

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: P270259

Luminaire Tested: **NAV-AF-01-D-UNV-AFL-7027-1200-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270259
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-7027-1200-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 2700K, 1200mA 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: 4887.8 lumens
Efficiency: N/A
Efficacy: 73.0 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 - G1

Input Watts (W): 67
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

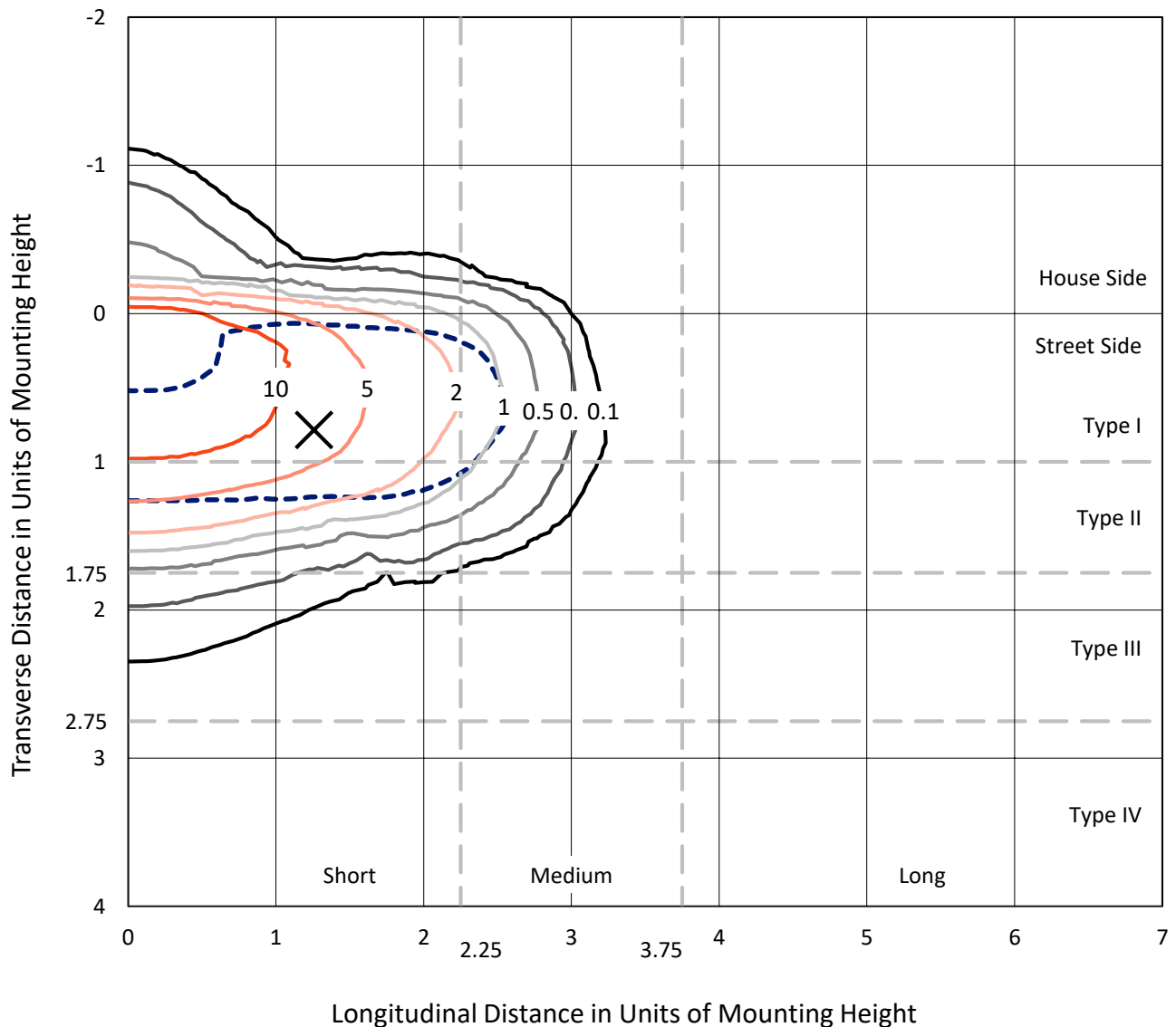


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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

