

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: P270346

Luminaire Tested: **NAV-AF-02-D-UNV-SL2-7027-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270346
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24257)
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-SL2-7027-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 2700K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II SPILL
LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6836 lumens
Efficiency: N/A
Efficacy: 103.6 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

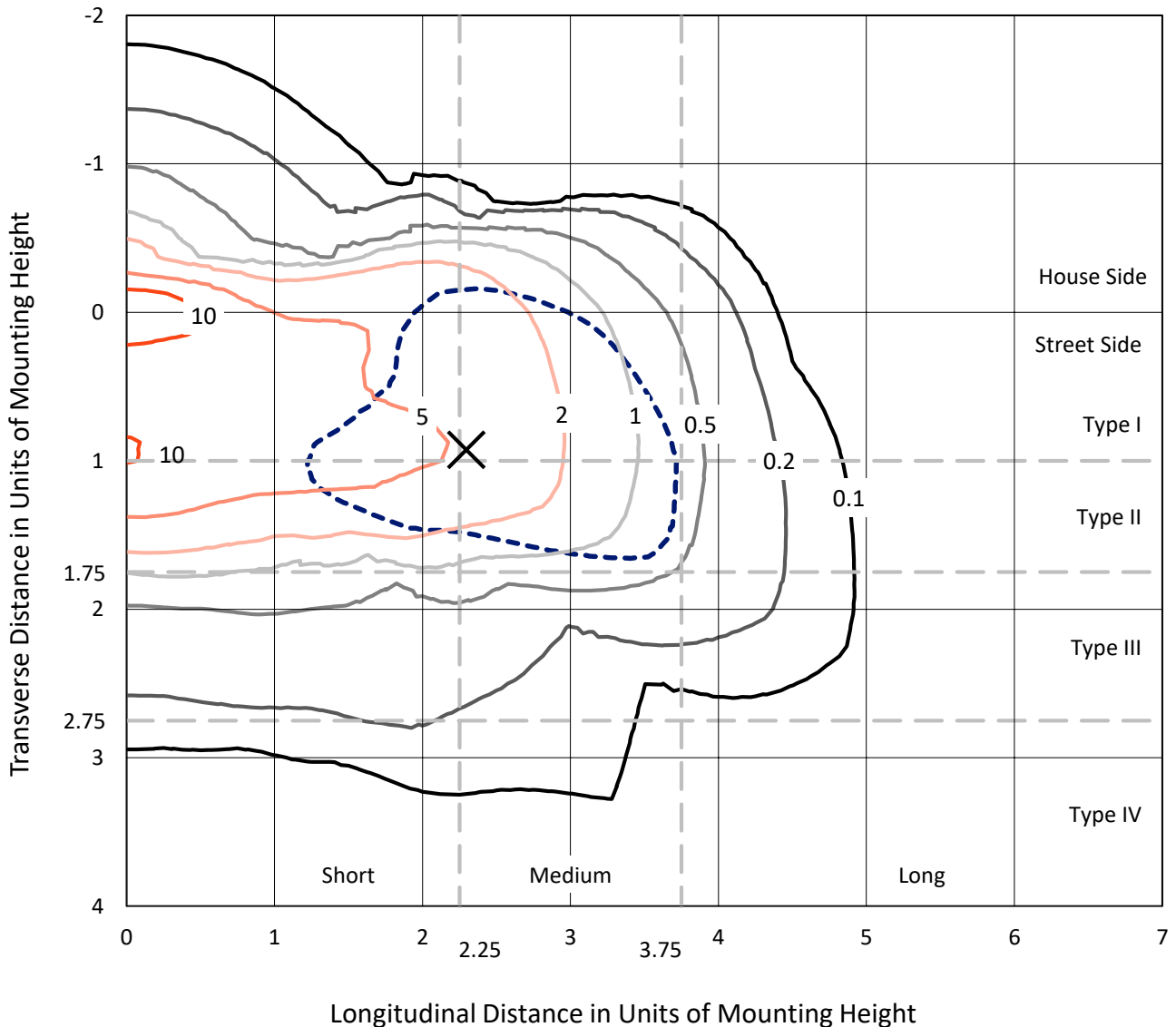


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Iso-Footcandle Lines of Horizontal Illumination

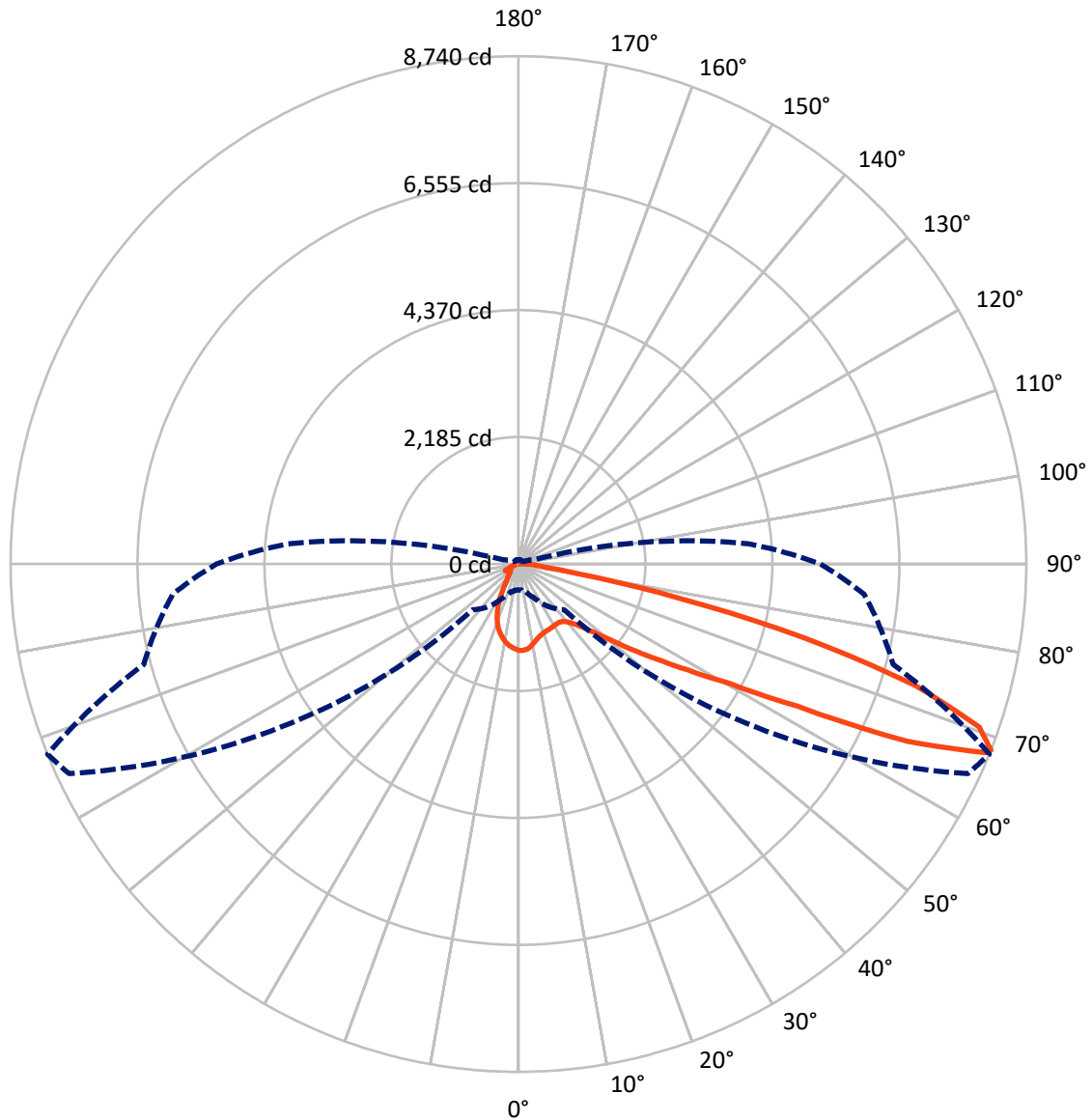
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 14.9 fc
 Type II - Medium - Semi-Cutoff

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Luminous Intensity Polar Plot



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

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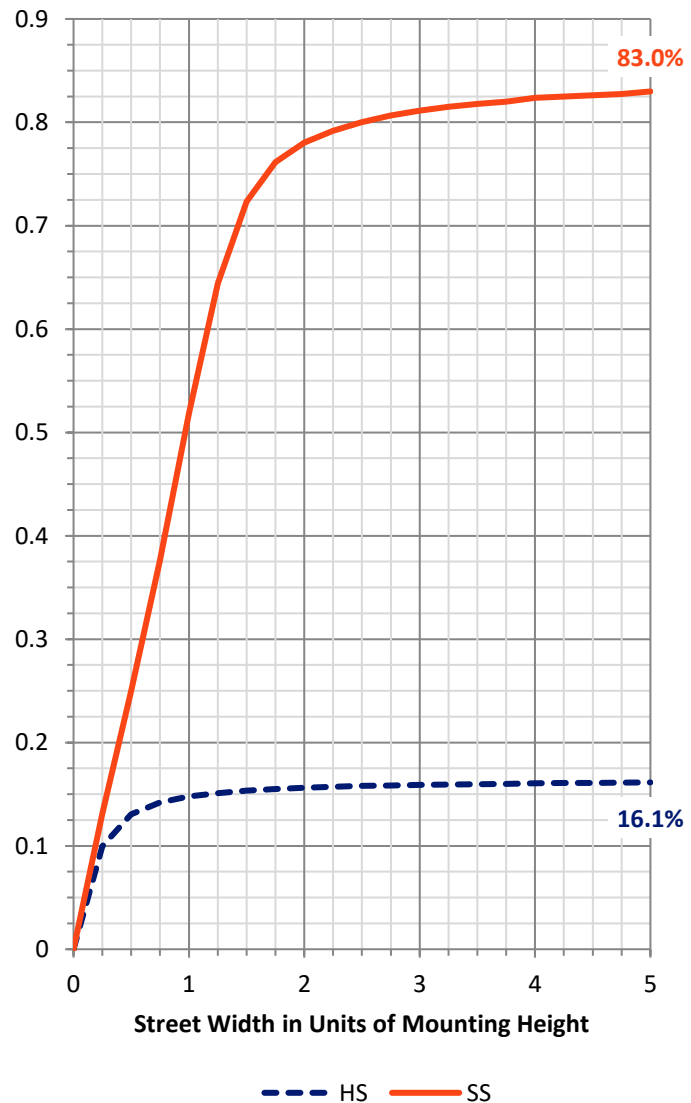
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1118.4	0.0	1118.4
	% Fixture	16.4	0.0	16.4
Street Side	Lumens	5717.6	0.0	5717.6
	% Fixture	83.6	0.0	83.6
