

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: P270355

Luminaire Tested: **NAV-AF-02-D-UNV-SL3-7027-600-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270355
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24263)
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-SL3-7027-600-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 2700K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III
SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5919.3 lumens
Efficiency: N/A
Efficacy: 89.7 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type III - Medium - 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

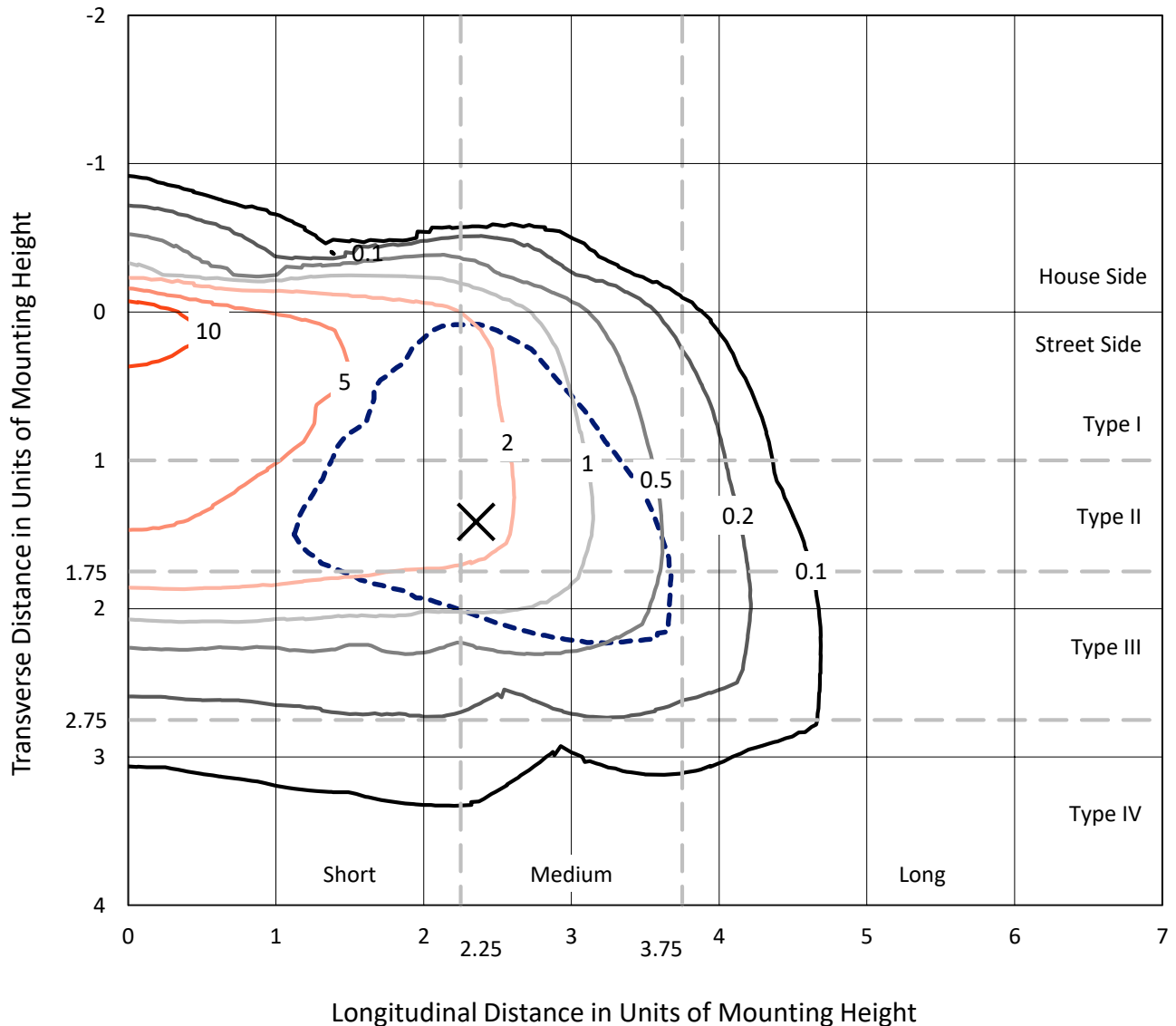


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Iso-Footcandle Lines of Horizontal Illumination

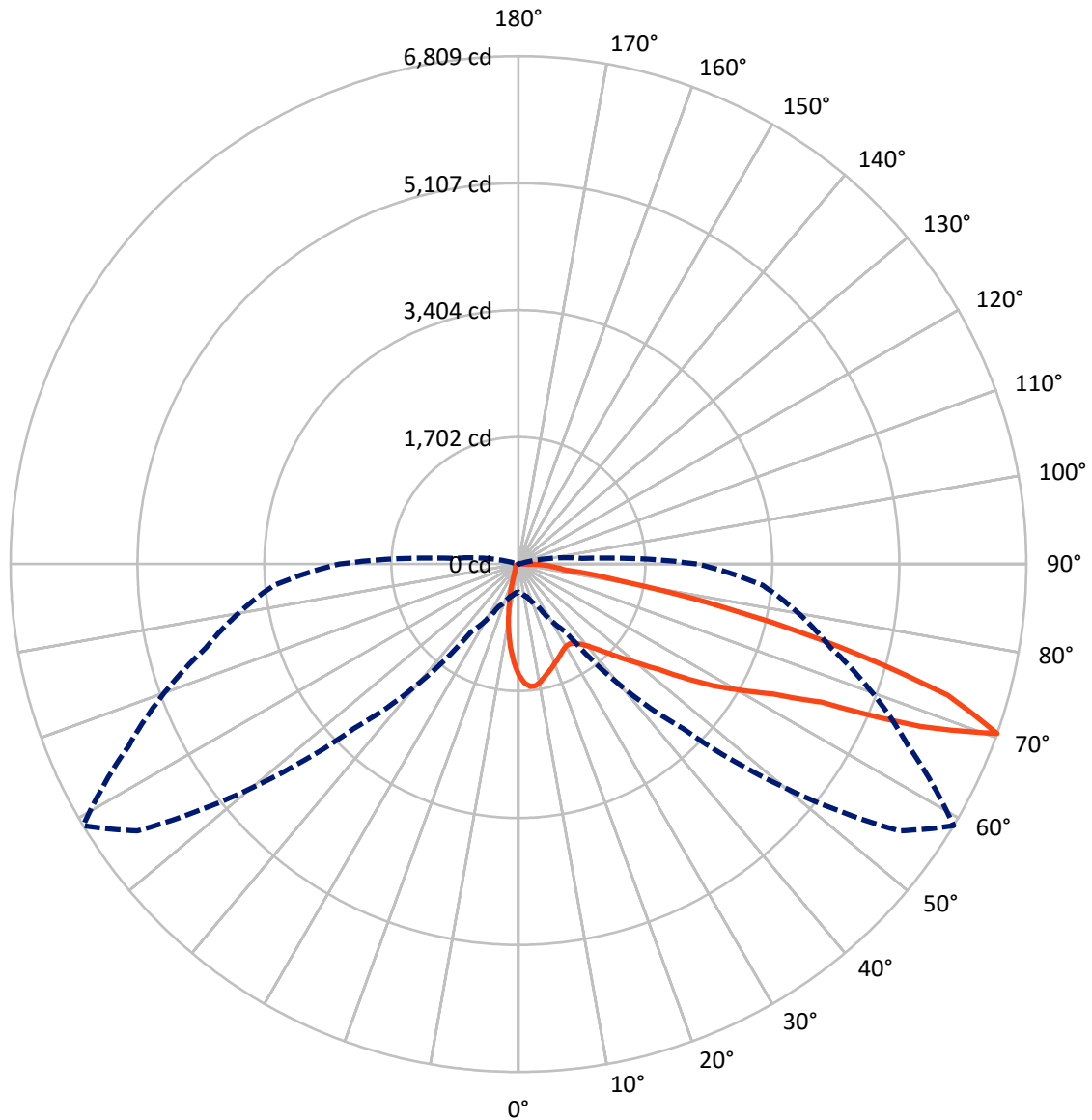
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 15.9 fc
 Type III - Medium - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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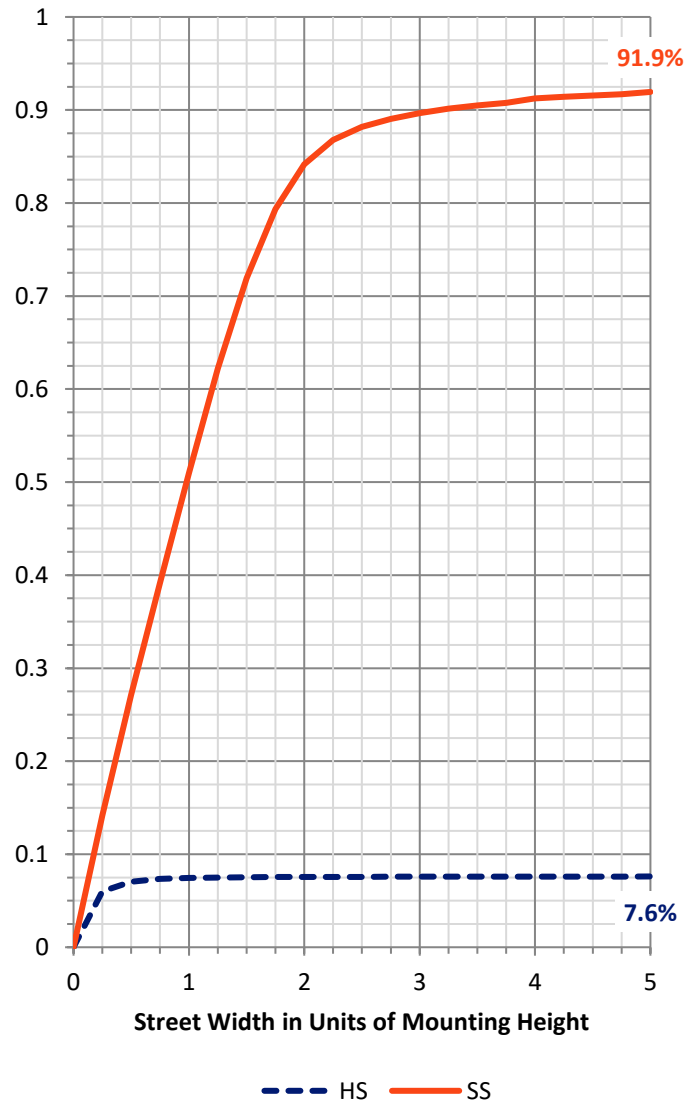
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	455.0	0.0	455.0
	% Fixture	7.7	0.0	7.7
Street Side	Lumens	5464.3	0.0	5464.3
	% Fixture	92.3	0.0	92.3
