

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: P196538

Luminaire Tested: **NAV-AF-02-D-UNV-SL2-7030-600-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196538
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-02-D-UNV-SL2-7030-600-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 3000K, 615mA LIGHTSQUARES 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: 6331.5 lumens
Efficiency: N/A
Efficacy: 95.9 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type II - Medium - Semi-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

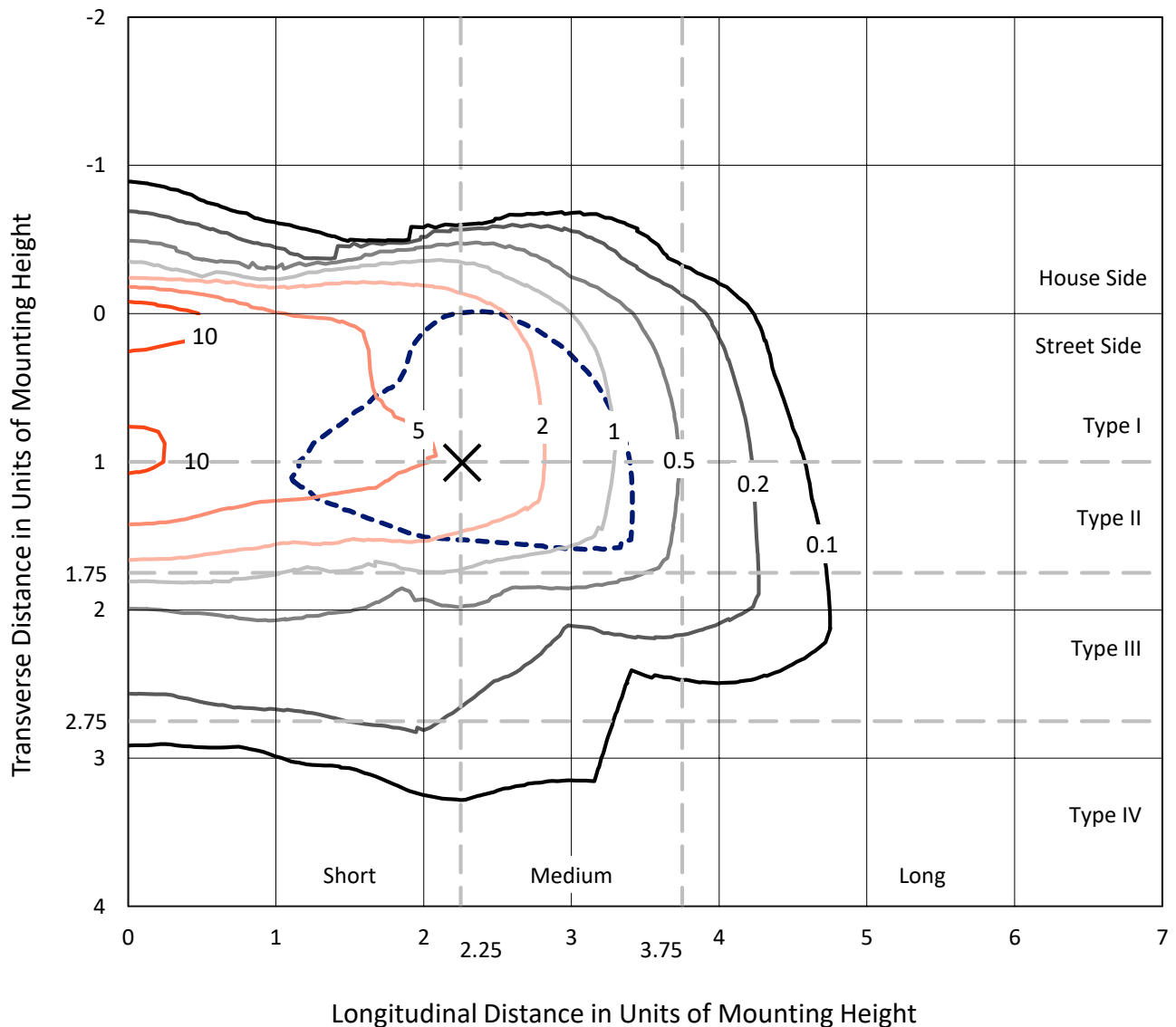


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

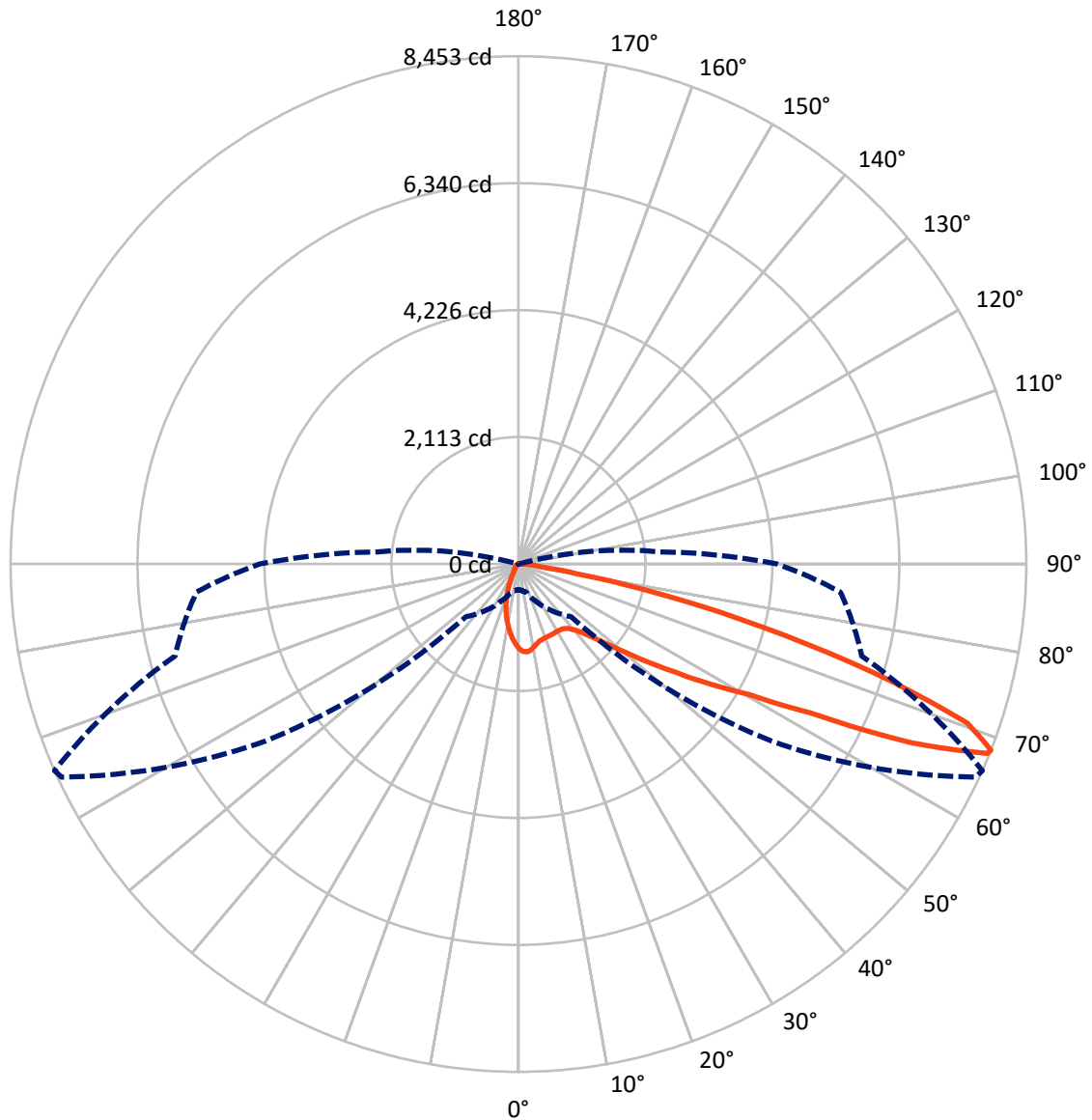


Based on 10 foot mounting height. Maximum calculated value = 14.1 fc
 Type II - Medium - Semi-Cutoff

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Luminous Intensity Polar Plot