Total	Lumens	6836.0	0.0	6836.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	127.4	1.9
10°-20°	295.6	4.3
20°-30°	399.8	5.8
30°-40°	563.7	8.2
40°-50°	926.9	13.6
50°-60°	1436.8	21.0
60°-70°	1862.9	27.3
70°-80°	1069.0	15.6
80°-90°	153.8	2.2
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°	6836.0	100.0
0°-180°	6836.0	100.0



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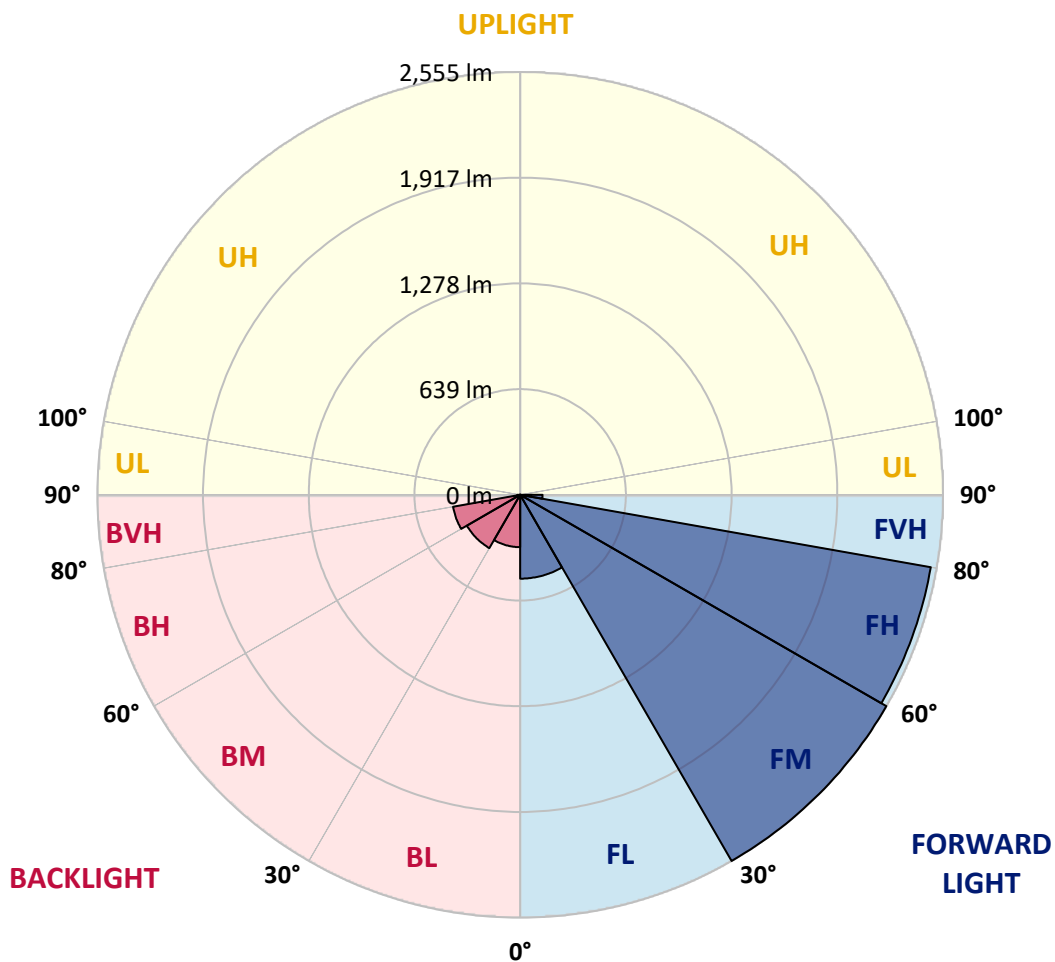
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	506.7	7.4			
FM	(30°-60°)	2555.4	37.4			
FH	(60°-80°)	2520.1	36.9			G2/5000
FVH	(80°-90°)	135.5	2.0			G2/225
BL	(0°-30°)	316.2	4.6	B1/500		
BM	(30°-60°)	372.0	5.4	B1/1000		
BH	(60°-80°)	411.9	6.0	B1/500		G1/500
BVH	(80°-90°)	18.3	0.3			G1/100
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°	68°	75°	85°
0°	1487.5	1487.5	1487.5	1487.5	1487.5	1487.5	1487.5	1487.5	1487.5	1487.5	1487.5
2.5°	1447.7	1459.3	1459.3	1467.8	1475.3	1481.7	1487.1	1487.1	1487.1	1483.5	1480.2
5°	1295.4	1311.0	1313.3	1334.7	1362.9	1397.3	1435.6	1469.5	1476.3	1488.9	1493.7
7.5°	1189.6	1194.6	1203.0	1217.7	1246.3	1288.8	1349.1	1424.9	1443.2	1482.6	1503.0
10°	1114.5	1118.6	1125.8	1140.5	1166.4	1204.7	1264.2	1362.9	1393.2	1462.9	1503.6
12.5°	1059.7	1062.8	1069.5	1082.8	1109.2	1143.6	1204.4	1307.0	1344.6	1443.2	1509.8
