

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: P196471

Luminaire Tested: **NAV-AF-01-D-UNV-AFL-7030-800-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196471
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24283)
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-7030-800-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 3000K, 800mA LIGHTSQUARE WITH 16 LEDS EACH AND AUTOMOTIVE FRONTLINE OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4006.5 lumens
Efficiency: N/A
Efficacy: 91.1 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 - G0

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

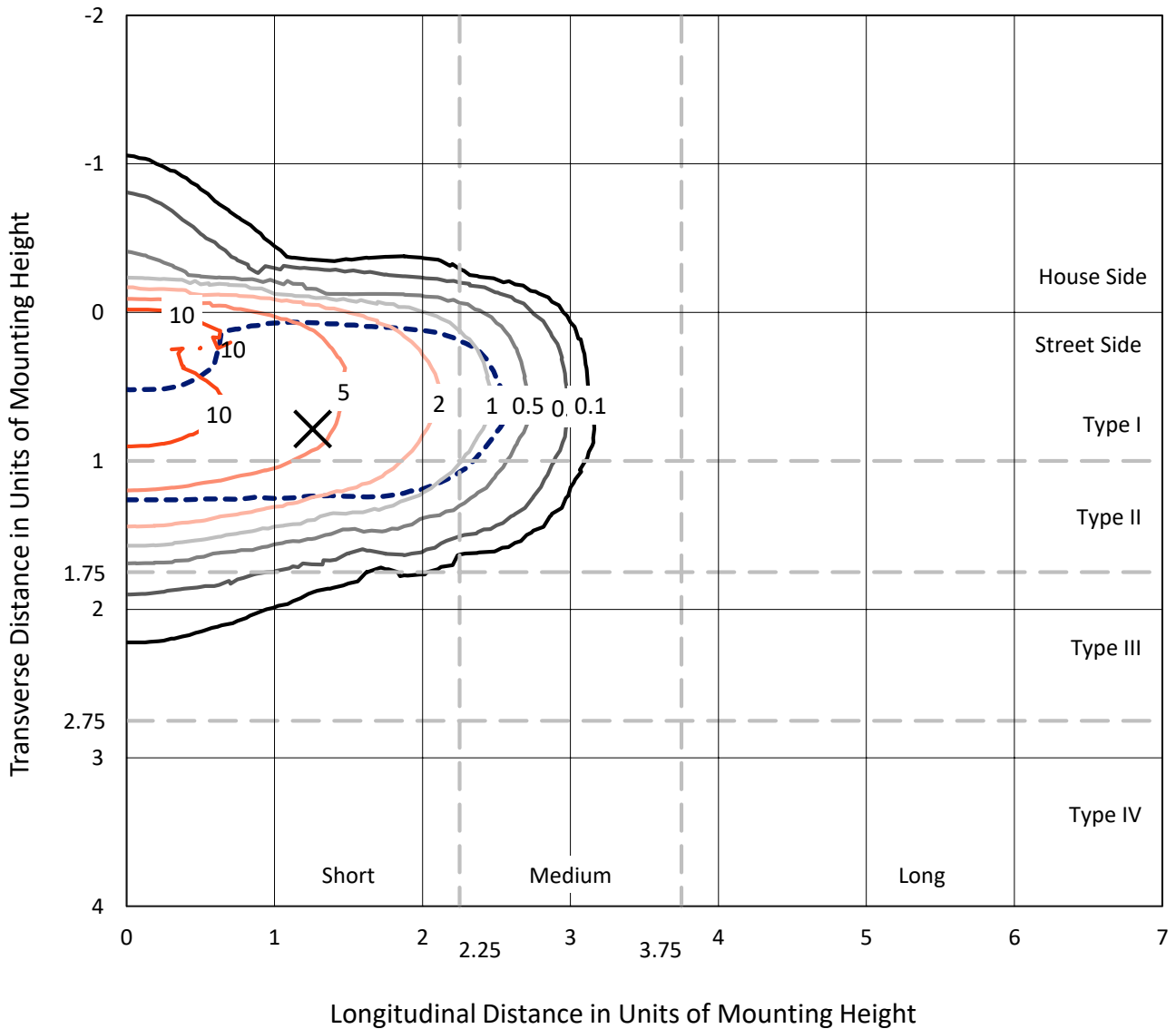


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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