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

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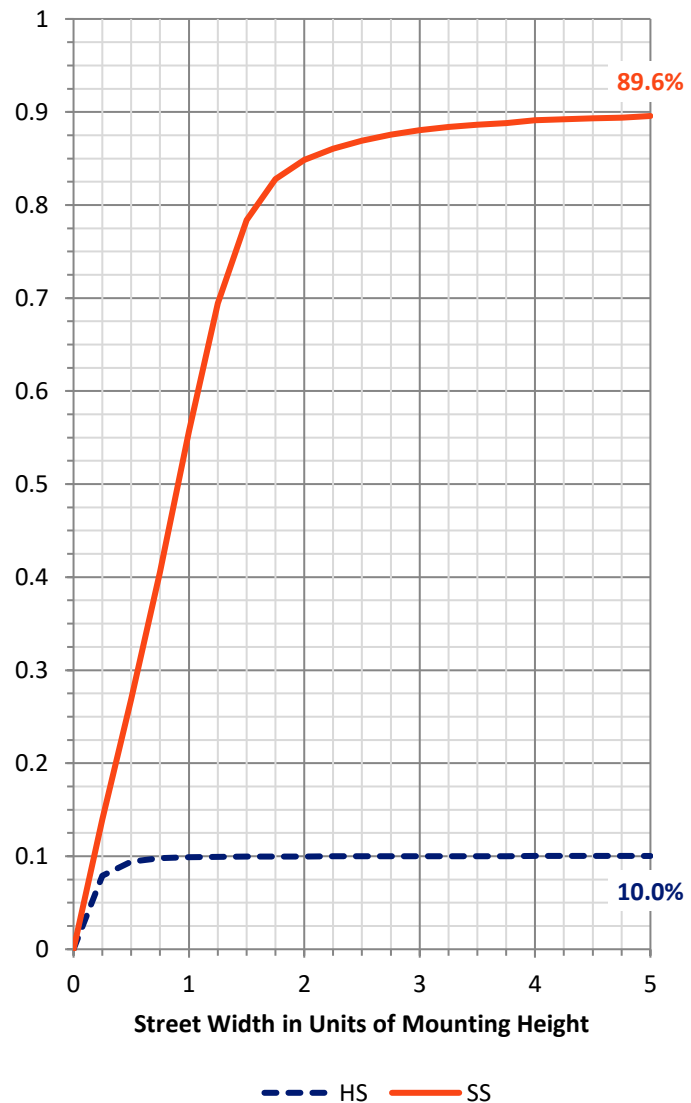
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	641.3	0.0	641.3
	% Fixture	10.1	0.0	10.1
Street Side	Lumens	5690.2	0.0	5690.2
	% Fixture	89.9	0.0	89.9
Total	Lumens	6331.5	0.0	6331.5
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	115.6	1.8
10°-20°	248.8	3.9
20°-30°	360.6	5.7
30°-40°	551.9	8.7
40°-50°	944.0	14.9
50°-60°	1476.8	23.3
60°-70°	1700.4	26.9
70°-80°	850.9	13.4
80°-90°	82.4	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°	6331.5	100.0
0°-180°	6331.5	100.0