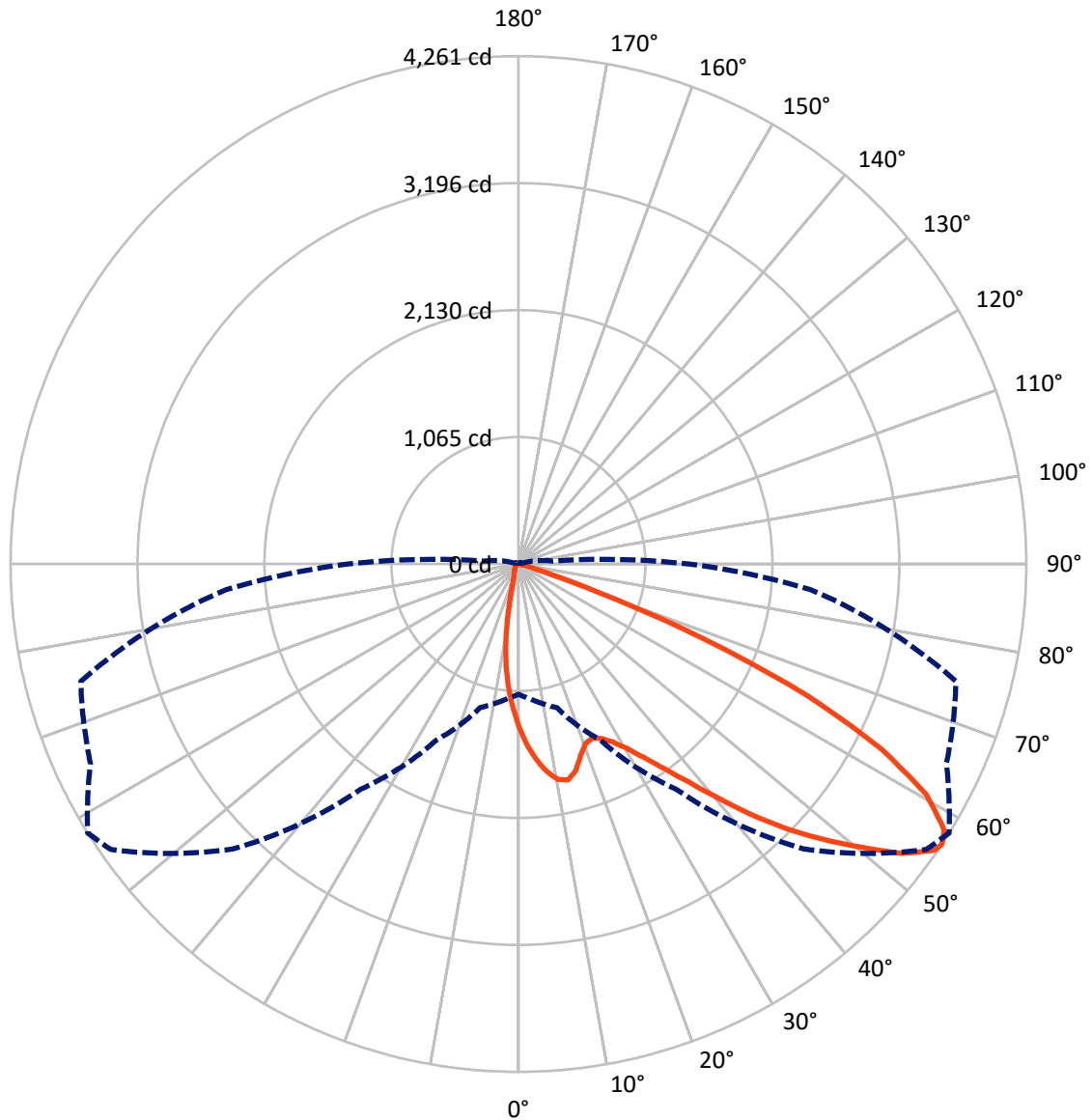


Based on 10 foot mounting height. Maximum calculated value = 17.2 fc
 Type II - Short - Full Cutoff

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Luminous Intensity Polar Plot