Total	Lumens	5919.3	0.0	5919.3
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	123.1	2.1
10°-20°	258.2	4.4
20°-30°	349.5	5.9
30°-40°	504.3	8.5
40°-50°	837.6	14.1
50°-60°	1281.1	21.6
60°-70°	1593.4	26.9
70°-80°	880.8	14.9
80°-90°	91.3	1.5
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°	5919.3	100.0
0°-180°	5919.3	100.0



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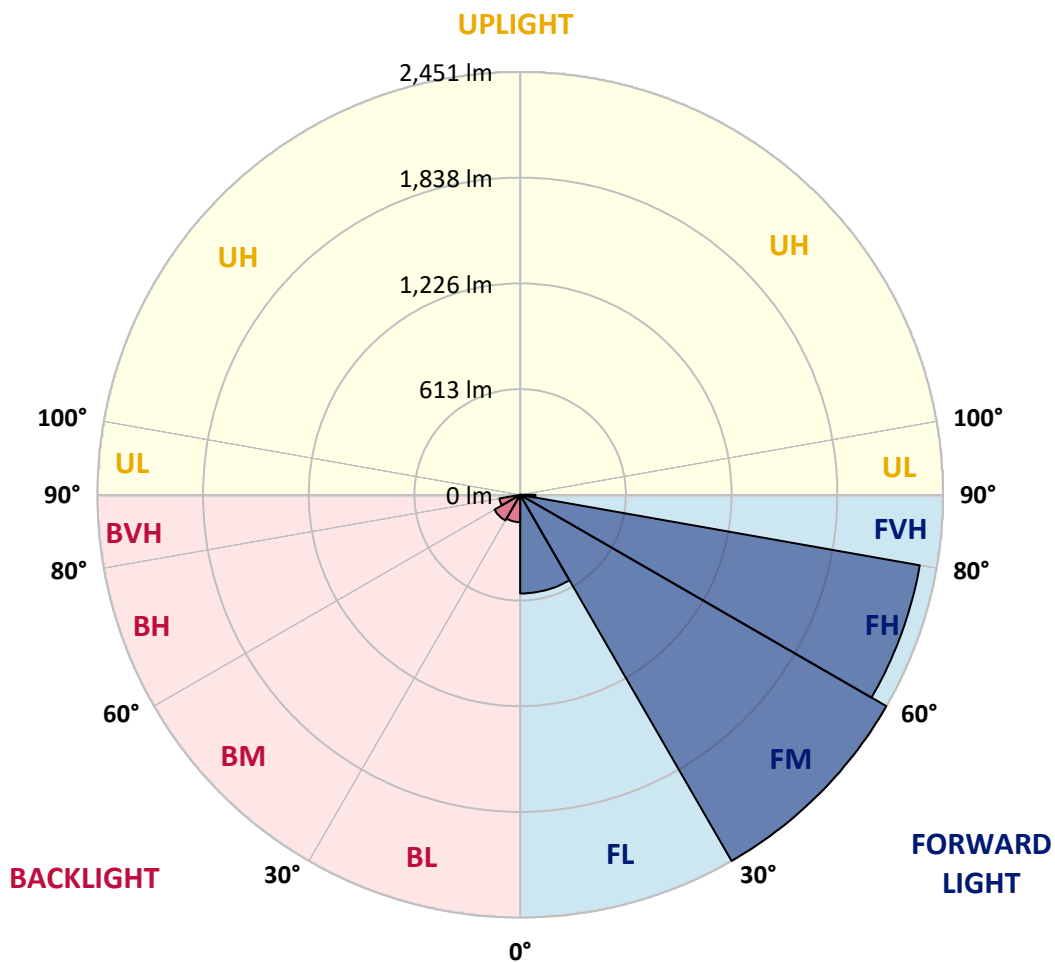
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	572.1	9.7			
FM	(30°-60°)	2451.3	41.4			
FH	(60°-80°)	2352.2	39.7			G2/5000
FVH	(80°-90°)	88.7	1.5			G1/100
BL	(0°-30°)	158.6	2.7	B1/500		
BM	(30°-60°)	171.8	2.9	B0/220		
BH	(60°-80°)	122.1	2.1	B1/500		G1/500
BVH	(80°-90°)	2.6	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 III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	1496.8	1496.8	1496.8	1496.8	1496.8	1496.8	1496.8	1496.8	1496.8	1496.8	1496.8
2.5°	1691.9	1689.3	1678.0	1675.9	1663.3	1638.2	1609.4	1597.6	1574.0	1536.6	1495.0
5°	1720.1	1721.4	1722.3	1717.4	1715.7	1695.0	1662.9	1649.1	1617.4	1555.8	1479.8
7.5°	1614.7	1618.2	1629.3	1634.3	1655.8	1663.8	1657.2	1648.2	1623.1	1550.4	1443.7
10°	1503.5	1510.2	1522.3	1530.3	1556.7	1578.1	1605.4	1607.5	1602.1	1532.5	1403.1
