

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: P196477

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196477
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-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 3000K, 1050mA 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: 4959.3 lumens
Efficiency: N/A
Efficacy: 84.1 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 - G1

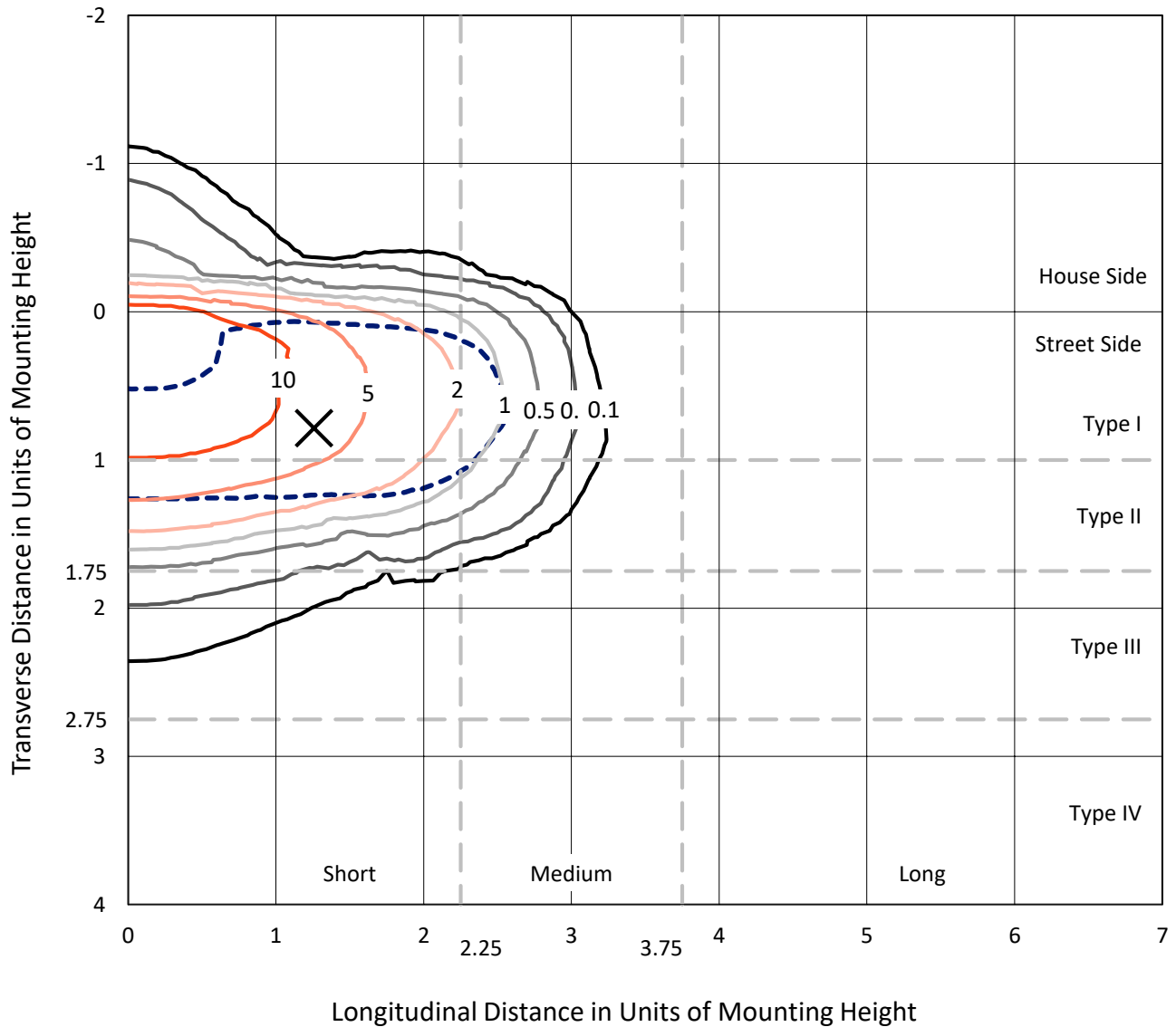
Input Watts (W): 59
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