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

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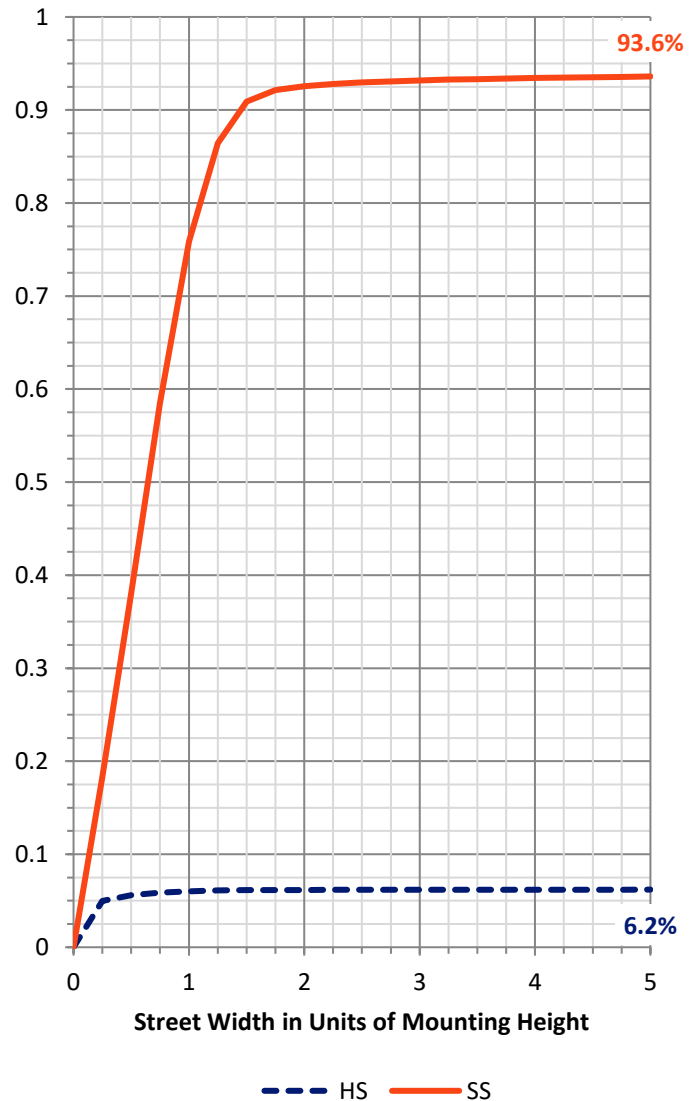
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	305.1	0.0	305.1
	% Fixture	6.2	0.0	6.2
Street Side	Lumens	4582.7	0.0	4582.7
	% Fixture	93.8	0.0	93.8
Total	Lumens	4887.8	0.0	4887.8
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	118.1	2.4
10°-20°	274.7	5.6
20°-30°	462.2	9.5
30°-40°	791.5	16.2
40°-50°	1194.4	24.4
50°-60°	1241.5	25.4
60°-70°	697.0	14.3
70°-80°	95.5	2.0
80°-90°	13.0	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°	4887.8	100.0
0°-180°	4887.8	100.0