15°	1016.8	1022.1	1027.5	1040.4	1067.2	1100.3	1161.9	1266.4	1307.0	1427.6	1521.4
17.5°	999.9	1002.5	1003.3	1010.1	1034.2	1067.6	1129.3	1237.9	1279.8	1415.1	1530.4
20°	1010.6	1011.0	1002.1	997.6	1011.4	1042.3	1102.1	1216.5	1259.2	1404.0	1533.9
22.5°	1057.5	1057.5	1034.2	1014.5	1005.2	1024.3	1083.7	1201.7	1248.1	1395.4	1533.9
25°	1146.7	1142.7	1106.5	1067.6	1026.1	1018.0	1072.1	1192.3	1239.7	1390.9	1528.0
27.5°	1264.2	1260.6	1214.6	1156.9	1082.0	1031.6	1068.2	1184.7	1231.1	1384.3	1515.6
30°	1407.0	1404.0	1351.7	1276.2	1165.6	1074.0	1077.5	1179.4	1224.4	1373.1	1494.6
32.5°	1549.5	1547.7	1506.2	1428.9	1280.8	1145.9	1102.1	1178.4	1220.8	1359.8	1469.2
35°	1692.9	1692.9	1667.4	1602.2	1435.6	1253.9	1153.5	1194.9	1227.5	1352.6	1447.3
37.5°	1904.5	1896.1	1848.7	1781.2	1630.9	1394.1	1236.4	1229.8	1253.5	1364.6	1440.2
40°	2232.3	2207.8	2089.4	1976.0	1843.9	1573.7	1358.0	1297.2	1311.5	1405.8	1457.1
42.5°	2575.3	2536.5	2379.7	2198.3	2063.9	1795.2	1517.3	1406.7	1406.1	1485.2	1511.0
45°	2869.5	2849.5	2679.7	2449.8	2315.3	2044.4	1718.7	1569.2	1553.1	1608.4	1615.2
47.5°	3040.6	3027.2	2924.9	2715.9	2613.7	2338.6	1974.1	1794.6	1764.4	1797.4	1787.1
50°	2993.2	3006.2	2976.8	2869.9	2934.3	2752.0	2299.8	2103.7	2046.1	2079.1	2054.2
52.5°	2744.1	2778.8	2805.2	2825.8	3118.6	3305.4	2708.7	2489.6	2441.8	2435.9	2411.8