12.5°	1408.0	1414.2	1427.5	1443.7	1470.4	1498.2	1538.7	1553.0	1570.9	1520.9	1374.0
15°	1325.8	1327.5	1340.5	1360.7	1395.8	1433.9	1482.1	1503.0	1537.9	1516.3	1351.7
17.5°	1253.9	1254.4	1262.7	1281.2	1324.0	1374.0	1430.2	1457.9	1502.1	1510.2	1331.9
20°	1206.6	1206.1	1206.6	1216.3	1254.4	1313.7	1382.0	1411.1	1467.8	1502.5	1312.0
22.5°	1190.4	1188.2	1177.9	1174.4	1198.5	1250.7	1332.5	1370.5	1437.0	1500.3	1297.2
25°	1210.0	1208.8	1186.9	1166.4	1168.5	1201.2	1282.1	1328.5	1412.9	1508.4	1293.6
27.5°	1273.4	1270.8	1237.3	1197.1	1171.7	1177.5	1244.5	1293.2	1393.6	1528.0	1298.5
30°	1356.6	1357.0	1321.2	1272.5	1212.8	1179.7	1224.4	1270.5	1380.7	1557.5	1309.2
32.5°	1449.0	1448.5	1423.2	1366.9	1290.4	1220.8	1233.4	1272.2	1382.5	1600.8	1329.9
35°	1544.5	1539.7	1531.3	1481.7	1392.4	1292.8	1273.9	1302.5	1401.3	1658.0	1364.6
37.5°	1654.9	1653.2	1661.5	1609.4	1518.2	1398.5	1345.4	1364.6	1448.5	1742.4	1420.8
40°	1830.3	1820.5	1824.5	1753.5	1660.2	1541.0	1445.5	1450.4	1524.1	1854.0	1509.7
42.5°	2164.7	2125.1	2050.6	1917.4	1816.6	1699.1	1576.3	1567.8	1630.8	1989.2	1626.7
45°	2564.4	2518.8	2330.9	2098.4	1972.8	1868.7	1738.0	1715.1	1762.0	2150.5	1777.7
47.5°	2898.0	2848.9	2599.8	2287.2	2131.8	2043.7	1917.0	1890.2	1919.1	2337.6	1958.9