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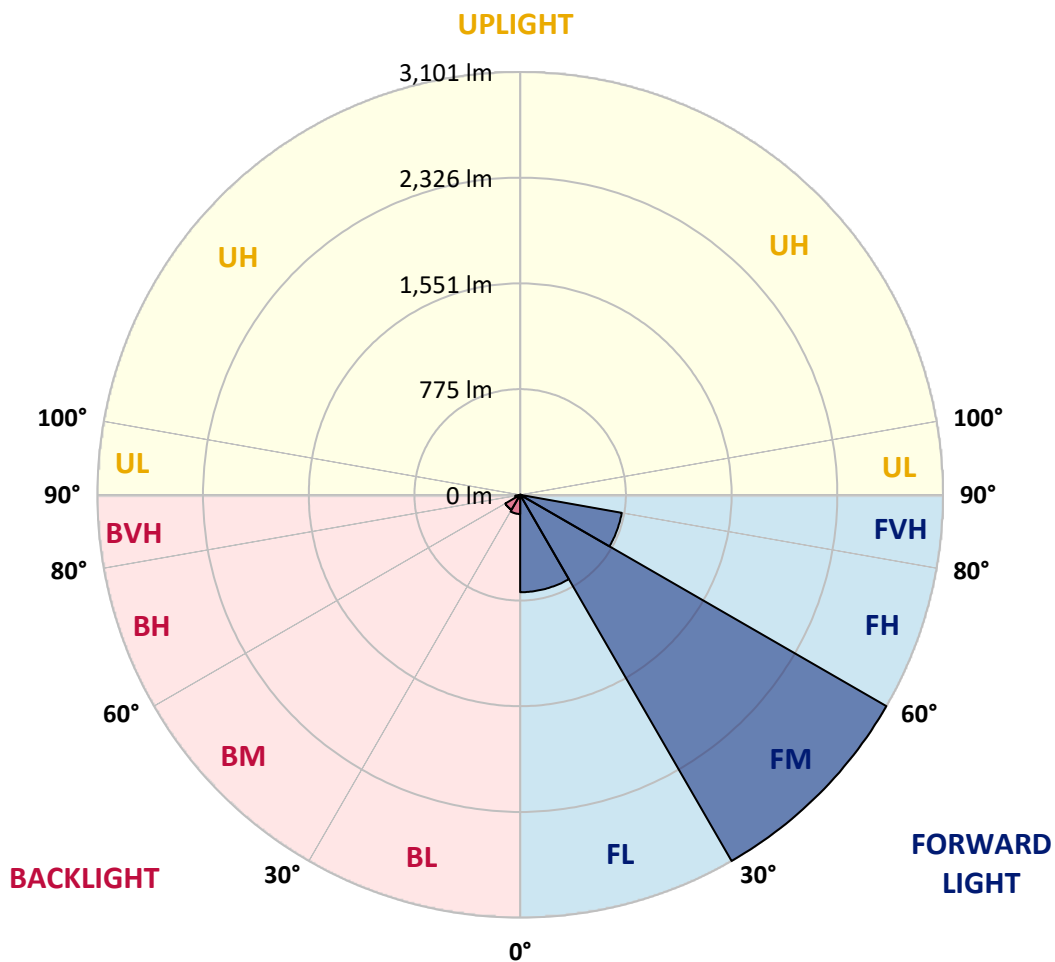
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	714.2	14.6			
FM	(30°-60°)	3101.0	63.4			
FH	(60°-80°)	756.3	15.5			G1/1800
FVH	(80°-90°)	11.2	0.2			G1/100
BL	(0°-30°)	140.7	2.9	B1/500		
BM	(30°-60°)	126.4	2.6	B0/220		
BH	(60°-80°)	36.2	0.7	B0/110		G0/110
BVH	(80°-90°)	1.8	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-G1