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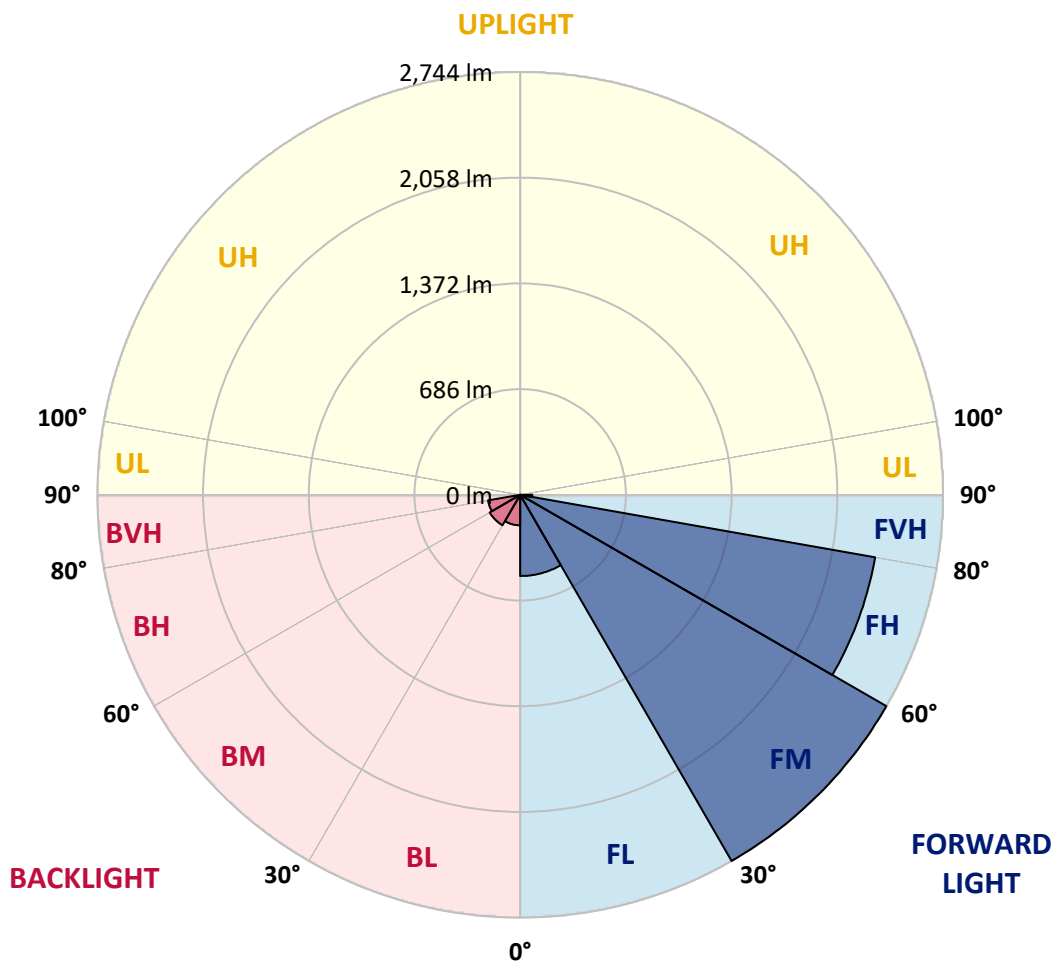
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	527.1	8.3			
FM (30°-60°)	2744.4	43.3			
FH (60°-80°)	2339.5	36.9			G2/5000
FVH (80°-90°)	79.3	1.3			G1/100
BL (0°-30°)	197.9	3.1	B1/500		
BM (30°-60°)	228.4	3.6	B1/1000		
BH (60°-80°)	211.9	3.3	B1/500		G1/500
BVH (80°-90°)	3.1	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-G2