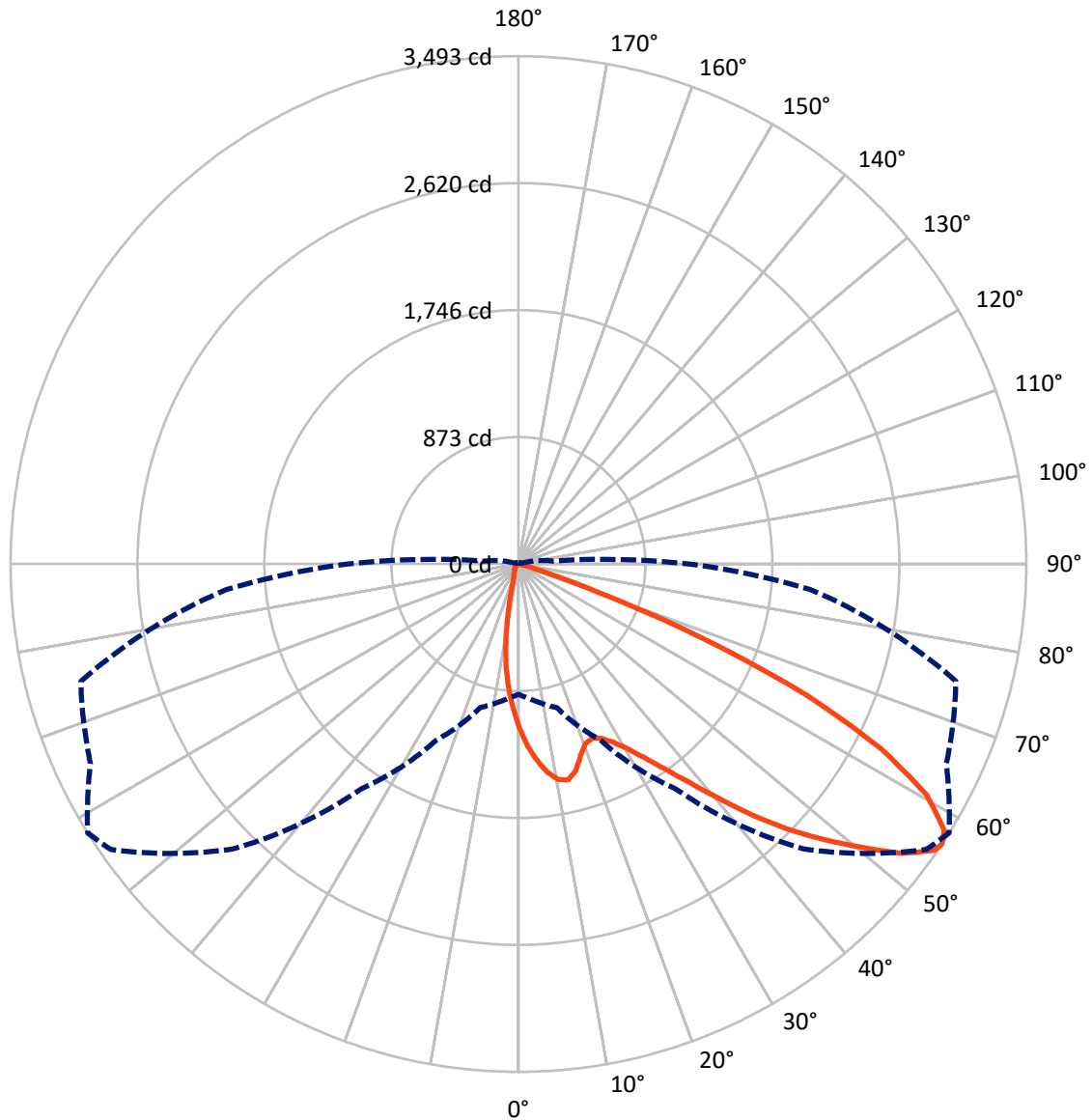


Based on 10 foot mounting height. Maximum calculated value = 14.1 fc
 Type II - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral - - - Horizontal Cone Through 56-Deg Vertical