55°	2295.3	2350.7	2433.7	2584.7	3069.1	3749.6	3423.3	2956.1	2886.6	2850.0	2859.2
57.5°	1562.1	1646.0	1825.0	2112.2	2811.4	3939.0	4479.8	3559.1	3441.0	3310.8	3341.1
60°	860.4	930.6	1143.6	1432.9	2223.3	3911.0	5416.2	4538.7	4167.6	3822.0	3884.5
62.5°	556.9	572.0	730.5	978.9	1364.6	3452.7	5936.4	6176.2	5389.8	4496.2	4584.3
65°	447.4	458.1	535.8	789.5	950.6	2221.1	5959.6	7874.9	7356.5	5412.6	5415.3
67.5°	437.1	442.1	487.2	663.9	891.7	1209.3	5151.4	8544.7	8664.8	6494.1	5971.3
68°	443.5	449.2	494.7	643.5	891.3	1114.5	4761.0	8534.4	8740.2	6675.0	5971.3
70°	391.2	398.3	504.6	665.9	853.4	958.3	3260.3	8081.2	8412.5	7090.7	5665.8
72.5°	204.5	198.7	249.5	525.6	960.6	998.5	1722.3	6751.4	7138.1	6567.0	4895.0
75°	159.4	145.2	139.7	207.7	844.9	1035.6	1000.3	4798.7	5090.6	4733.9	3271.8
77.5°	150.0	132.6	122.3	122.8	372.0	1077.5	809.2	2824.0	2824.0	2258.2	1044.0
80°	120.6	104.6	97.7	111.6	179.5	993.2	844.4	1286.9	1097.5	583.7	287.5
82.5°	79.5	71.0	71.4	90.6	136.3	663.0	978.0	635.5	477.4	258.5	169.2
85°	50.5	43.3	48.1	63.4	101.8	295.6	968.2	441.6	316.2	145.2	84.4
87.5°	25.4	19.7	24.2	33.1	62.1	84.8	797.1	394.3	234.5	60.2	46.1
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°	1487.5	1487.5	1487.5	1487.5	1487.5	1487.5	1487.5	1487.5	1487.5	1487.5	1487.5