50°	3011.8	2984.6	2765.8	2444.3	2292.0	2240.3	2141.6	2097.0	2104.1	2539.5	2170.7
52.5°	2959.6	2950.3	2803.8	2551.9	2440.3	2457.3	2387.7	2340.8	2332.7	2760.0	2404.7
55°	2849.3	2844.8	2773.4	2611.8	2571.2	2656.0	2732.7	2692.1	2616.3	2994.5	2598.0
57.5°	2691.7	2708.7	2760.0	2727.0	2731.8	2865.9	3053.3	3074.4	2961.0	3181.1	2741.3
60°	2270.6	2316.2	2551.5	2850.7	3079.7	3215.0	3396.9	3436.0	3253.0	3308.7	2906.9
62.5°	1678.6	1743.7	2079.0	2628.7	3271.3	3879.1	3853.5	3836.2	3531.6	3479.9	3208.3
65°	985.9	1062.2	1345.8	2054.1	2982.5	4305.9	4706.5	4465.4	3956.2	3835.3	3688.4
67.5°	491.3	491.6	619.8	1084.2	2204.1	4008.1	5951.5	5812.0	4859.2	4359.0	3877.8
70°	377.7	388.1	458.6	630.0	1114.5	3121.7	6236.8	6808.8	5766.5	4335.8	3290.0
72.5°	320.2	326.9	408.1	548.3	833.3	1713.7	5399.1	6018.4	5502.7	3663.4	2425.2
75°	230.4	235.7	361.3	497.4	767.2	850.2	3703.5	4463.6	4128.7	2577.0	1334.7
77.5°	57.1	56.8	125.9	403.7	686.3	708.3	2125.1	2862.3	2368.9	1055.1	343.0
80°	25.4	24.6	28.6	84.8	638.5	668.5	934.5	1445.5	908.6	170.9	104.9
82.5°	17.8	17.0	17.8	31.3	213.4	620.2	564.9	626.5	332.6	58.5	44.6
85°	5.7	5.4	9.8	26.3	59.8	357.6	551.0	467.9	247.4	25.1	30.0
87.5°	0.9	0.9	3.6	14.4	17.3	119.3	323.3	324.2	111.2	14.7	13.4