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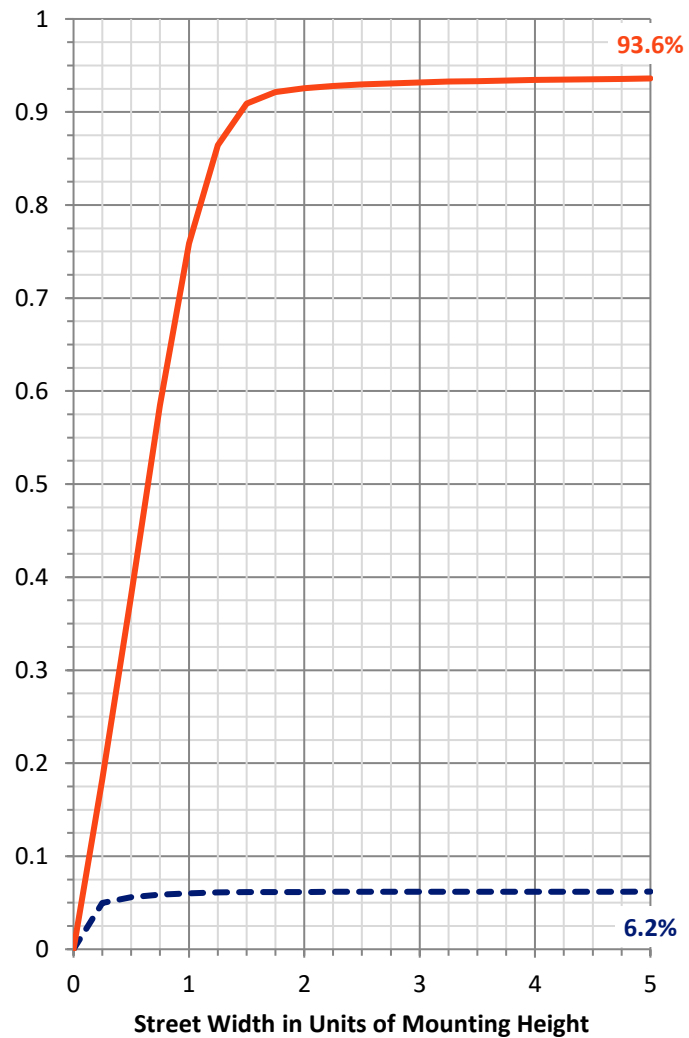
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	250.1	0.0	250.1
	% Fixture	6.2	0.0	6.2
Street Side	Lumens	3756.4	0.0	3756.4
	% Fixture	93.8	0.0	93.8
Total	Lumens	4006.5	0.0	4006.5
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	96.8	2.4
10°-20°	225.2	5.6
20°-30°	378.9	9.5
30°-40°	648.8	16.2
40°-50°	979.0	24.4
50°-60°	1017.7	25.4
60°-70°	571.3	14.3
70°-80°	78.3	2.0
80°-90°	10.6	0.3
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°	4006.5	100.0
0°-180°	4006.5	100.0