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	1383.8	1383.8	1383.8	1383.8	1383.8	1383.8	1383.8	1383.8	1383.8	1383.8	1383.8
2.5°	1665.1	1654.9	1644.5	1625.2	1607.2	1579.7	1541.6	1532.2	1502.4	1453.3	1407.4
5°	1808.6	1806.9	1799.7	1784.0	1764.6	1731.0	1688.2	1659.4	1613.3	1535.7	1447.3
7.5°	1723.6	1739.3	1765.0	1801.6	1826.2	1822.8	1790.1	1765.0	1719.1	1613.3	1486.4
10°	1452.9	1455.9	1491.2	1568.1	1689.6	1803.1	1845.8	1839.2	1797.1	1681.1	1520.7
12.5°	1357.3	1359.2	1367.5	1392.1	1471.2	1629.3	1823.5	1858.7	1855.2	1745.9	1557.3
15°	1364.9	1366.1	1368.2	1376.1	1398.4	1477.8	1710.2	1799.3	1892.5	1807.5	1593.1
17.5°	1423.8	1423.0	1416.0	1408.5	1415.5	1441.7	1594.6	1688.5	1884.7	1859.3	1622.6
20°	1538.6	1542.4	1518.6	1485.3	1468.2	1469.3	1537.4	1608.0	1840.6	1899.6	1644.5
22.5°	1700.1	1702.6	1663.5	1606.1	1555.8	1530.4	1549.4	1586.8	1790.1	1936.9	1662.5
25°	1892.9	1892.9	1838.1	1756.5	1678.5	1622.9	1606.4	1620.7	1770.6	1979.1	1680.3
27.5°	2101.0	2108.4	2036.8	1929.7	1827.0	1745.5	1694.2	1691.5	1785.6	2032.0	1700.5
30°	2327.4	2334.1	2249.0	2118.2	1996.3	1892.2	1813.0	1795.9	1842.6	2103.2	1730.0
32.5°	2552.5	2558.2	2464.2	2330.7	2188.6	2066.3	1962.3	1935.0	1945.1	2207.2	1773.3
35°	2839.0	2840.1	2721.1	2562.2	2410.5	2267.0	2135.4	2108.4	2097.3	2338.6	1835.4
37.5°	3066.9	3057.9	2982.6	2832.3	2658.2	2508.2	2353.5	2318.3	2291.5	2523.1	1932.1
40°	3120.5	3120.5	3109.4	3064.2	2925.9	2781.5	2631.7	2579.5	2520.1	2740.5	2061.8
42.5°	2980.7	2989.6	3063.5	3161.6	3162.7	3070.1	2923.7	2879.6	2775.3	2988.1	2203.5
45°	2667.8	2670.4	2847.5	3112.3	3292.1	3345.0	3237.0	3176.0	3031.4	3245.4	2333.3
47.5°	2555.1	2563.5	2638.7	2962.4	3301.8	3567.7	3537.4	3454.0	3268.6	3480.5	2454.4
50°	2382.1	2392.2	2484.4	2741.6	3214.6	3710.4	3825.0	3735.4	3484.4	3676.1	2514.5
52.5°	1968.2	1983.8	2114.0	2449.7	2996.3	3716.5	4088.2	4034.6	3705.6	3781.0	2507.4
55°	1354.5	1366.1	1517.7	1912.3	2556.2	3534.1	4201.6	4238.6	3902.9	3804.4	2473.2
56°	1092.6	1135.8	1246.9	1629.3	2305.7	3379.0	4175.5	4260.9	3961.4	3800.6	2458.2
57.5°	722.3	730.5	851.8	1180.6	1851.4	3042.2	4057.6	4213.2	4036.8	3781.8	2447.4
60°	339.6	343.4	387.1	544.8	1002.0	2216.9	3674.6	3932.7	4064.4	3741.8	2447.1
62.5°	221.5	222.2	227.5	259.9	409.8	1207.5	3046.3	3417.7	3835.8	3737.3	2439.9
65°	182.4	184.2	177.9	181.9	214.4	455.4	2148.7	2664.5	3299.1	3632.1	2360.1
67.5°	160.7	161.1	152.5	147.7	157.1	200.0	1082.5	1680.6	2467.6	3086.2	1944.0
70°	146.6	146.2	136.5	125.4	125.7	132.8	352.8	698.2	1365.2	1832.5	1116.1
72.5°	130.2	131.0	125.4	109.7	104.5	94.0	132.8	188.4	464.7	588.5	294.3
75°	114.2	112.6	107.0	96.9	87.2	63.1	66.7	80.2	121.2	120.1	63.4
77.5°	86.4	85.0	87.7	82.7	68.2	43.9	36.6	41.9	54.8	51.2	25.7