2.5°	1480.2	1470.4	1465.6	1457.5	1447.7	1437.8	1431.2	1428.0	1426.2	1427.1	1426.7
5°	1491.0	1478.2	1457.1	1427.1	1396.3	1363.7	1338.7	1319.6	1307.6	1303.9	1303.0
7.5°	1499.1	1480.2	1441.1	1386.5	1333.9	1276.8	1228.1	1189.1	1162.9	1150.8	1150.3
10°	1497.7	1473.6	1411.5	1331.2	1253.9	1170.0	1093.5	1028.4	981.0	958.3	957.5
12.5°	1499.1	1466.0	1375.3	1266.4	1155.7	1035.6	922.1	820.7	750.3	716.7	715.4
15°	1504.4	1457.9	1338.4	1194.0	1040.9	871.3	709.1	581.8	517.6	495.7	495.7
17.5°	1504.0	1444.6	1295.4	1110.1	904.8	677.4	484.0	405.5	399.1	419.2	422.5
20°	1495.0	1423.2	1240.1	1010.6	744.9	468.8	328.2	317.0	367.0	422.5	428.8
22.5°	1481.2	1395.4	1176.2	894.9	558.7	305.5	253.2	270.2	338.0	406.8	416.6
25°	1462.0	1362.0	1102.9	760.4	371.4	219.6	211.2	232.2	280.0	325.9	333.1
27.5°	1433.9	1319.6	1023.0	614.9	237.2	180.9	184.0	198.7	219.2	238.9	242.9
30°	1398.7	1269.9	935.9	453.7	180.0	161.7	167.1	176.0	185.0	197.4	200.1
32.5°	1362.9	1219.4	845.3	311.7	157.3	151.4	156.8	161.7	169.2	177.8	179.5
35°	1330.7	1172.6	752.1	217.5	147.3	144.6	147.3	150.5	158.1	166.5	167.4
37.5°	1307.6	1134.2	654.7	171.9	141.6	138.9	140.2	141.6	150.5	163.0	164.3
40°	1304.3	1108.8	556.0	154.5	137.1	133.5	132.6	133.5	145.2	159.4	160.7
42.5°	1334.7	1110.1	459.6	147.3	133.5	129.4	125.9	127.6	138.0	149.2	150.0
