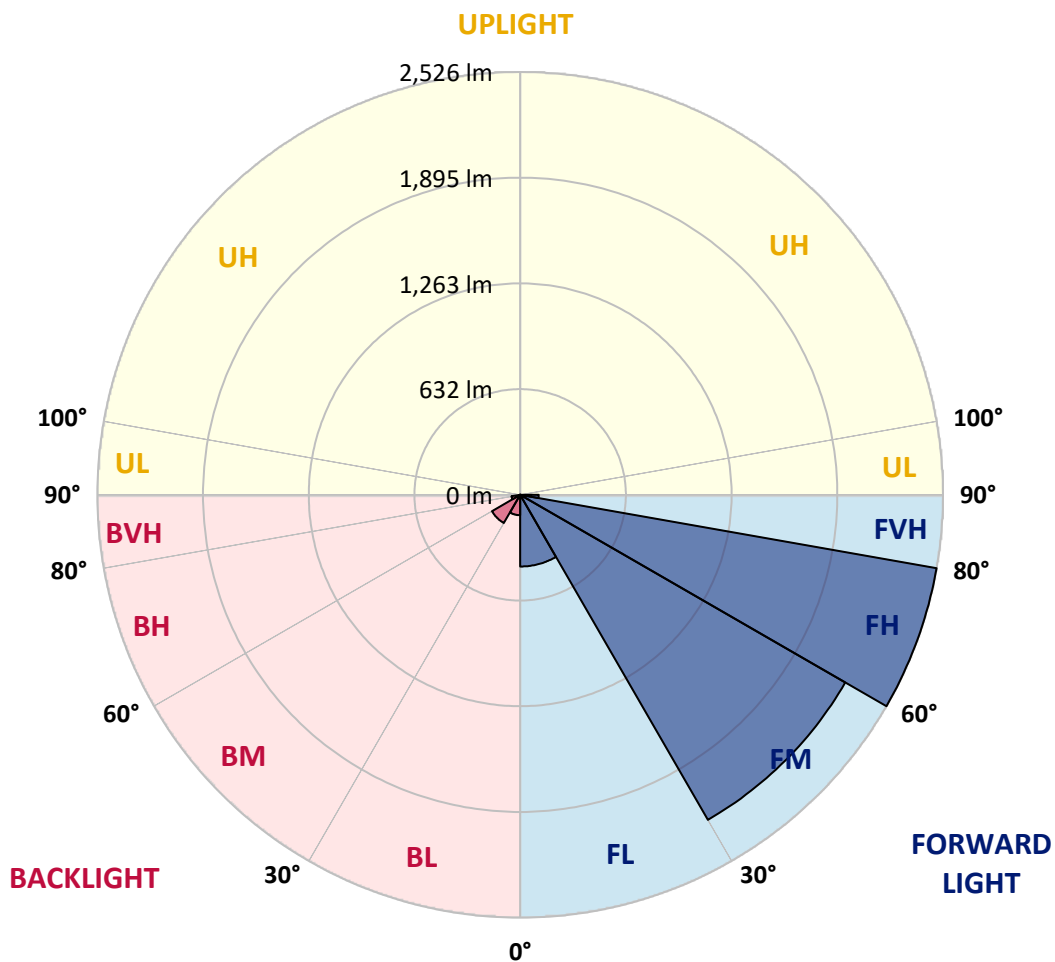
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	428.4	7.5			
FM (30°-60°)	2242.5	39.5			
FH (60°-80°)	2526.1	44.5			G2/5000
FVH (80°-90°)	110.6	1.9			G2/225
BL (0°-30°)	121.9	2.1	B1/500		
BM (30°-60°)	194.8	3.4	B0/220		
BH (60°-80°)	52.3	0.9	B0/110		G0/110
BVH (80°-90°)	3.3	0.1			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G2

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	39°	45°	55°	65°	75°	85°
0°	909.1	909.1	909.1	909.1	909.1	909.1	909.1	909.1	909.1	909.1	909.1
2.5°	968.1	969.8	967.6	963.5	957.8	954.2	949.2	938.5	925.2	913.5	900.1
5°	975.6	976.5	973.9	966.2	957.4	952.5	946.2	934.5	920.8	904.7	880.5
7.5°	977.8	977.4	974.3	964.9	951.0	944.7	934.1	919.9	905.5	890.8	863.5
10°	976.9	976.9	974.8	965.8	950.1	944.4	932.4	917.1	899.3	884.6	855.5
12.5°	973.9	975.6	974.3	969.5	957.8	953.3	942.6	927.4	910.4	895.3	864.4
15°	977.8	980.5	983.3	981.4	974.8	970.7	960.8	945.2	931.5	915.4	882.3
17.5°	994.0	999.8	1006.0	1006.5	999.3	992.2	980.9	964.9	951.6	936.8	901.1
20°	1024.2	1028.7	1040.3	1042.7	1028.3	1018.0	1002.4	983.6	970.3	957.8	918.4
22.5°	1069.4	1074.4	1083.6	1080.5	1056.4	1044.4	1024.7	1003.2	989.5	982.3	938.5
25°	1137.8	1139.1	1141.2	1127.5	1087.7	1074.4	1050.2	1026.0	1014.9	1014.0	967.1
27.5°	1218.1	1219.9	1210.0	1179.3	1122.5	1105.2	1077.8	1056.0	1050.7	1057.3	1003.2
30°	1310.1	1310.4	1283.3	1233.3	1162.6	1143.5	1115.3	1091.4	1096.2	1112.7	1049.8
32.5°	1404.3	1399.7	1362.3	1297.2	1217.7	1194.3	1170.3	1146.1	1160.5	1193.9	1117.6
35°	1490.5	1488.8	1444.5	1368.6	1289.1	1268.5	1251.1	1225.6	1249.0	1303.4	1210.0
37.5°	1576.6	1575.3	1524.9	1445.8	1377.0	1362.3	1349.3	1329.8	1367.7	1447.6	1333.8
40°	1671.7	1669.5	1607.4	1531.5	1479.2	1471.2	1463.7	1455.2	1519.9	1631.1	1487.8
42.5°	1789.2	1779.4	1694.9	1624.9	1591.7	1594.0	1594.5	1602.9	1704.4	1849.4	1669.5
45°	1924.0	1902.2	1783.0	1724.8	1715.6	1728.9	1742.4	1777.6	1919.0	2100.9	1870.5