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°	1496.8	1496.8	1496.8	1496.8	1496.8	1496.8	1496.8	1496.8	1496.8	1496.8	1496.8
2.5°	1473.9	1447.7	1410.6	1373.6	1340.0	1305.6	1278.0	1265.1	1259.2	1251.2	1233.8
5°	1440.1	1392.4	1311.0	1231.0	1156.5	1085.2	1023.9	989.0	951.6	949.8	931.5
7.5°	1385.5	1317.8	1189.5	1065.4	951.6	842.6	748.8	688.1	646.6	620.6	602.9
10°	1324.9	1237.8	1068.2	893.5	738.5	593.1	472.4	393.8	346.0	322.0	308.1
12.5°	1276.6	1167.3	948.4	728.7	534.5	367.4	255.4	198.3	172.8	163.0	158.6
15°	1235.1	1102.5	836.3	581.5	356.7	211.2	147.9	129.0	125.0	125.0	124.5
17.5°	1193.2	1040.0	727.4	436.7	224.5	138.3	116.5	113.8	114.4	115.6	115.6
20°	1153.5	980.6	622.4	311.3	147.3	110.8	105.8	104.9	106.3	108.1	107.5
22.5°	1121.3	928.4	524.3	213.8	113.5	100.5	97.3	95.9	96.8	98.3	97.7
25°	1098.4	883.8	434.1	149.2	98.6	91.5	87.9	86.1	85.2	86.1	85.8
27.5°	1084.7	846.2	349.3	112.1	88.5	82.6	78.2	74.6	72.4	72.4	71.4
30°	1075.7	810.9	273.8	92.9	79.9	73.8	67.5	62.5	59.0	58.0	57.6
32.5°	1075.2	780.5	204.5	82.1	71.9	64.8	57.1	50.9	46.9	46.1	45.5
35°	1086.4	756.0	150.5	74.1	64.8	56.2	47.8	41.1	37.5	37.5	37.1
37.5°	1115.4	741.7	113.8	67.9	59.0	49.0	40.2	34.0	30.8	31.7	31.7