Coefficient of Utilization



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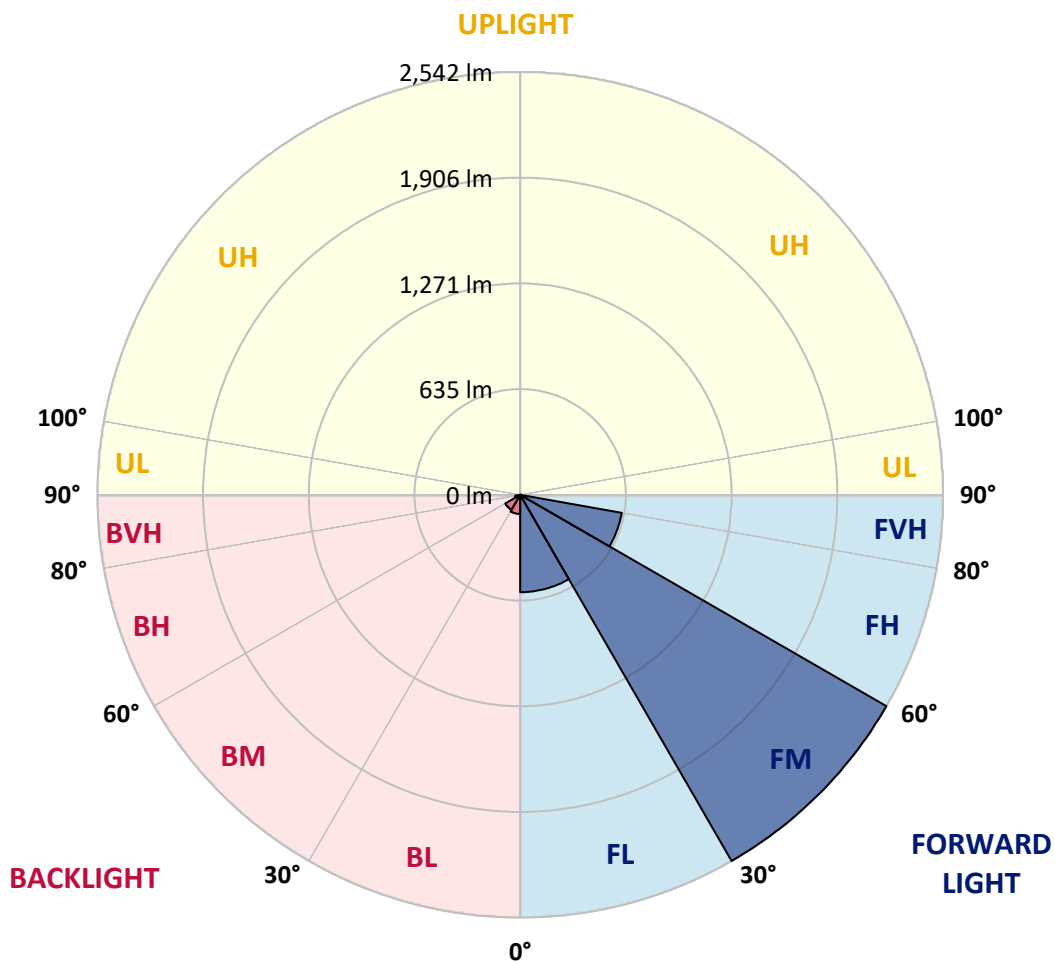
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	585.4	14.6			
FM	(30°-60°)	2541.9	63.4			
FH	(60°-80°)	619.9	15.5			G0/660
FVH	(80°-90°)	9.1	0.2			G0/10
BL	(0°-30°)	115.4	2.9	B1/500		
BM	(30°-60°)	103.6	2.6	B0/220		
BH	(60°-80°)	29.7	0.7	B0/110		G0/110
BVH	(80°-90°)	1.5	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-G0