47.5°	2054.9	2019.6	1884.3	1832.5	1851.6	1879.3	1911.6	1980.3	2160.2	2363.8	2052.5
50°	2167.4	2131.1	1984.7	1941.9	2003.0	2044.2	2101.2	2205.2	2414.7	2586.2	2167.4
52.5°	2255.7	2227.2	2091.1	2062.4	2170.9	2227.2	2317.0	2453.6	2654.9	2732.6	2247.6
55°	2321.0	2306.7	2192.9	2196.8	2357.6	2438.9	2550.5	2704.9	2857.7	2846.5	2308.0
57.5°	2394.6	2383.5	2299.5	2355.4	2582.2	2687.1	2816.1	2940.2	3005.0	2938.0	2366.9
60°	2470.1	2473.7	2428.9	2547.4	2859.9	2975.9	3088.6	3119.4	3131.4	3030.9	2428.9
62.5°	2527.2	2542.5	2546.4	2754.6	3144.7	3243.9	3292.6	3270.6	3268.0	3155.4	2424.0
65°	2592.9	2632.7	2698.7	2981.8	3403.8	3469.0	3503.7	3535.5	3468.4	3192.5	2185.7
67.5°	2706.4	2768.8	2917.4	3260.4	3703.0	3799.3	3898.0	3864.6	3498.4	2816.1	1665.1
70°	2858.9	2935.3	3197.8	3624.3	4108.8	4270.5	4353.0	3838.2	2970.2	1945.9	878.4
72°	2762.6	2831.7	3284.6	3810.2	4396.3	4544.5	4337.8	3348.0	2153.1	1008.6	294.3
72.5°	2668.8	2740.2	3256.9	3807.8	4425.0	4538.3	4239.1	3154.6	1905.2	784.9	202.7
75°	1851.6	1941.9	2792.0	3422.9	3995.8	3871.2	3243.4	1910.2	690.3	134.8	67.0
77.5°	957.4	1026.9	1693.7	2418.7	2784.8	2550.5	1916.9	828.7	191.1	71.4	44.1
80°	593.4	627.7	792.1	1191.7	1446.7	1265.4	845.7	334.9	122.3	42.4	35.3
82.5°	307.2	333.5	498.7	481.0	534.5	444.3	312.2	280.5	75.5	26.3	36.1
85°	100.9	107.2	306.3	319.6	228.6	153.6	138.3	267.4	21.9	17.0	30.8
87.5°	13.4	15.6	107.5	183.1	112.5	69.7	83.1	94.2	7.5	9.4	8.4
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°	909.1	909.1	909.1	909.1	909.1	909.1	909.1	909.1	909.1	909.1	909.1
2.5°	891.2	885.4	867.1	848.8	827.8	808.7	793.5	783.6	788.2	773.4	775.5
5°	865.7	851.1	810.9	767.5	720.7	677.0	642.1	616.1	611.2	589.0	589.8
7.5°	841.3	817.1	751.9	680.5	602.9	539.8	482.7	432.7	414.7	396.5	385.8
10°	827.8	794.8	702.4	598.4	488.9	396.5	316.2	253.1	226.8	207.6	198.3
12.5°	831.8	788.2	665.4	523.7	380.0	262.6	178.7	132.6	116.5	107.5	104.6