80°	66.0	65.2	59.6	70.8	62.3	33.1	25.1	25.7	29.9	27.2	12.7
82.5°	47.7	47.4	45.2	43.7	39.5	24.3	19.0	20.1	22.4	19.0	9.3
85°	18.2	18.2	35.5	29.9	27.2	16.3	13.5	14.6	17.2	13.8	6.4
87.5°	3.0	3.0	23.9	19.8	12.2	8.3	8.5	9.3	10.2	8.3	4.9
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°	1383.8	1383.8	1383.8	1383.8	1383.8	1383.8	1383.8	1383.8	1383.8	1383.8	1383.8
2.5°	1380.2	1355.2	1300.3	1247.3	1201.2	1150.4	1124.7	1094.9	1083.6	1061.3	1063.6
5°	1394.3	1342.1	1232.0	1116.1	1009.9	901.7	824.9	752.5	712.3	672.3	672.3
7.5°	1408.8	1329.0	1159.1	973.7	794.7	609.3	478.1	372.8	314.3	275.2	274.2
10°	1419.0	1312.2	1075.9	808.5	544.5	314.0	189.5	149.2	134.7	128.3	127.9
12.5°	1432.0	1295.4	981.0	613.8	302.4	149.2	118.1	111.8	109.2	107.7	107.7
15°	1443.1	1271.6	866.2	412.9	158.9	111.8	101.8	99.5	99.3	98.9	99.3
17.5°	1445.8	1237.7	728.6	241.6	115.3	97.6	93.2	91.4	91.4	91.0	91.0
20°	1439.9	1192.9	576.5	149.2	99.5	89.9	85.0	82.7	82.5	82.5	82.5
22.5°	1427.4	1135.8	426.2	112.9	90.5	82.7	76.4	74.2	74.2	74.6	75.0
25°	1412.2	1068.4	292.8	97.3	83.9	75.3	69.0	66.7	67.6	68.2	68.6
27.5°	1392.8	987.9	191.7	84.4	75.0	67.9	62.3	60.7	62.3	63.8	64.5
30°	1373.5	899.5	129.7	73.1	64.9	59.6	56.4	56.0	58.2	61.5	62.0
32.5°	1360.8	808.8	98.1	65.7	57.0	52.6	51.2	51.8	55.2	58.8	59.6
35°	1359.7	720.5	83.5	59.6	51.8	47.7	47.0	49.2	53.0	56.0	56.8
37.5°	1377.1	637.6	75.6	55.2	47.7	43.7	42.5	46.6	49.9	53.0	53.7
40°	1412.6	563.4	70.4	51.2	44.3	39.5	38.7	42.1	45.5	48.9	49.9
42.5°	1457.1	494.1	64.5	47.0	40.7	35.0	34.3	36.9	40.2	45.2	45.9
45°	1495.4	429.6	58.2	42.5	36.6	30.3	29.9	32.8	35.5	40.0	40.7
47.5°	1527.7	375.9	52.2	37.6	31.4	26.9	26.5	27.9	29.5	33.5	34.3
50°	1510.7	330.3	46.3	30.9	25.3	23.1	22.7	22.7	24.7	28.7	29.5
52.5°	1468.5	302.1	40.7	25.7	20.9	19.8	18.7	19.0	20.9	22.7	23.1
55°	1434.7	288.6	35.8	22.7	17.5	16.3	15.4	14.9	15.4	14.6	13.8
56°	1426.4	287.2	34.7	22.0	16.8	15.4	13.8	13.0	12.7	11.1	10.8
57.5°	1422.6	287.2	32.8	20.5	15.7	13.8	11.9	10.4	9.0	7.8	7.8
60°	1419.7	289.1	30.6	17.8	13.5	11.1	8.5	6.4	5.2	5.2	5.2
62.5°	1413.4	288.3	27.9	14.9	11.6	8.5	5.2	4.1	3.8	4.1	4.5
65°	1342.1	267.8	24.7	11.9	9.0	6.0	3.0	3.0	3.4	4.1	4.5
67.5°	1081.5	202.8	20.1	9.3	6.4	4.5	2.6	2.6	3.4	4.1	4.5
70°	594.0	107.0	17.2	6.6	4.9	3.8	2.6	2.2	3.4	4.1	4.5
72.5°	145.0	44.7	15.7	5.2	4.5	3.4	2.2	2.2	3.4	4.1	4.5
75°	35.8	33.5	12.7	4.1	3.8	3.0	2.2	2.2	3.4	4.1	4.5
77.5°	16.8	44.3	8.5	3.8	3.4	2.6	2.2	2.2	3.4	4.1	4.1
80°	10.2	33.5	5.2	3.4	3.0	2.6	2.2	2.2	3.4	4.1	4.5
82.5°	6.0	9.7	3.8	3.4	3.0	2.2	2.2	2.2	3.4	4.1	4.5
85°	5.2	4.9	3.8	3.4	3.0	2.6	2.2	2.2	3.8	4.5	4.5
87.5°	4.1	3.8	3.4	3.0	3.0	2.6	2.2	2.2	3.4	4.1	4.5
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)