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	1134.3	1134.3	1134.3	1134.3	1134.3	1134.3	1134.3	1134.3	1134.3	1134.3	1134.3
2.5°	1364.8	1356.6	1348.0	1332.2	1317.4	1294.8	1263.7	1256.1	1231.6	1191.3	1153.7
5°	1482.5	1481.0	1475.2	1462.3	1446.5	1419.0	1383.8	1360.3	1322.4	1258.7	1186.3
7.5°	1412.8	1425.8	1446.8	1476.7	1496.9	1494.1	1467.3	1446.8	1409.2	1322.4	1218.5
10°	1190.9	1193.3	1222.4	1285.3	1385.1	1478.0	1513.1	1507.6	1473.1	1378.0	1246.5
12.5°	1112.7	1114.2	1120.9	1141.1	1205.9	1335.4	1494.7	1523.5	1520.8	1431.2	1276.4
15°	1118.9	1119.7	1121.5	1128.0	1146.2	1211.3	1401.8	1474.9	1551.3	1481.7	1305.8
17.5°	1167.1	1166.5	1160.7	1154.6	1160.4	1181.7	1307.1	1384.1	1544.9	1524.0	1330.0
20°	1261.2	1264.2	1244.7	1217.4	1203.5	1204.4	1260.3	1318.1	1508.9	1557.2	1348.0
22.5°	1393.6	1395.7	1363.7	1316.6	1275.3	1254.6	1270.1	1300.6	1467.3	1587.6	1362.7
25°	1551.6	1551.6	1506.6	1439.7	1375.9	1330.3	1316.9	1328.5	1451.4	1622.3	1377.4
27.5°	1722.2	1728.3	1669.6	1581.8	1497.5	1430.9	1388.6	1386.6	1463.6	1665.6	1393.9
30°	1907.7	1913.2	1843.5	1736.2	1636.2	1551.1	1486.3	1472.2	1510.4	1724.0	1418.0
32.5°	2092.4	2096.9	2019.8	1910.5	1794.0	1693.7	1608.6	1586.1	1594.4	1809.4	1453.4
35°	2327.1	2328.1	2230.5	2100.3	1976.0	1858.2	1750.4	1728.3	1719.0	1917.0	1504.5
37.5°	2513.9	2506.5	2444.7	2321.6	2178.8	2056.0	1929.1	1900.4	1878.3	2068.2	1583.7
40°	2557.9	2557.9	2548.7	2511.8	2398.3	2280.0	2157.3	2114.3	2065.8	2246.5	1690.1
42.5°	2443.2	2450.5	2511.1	2591.5	2592.5	2516.7	2396.5	2360.4	2274.9	2449.4	1806.3
45°	2186.9	2189.0	2334.1	2551.2	2698.4	2742.0	2653.3	2603.4	2484.9	2660.4	1912.6
47.5°	2094.5	2101.3	2163.0	2428.3	2706.5	2924.5	2899.6	2831.2	2679.2	2852.9	2012.0
50°	1952.7	1960.8	2036.4	2247.4	2634.9	3041.4	3135.3	3062.0	2856.2	3013.4	2061.1
52.5°	1613.3	1626.3	1732.9	2007.9	2456.1	3046.3	3351.2	3307.2	3037.5	3099.2	2055.3
55°	1110.2	1119.7	1244.1	1567.6	2095.4	2896.9	3444.1	3474.3	3199.2	3118.5	2027.3
56°	895.6	931.1	1022.2	1335.4	1889.9	2769.7	3422.6	3492.7	3247.1	3115.4	2015.1
57.5°	592.0	598.8	698.1	967.8	1517.7	2493.8	3326.1	3453.5	3308.9	3099.9	2006.2
60°	278.5	281.6	317.3	446.6	821.4	1817.3	3012.2	3223.7	3331.6	3067.1	2005.9
62.5°	181.6	182.1	186.5	213.0	336.0	989.8	2497.1	2801.5	3144.2	3063.5	2000.1
65°	149.4	151.0	145.9	149.1	175.8	373.2	1761.4	2184.1	2704.3	2977.4	1934.7
67.5°	131.7	132.1	125.0	121.1	128.7	163.9	887.4	1377.6	2022.7	2529.8	1593.5
70°	120.1	119.8	111.9	102.7	103.0	108.8	289.2	572.2	1119.1	1502.1	914.9
72.5°	106.6	107.3	102.7	89.9	85.5	77.0	108.8	154.4	380.9	482.4	241.1
75°	93.5	92.4	87.7	79.4	71.6	51.7	54.7	65.8	99.3	98.5	52.0
77.5°	70.9	69.7	71.8	67.8	55.9	36.0	29.9	34.2	44.9	41.8	21.1