15°	845.2	789.4	631.8	450.9	276.4	159.0	104.9	89.7	88.5	87.9	87.6
17.5°	857.7	790.8	596.6	375.0	184.8	101.4	84.4	83.1	83.1	83.1	83.1
20°	870.6	791.1	557.7	295.6	121.5	83.1	79.5	78.6	79.5	79.5	79.5
22.5°	885.9	794.3	520.2	218.4	89.7	78.2	75.8	75.5	75.8	75.8	75.5
25°	904.7	801.1	479.5	156.2	81.2	75.0	72.9	72.4	72.9	72.4	72.4
27.5°	929.7	810.0	432.3	112.1	77.8	71.9	69.7	69.7	69.7	69.2	69.2
30°	961.7	820.7	368.8	88.5	74.1	68.8	67.0	67.0	66.6	66.0	66.0
32.5°	1007.8	838.1	299.7	79.9	70.1	64.8	62.9	63.4	62.9	62.5	62.1
35°	1072.9	865.3	231.4	75.5	66.0	60.7	59.0	59.0	59.0	58.0	58.0
37.5°	1165.5	906.8	173.3	71.0	62.1	56.8	54.4	54.4	54.0	53.1	53.5
40°	1279.6	959.1	125.5	67.0	58.0	52.2	50.5	49.5	48.7	47.8	47.8
42.5°	1417.3	1010.1	94.2	62.9	54.0	48.7	46.4	45.5	43.7	42.8	42.4
45°	1571.2	1064.0	78.2	58.0	49.5	44.6	42.8	41.1	38.8	37.5	37.1
47.5°	1701.2	1097.1	69.7	53.1	45.0	40.7	38.8	36.1	33.4	32.6	32.6
50°	1779.4	1083.3	62.5	48.1	40.7	36.7	34.3	30.8	29.0	28.1	27.7
52.5°	1823.1	1042.2	56.8	44.1	36.7	32.2	29.0	26.0	25.1	24.2	24.2
55°	1853.1	982.7	50.5	40.2	33.1	28.1	24.6	22.3	21.4	21.0	20.5
57.5°	1881.6	910.4	44.6	36.7	29.5	25.1	21.0	20.1	18.3	17.8	17.8
60°	1890.0	810.9	39.3	32.6	26.3	21.9	18.3	17.0	15.2	14.7	14.7
62.5°	1782.0	645.3	34.9	27.7	23.3	18.8	16.1	14.4	12.4	12.4	12.4
65°	1489.1	438.1	30.0	24.2	20.5	16.1	13.8	11.6	10.7	10.7	10.7
67.5°	1037.3	244.2	25.4	20.5	17.3	13.4	11.6	9.8	9.4	9.8	9.8
70°	467.5	96.8	21.4	17.0	14.4	11.1	9.8	8.4	9.4	9.4	9.4
72°	140.1	51.8	17.8	13.8	11.6	9.8	8.4	8.1	9.0	9.4	9.4
72.5°	104.1	46.4	17.0	13.4	11.6	9.4	8.1	8.1	9.0	9.4	9.4
75°	53.5	31.7	12.9	9.8	8.4	7.5	6.6	7.5	9.0	9.0	9.0
77.5°	42.0	26.0	10.7	7.5	7.1	6.6	6.3	7.1	8.1	8.1	8.1
80°	39.3	17.0	8.4	7.1	6.3	5.7	5.7	6.3	7.1	7.5	7.5
82.5°	39.7	13.8	7.5	6.6	5.7	5.4	5.4	5.7	6.6	7.1	7.1
85°	25.4	9.4	6.6	5.7	5.4	4.9	4.9	5.4	6.3	6.6	6.6
87.5°	8.4	7.1	5.7	5.4	4.4	4.4	4.4	4.4	5.4	5.7	6.3
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)