40°	1169.5	739.0	92.9	62.9	54.1	42.8	32.6	27.7	26.3	27.7	27.7
42.5°	1252.1	753.3	82.6	59.4	49.5	36.7	27.3	23.6	23.3	24.6	24.6
45°	1359.8	781.4	76.8	56.2	44.6	30.4	22.7	20.5	20.1	21.9	21.9
47.5°	1490.1	819.3	71.4	52.7	39.7	25.1	19.3	17.3	17.3	19.3	19.7
50°	1644.5	870.7	66.0	49.0	35.8	21.0	16.1	14.7	15.2	17.0	17.3
52.5°	1822.3	933.7	61.2	46.1	31.3	17.0	13.4	12.4	12.9	14.7	15.2
55°	1975.5	988.7	55.3	42.8	25.4	13.8	11.1	10.7	11.1	13.4	13.4
57.5°	2109.0	1041.3	50.0	38.0	20.1	11.1	9.0	9.0	9.8	12.0	12.4
60°	2286.2	1124.4	45.5	32.2	15.2	8.4	7.1	7.5	9.0	10.7	11.1
62.5°	2600.1	1265.5	39.7	26.8	11.1	6.6	5.7	6.3	8.1	10.3	10.7
65°	2993.2	1399.0	33.1	22.3	8.4	4.9	4.4	5.7	8.1	10.3	10.7
67.5°	2952.9	1216.8	26.0	17.8	6.3	4.0	3.6	5.4	7.5	10.3	10.7
70°	2394.7	852.9	19.3	12.0	4.9	3.6	3.6	5.4	7.5	9.8	10.3
72.5°	1661.1	474.7	14.7	8.1	4.4	3.6	3.1	4.9	7.1	9.8	10.3
75°	790.4	145.5	11.6	5.7	4.0	3.1	2.6	4.9	7.1	9.8	10.3
77.5°	151.9	37.1	9.4	4.9	3.6	3.1	2.6	4.4	7.1	9.4	9.8
80°	51.4	16.4	7.5	4.4	3.6	3.1	2.6	4.4	6.6	9.0	9.4
82.5°	28.1	9.4	6.6	4.0	3.6	2.6	2.2	4.0	6.3	9.0	9.4
85°	21.9	6.6	5.4	4.0	3.6	2.6	2.2	4.0	6.3	8.4	9.0
87.5°	11.1	4.9	4.4	4.0	3.6	2.6	2.2	3.6	5.7	8.1	9.0
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)