80°	54.1	53.5	48.9	58.1	51.1	27.2	20.4	21.1	24.5	22.3	10.4
82.5°	39.2	38.8	37.0	35.7	32.4	19.8	15.7	16.5	18.3	15.7	7.6
85°	15.0	15.0	29.1	24.5	22.3	13.4	11.0	11.9	14.1	11.4	5.3
87.5°	2.4	2.4	19.5	16.2	10.1	6.8	7.0	7.6	8.3	6.8	4.0
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°	1134.3	1134.3	1134.3	1134.3	1134.3	1134.3	1134.3	1134.3	1134.3	1134.3	1134.3
2.5°	1131.3	1110.8	1066.0	1022.4	984.5	943.0	921.9	897.4	888.3	869.9	871.8
5°	1143.0	1100.1	1010.0	914.9	827.7	739.1	676.2	616.9	583.9	551.1	551.1
7.5°	1154.9	1089.5	950.0	798.1	651.4	499.5	391.9	305.7	257.7	225.6	224.6
10°	1163.1	1075.6	881.8	662.6	446.4	257.5	155.2	122.3	110.4	105.1	104.9
12.5°	1173.8	1061.9	804.2	503.1	247.9	122.3	96.9	91.7	89.6	88.4	88.4
15°	1183.0	1042.4	710.0	338.3	130.2	91.7	83.5	81.6	81.3	81.0	81.3
17.5°	1185.1	1014.6	597.3	198.1	94.4	80.1	76.4	74.9	74.9	74.7	74.7
20°	1180.2	977.9	472.5	122.3	81.6	73.6	69.7	67.8	67.5	67.5	67.5
22.5°	1170.1	931.1	349.4	92.7	74.3	67.8	62.8	60.8	60.8	61.1	61.4
25°	1157.6	875.8	240.0	79.8	68.8	61.7	56.6	54.7	55.2	55.9	56.3
27.5°	1141.8	809.7	157.2	69.1	61.4	55.6	51.1	49.8	51.1	52.2	52.9
30°	1125.8	737.3	106.4	59.9	53.2	48.9	46.1	45.9	47.6	50.5	50.7
32.5°	1115.4	662.9	80.5	53.7	46.8	43.0	41.8	42.5	45.3	48.3	48.9
35°	1114.6	590.5	68.5	48.9	42.5	39.2	38.6	40.3	43.3	45.9	46.4
37.5°	1128.8	522.7	62.1	45.3	39.2	35.7	34.9	38.2	41.0	43.3	44.0
40°	1157.9	461.8	57.8	41.8	36.4	32.4	31.8	34.5	37.2	40.1	41.0
42.5°	1194.3	405.1	52.9	38.6	33.4	28.7	28.1	30.3	33.0	37.0	37.5
45°	1225.8	352.2	47.6	34.9	29.9	24.8	24.5	26.9	29.1	32.7	33.4
47.5°	1252.3	308.1	42.8	30.9	25.6	22.0	21.8	23.0	24.1	27.6	28.1
50°	1238.4	270.9	37.9	25.3	20.8	18.9	18.7	18.7	20.2	23.5	24.1
52.5°	1203.7	247.6	33.4	21.1	17.2	16.2	15.3	15.7	17.2	18.7	18.9
55°	1175.9	236.5	29.4	18.7	14.3	13.4	12.6	12.2	12.6	11.9	11.4
56°	1169.2	235.4	28.4	18.0	13.7	12.6	11.4	10.7	10.4	9.2	8.8
57.5°	1166.2	235.4	26.9	16.8	12.9	11.4	9.9	8.5	7.3	6.4	6.4
60°	1163.7	236.9	25.0	14.6	11.0	9.2	7.0	5.3	4.3	4.3	4.3
62.5°	1158.4	236.3	23.0	12.2	9.5	7.0	4.3	3.4	3.1	3.4	3.8
65°	1100.1	219.5	20.2	9.9	7.3	4.9	2.4	2.4	2.7	3.4	3.8
67.5°	886.4	166.3	16.5	7.6	5.3	3.8	2.1	2.1	2.7	3.4	3.8
70°	487.0	87.7	14.1	5.5	4.0	3.1	2.1	1.8	2.7	3.4	3.8
72.5°	118.9	36.7	12.9	4.3	3.8	2.7	1.8	1.8	2.7	3.4	3.8
75°	29.4	27.6	10.4	3.4	3.1	2.4	1.8	1.8	2.7	3.4	3.8
77.5°	13.7	36.4	7.0	3.1	2.7	2.1	1.8	1.8	2.7	3.4	3.4
80°	8.3	27.6	4.3	2.7	2.4	2.1	1.8	1.8	2.7	3.4	3.8
82.5°	4.9	7.9	3.1	2.7	2.4	1.8	1.8	1.8	2.7	3.4	3.8
85°	4.3	4.0	3.1	2.7	2.4	2.1	1.8	1.8	3.1	3.8	3.8
87.5°	3.4	3.1	2.7	2.4	2.4	2.1	1.8	1.8	2.7	3.4	3.8
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)