Type II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	66°	75°	85°
0°	1410.6	1410.6	1410.6	1410.6	1410.6	1410.6	1410.6	1410.6	1410.6	1410.6	1410.6
2.5°	1483.6	1484.8	1484.2	1485.7	1484.8	1477.1	1469.3	1452.4	1453.8	1432.0	1407.6
5°	1379.3	1387.7	1396.3	1404.6	1425.1	1442.9	1464.3	1469.3	1469.3	1450.4	1414.6
7.5°	1273.0	1273.4	1282.9	1294.2	1321.6	1354.5	1404.2	1448.9	1449.9	1454.9	1415.6
10°	1192.9	1195.4	1201.9	1214.3	1241.6	1274.0	1329.5	1399.7	1405.2	1441.9	1405.6
12.5°	1130.8	1133.8	1140.6	1155.1	1180.0	1213.4	1271.9	1352.0	1359.4	1429.5	1402.7
15°	1083.1	1087.0	1092.5	1106.9	1133.8	1169.1	1233.2	1320.2	1329.1	1424.5	1412.0
17.5°	1063.2	1063.2	1062.6	1072.6	1099.4	1135.2	1202.4	1303.3	1314.7	1428.4	1428.0
20°	1071.7	1070.0	1059.7	1057.2	1073.6	1109.4	1178.1	1292.3	1305.2	1436.0	1447.3
22.5°	1116.4	1113.4	1090.0	1070.6	1065.8	1089.6	1161.7	1284.9	1300.3	1451.4	1473.3
25°	1211.2	1202.4	1170.0	1126.4	1087.0	1084.5	1150.2	1280.8	1297.2	1469.3	1501.5
27.5°	1334.6	1332.1	1280.4	1221.7	1146.2	1101.0	1146.6	1277.9	1294.2	1482.2	1524.3
30°	1487.7	1488.6	1429.0	1352.4	1238.1	1147.2	1157.6	1276.3	1293.3	1483.2	1534.3
32.5°	1645.7	1646.7	1597.1	1515.0	1363.9	1226.7	1188.4	1283.4	1298.8	1479.3	1533.9
35°	1797.9	1799.3	1769.5	1703.4	1532.0	1337.0	1246.5	1307.2	1318.2	1481.7	1532.9
37.5°	1990.1	1996.1	1959.3	1897.8	1742.6	1499.0	1341.4	1355.5	1364.4	1502.1	1540.3
40°	2318.3	2310.3	2204.9	2100.5	1971.2	1696.5	1478.8	1438.4	1441.4	1554.8	1568.6
42.5°	2700.5	2690.5	2510.1	2330.2	2206.4	1934.6	1654.1	1565.6	1565.2	1643.3	1630.2
45°	3029.5	3023.5	2833.6	2593.6	2466.8	2197.4	1870.4	1749.1	1743.1	1796.3	1742.6
47.5°	3263.1	3258.1	3114.4	2873.9	2768.1	2486.7	2140.3	1999.1	1986.7	1996.6	1925.0
50°	3286.0	3280.5	3230.2	3075.7	3120.0	2911.2	2473.8	2326.6	2310.8	2295.3	2200.9
52.5°	3072.3	3071.8	3098.0	3088.1	3366.5	3457.4	2883.0	2731.8	2712.9	2673.6	2579.6
55°	2635.4	2632.8	2732.8	2877.9	3361.1	4021.1	3506.6	3213.9	3189.1	3110.5	2987.2
57.5°	1925.5	1912.6	2121.4	2429.1	3125.0	4267.6	4497.2	3812.8	3771.6	3522.5	3332.7
60°	1063.2	1068.1	1336.6	1700.8	2565.7	4218.9	5408.9	4511.2	4402.8	3877.9	3686.6
62.5°	596.0	608.3	808.2	1105.3	1635.8	3823.7	5898.0	5713.0	5452.0	4292.5	4134.0
65°	450.8	458.3	558.7	852.9	1031.4	2672.2	5975.9	7393.6	7168.4	4920.7	4846.2
67.5°	424.5	430.5	479.6	707.4	939.4	1385.7	5388.4	8387.7	8416.0	5777.6	5398.0
68°	427.4	435.0	484.1	680.4	937.9	1239.6	5137.9	8392.6	8452.8	5915.9	5379.1
70°	392.7	394.7	512.0	667.6	909.1	976.7	3716.9	7817.5	7925.3	6080.4	4883.1
72.5°	150.1	150.6	229.7	578.1	952.3	982.1	1872.3	6178.7	6184.3	5291.5	3806.9
75°	78.0	65.5	72.1	181.0	909.6	957.3	939.4	4218.9	4192.6	3578.7	2332.6
77.5°	53.6	45.8	48.2	62.6	378.2	956.8	678.5	2426.1	2420.6	1522.4	665.5