45°	1406.7	1141.3	376.0	144.3	130.4	127.3	121.9	122.8	127.6	133.5	134.3
47.5°	1533.4	1209.7	312.2	142.4	127.6	125.0	118.3	115.6	116.2	119.3	119.3
50°	1736.2	1324.0	273.3	140.7	125.5	120.6	112.9	107.5	106.3	108.1	108.5
52.5°	2038.6	1520.0	254.5	137.1	121.5	114.8	106.3	100.9	98.6	100.5	100.5
55°	2447.2	1833.1	245.5	132.2	116.5	107.5	100.0	95.6	93.8	95.1	95.1
57.5°	2912.8	2240.0	260.8	125.5	110.3	100.0	94.7	91.5	90.2	91.5	91.9
60°	3466.1	2772.2	365.3	117.0	103.7	93.3	90.2	88.5	87.6	88.8	88.8
62.5°	4201.6	3480.5	565.4	110.3	96.5	87.0	86.1	85.2	84.4	85.8	85.8
65°	4995.6	4124.7	581.8	106.3	90.2	81.7	82.1	82.1	81.2	82.6	82.6
67.5°	5248.3	4069.0	325.0	101.4	82.6	76.4	78.2	78.2	77.8	79.1	78.6
68°	5194.7	3980.5	283.1	100.0	81.2	75.0	76.8	77.3	76.8	78.2	77.8
70°	4795.5	3494.6	186.2	92.4	75.5	70.5	73.2	73.8	73.2	75.0	74.6
72.5°	3958.7	2621.3	137.5	80.8	68.4	64.8	67.5	67.9	68.4	70.1	69.7
75°	2514.0	1447.7	108.5	68.8	61.2	58.0	60.7	62.1	63.1	65.7	64.3
77.5°	688.6	439.5	87.9	58.5	52.7	51.4	53.1	54.9	55.9	59.0	56.8
80°	241.1	194.3	73.2	49.5	43.7	43.3	45.2	46.9	47.8	50.5	47.8
82.5°	146.5	126.8	58.5	38.8	34.3	34.0	36.2	38.0	38.8	38.8	37.1
85°	76.4	67.0	42.8	27.3	23.6	22.3	26.3	28.6	29.0	28.6	27.3
87.5°	42.8	38.0	22.7	12.9	10.7	11.1	13.8	17.0	18.3	17.8	17.0
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)