80°	30.4	26.3	28.9	52.7	132.8	898.1	632.3	1042.8	982.7	267.3	107.8
82.5°	15.4	12.9	15.4	44.2	82.5	565.1	614.8	409.0	364.4	63.6	70.0
85°	4.0	4.0	7.4	30.8	51.3	185.4	551.2	295.2	265.4	27.9	49.7
87.5°	1.0	0.5	2.9	11.5	18.3	40.2	305.7	164.6	141.7	14.4	28.9
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°	1410.6	1410.6	1410.6	1410.6	1410.6	1410.6	1410.6	1410.6	1410.6	1410.6	1410.6
2.5°	1397.7	1383.8	1356.5	1325.7	1303.8	1279.9	1266.0	1249.1	1236.2	1224.7	1233.2
5°	1392.7	1365.8	1305.2	1237.2	1180.0	1125.3	1084.5	1045.8	1016.4	998.1	1005.5
7.5°	1379.8	1340.1	1241.6	1135.2	1041.8	953.9	882.3	818.2	768.4	741.6	750.1
10°	1357.9	1301.8	1169.5	1021.9	891.2	766.9	660.6	565.1	493.1	459.2	467.2
12.5°	1342.0	1268.0	1095.0	912.6	740.6	564.1	423.0	313.7	257.6	223.7	226.6
15°	1335.0	1241.6	1025.4	797.3	576.2	362.3	228.7	165.5	146.1	139.2	139.7
17.5°	1336.0	1220.8	959.3	677.5	410.0	208.2	140.2	126.3	123.3	121.9	121.9
20°	1338.5	1199.8	890.7	552.8	262.4	134.2	116.8	112.3	110.8	108.8	109.4
22.5°	1346.0	1184.0	821.6	427.4	161.4	109.4	103.4	99.4	96.9	94.0	94.4
25°	1357.4	1172.1	753.6	307.7	113.8	95.4	89.9	84.4	80.0	76.6	77.0
27.5°	1364.4	1155.1	680.9	209.8	94.4	83.5	76.1	68.7	63.6	60.6	60.1
30°	1359.4	1127.8	598.4	137.6	83.5	72.1	63.2	54.6	49.7	47.2	47.2
32.5°	1346.0	1092.5	507.5	100.4	74.1	62.2	51.3	43.7	40.2	38.8	39.3
35°	1330.6	1055.8	410.6	85.0	66.6	52.7	41.7	35.8	34.3	33.8	33.8
37.5°	1322.1	1023.9	317.6	77.0	59.6	43.7	34.3	30.8	29.3	29.3	29.3
40°	1331.6	999.5	235.1	71.1	52.7	36.3	28.9	26.3	25.9	25.9	25.9
42.5°	1371.9	991.1	172.0	66.1	45.8	30.4	24.8	22.8	22.4	22.8	22.8
45°	1450.4	1009.4	130.2	61.1	39.3	24.8	21.5	19.8	19.8	20.4	20.4
47.5°	1583.6	1056.7	106.8	56.2	32.8	20.9	18.3	17.4	17.4	17.9	17.9
50°	1790.3	1144.2	95.9	50.7	27.4	17.9	15.4	14.9	14.9	15.4	16.0
52.5°	2104.5	1310.7	90.4	45.3	22.4	14.9	12.9	12.4	12.9	13.4	13.4
55°	2454.0	1523.9	84.0	39.8	18.9	12.4	10.5	10.5	10.9	11.9	11.9
57.5°	2779.4	1729.7	78.0	32.8	16.4	10.0	8.4	8.4	9.4	10.5	10.5
60°	3123.4	1931.4	70.0	26.3	13.8	7.9	7.0	7.0	8.4	9.4	10.0
62.5°	3548.4	2166.2	59.6	20.9	10.9	6.0	4.9	6.4	7.9	9.4	9.4
65°	4162.8	2457.9	46.8	16.4	8.4	4.5	4.0	6.0	7.4	9.0	9.4
67.5°	4385.8	2420.6	35.3	13.4	6.4	3.5	3.5	5.5	7.4	9.0	9.0
68°	4304.4	2339.1	33.8	12.9	6.0	3.5	3.5	5.5	7.4	9.0	9.0
70°	3750.7	1912.1	27.9	10.0	4.9	2.9	2.9	4.9	7.4	8.4	9.0
72.5°	2808.3	1270.4	23.8	6.4	4.5	2.9	2.5	4.9	7.0	8.4	8.4
75°	1610.9	527.4	20.4	4.9	4.0	2.5	2.5	4.5	7.0	8.4	8.4
77.5°	455.3	123.3	16.4	4.0	3.5	2.5	1.9	4.5	6.4	7.9	7.9
80°	83.5	36.8	12.9	3.5	2.9	2.5	1.9	4.5	6.4	7.9	7.9
82.5°	55.1	17.4	9.4	3.5	2.9	2.5	1.9	4.0	6.0	7.4	7.4
85°	41.3	12.4	6.0	3.5	2.9	2.5	1.9	4.0	6.0	7.4	7.4
87.5°	22.8	5.5	4.5	4.0	3.5	2.5	1.9	3.5	5.5	7.0	7.0
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)