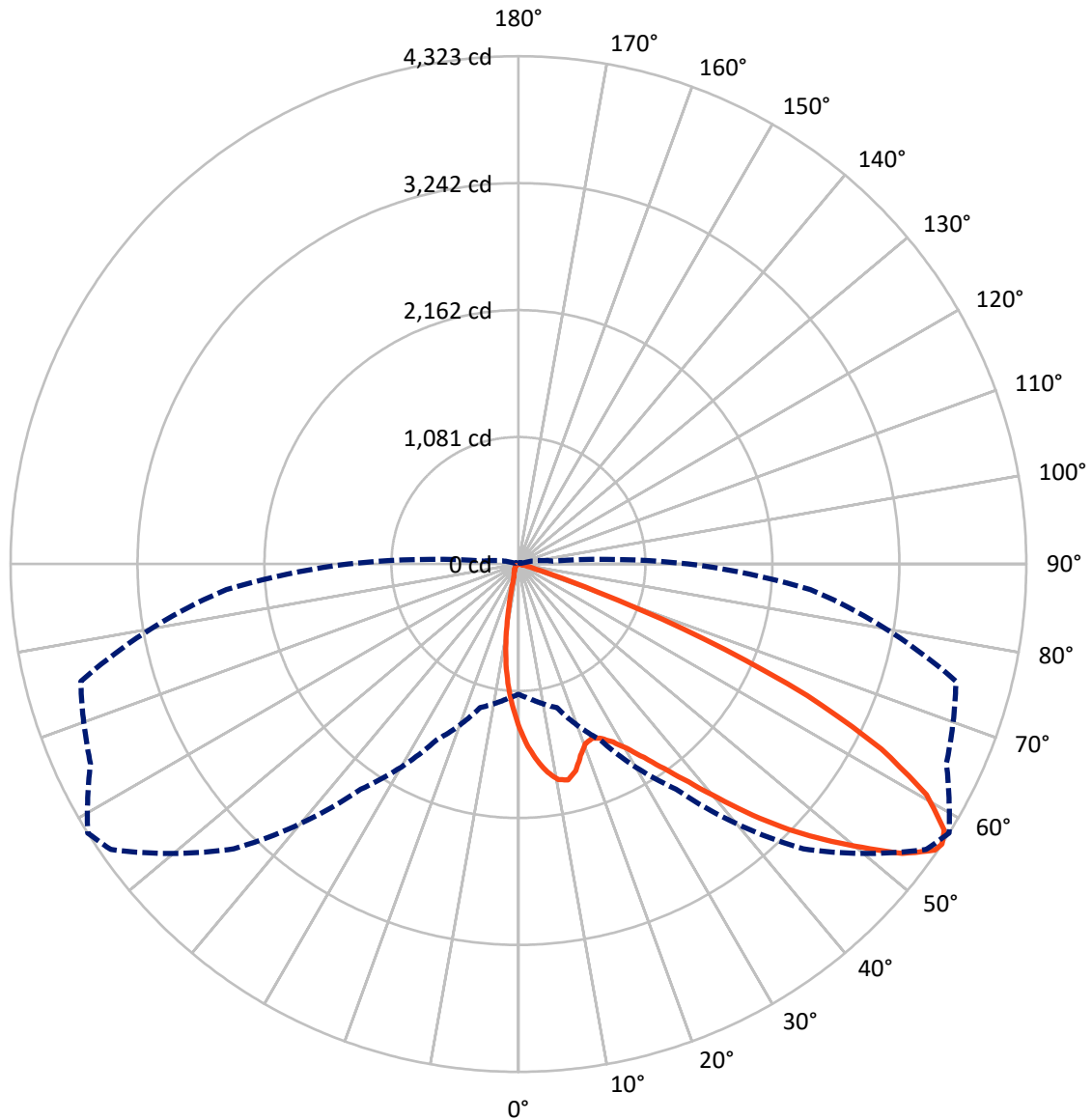


Based on 10 foot mounting height. Maximum calculated value = 17.5 fc
 Type II - Short - Full Cutoff

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Luminous Intensity Polar Plot



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

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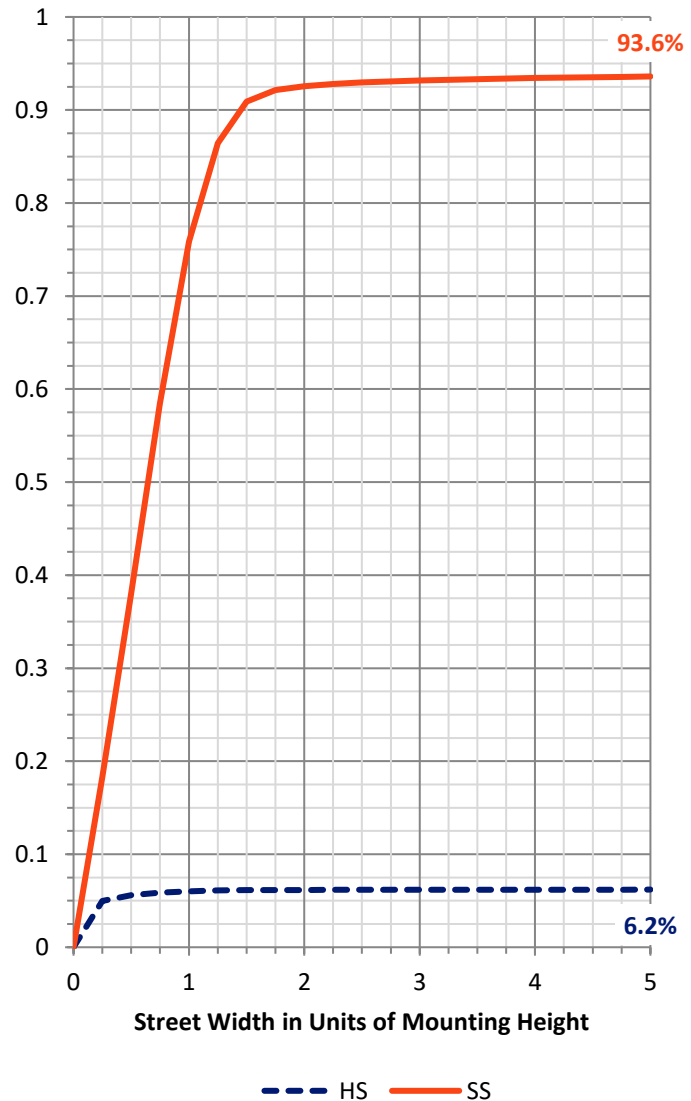
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	309.6	0.0	309.6
	% Fixture	6.2	0.0	6.2
Street Side	Lumens	4649.7	0.0	4649.7
	% Fixture	93.8	0.0	93.8
Total	Lumens	4959.3	0.0	4959.3
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	119.8	2.4
10°-20°	278.7	5.6
20°-30°	469.0	9.5
30°-40°	803.1	16.2
40°-50°	1211.9	24.4
50°-60°	1259.7	25.4
60°-70°	707.2	14.3
70°-80°	96.9	2.0
80°-90°	13.1	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°	4959.3	100.0
0°-180°	4959.3	100.0



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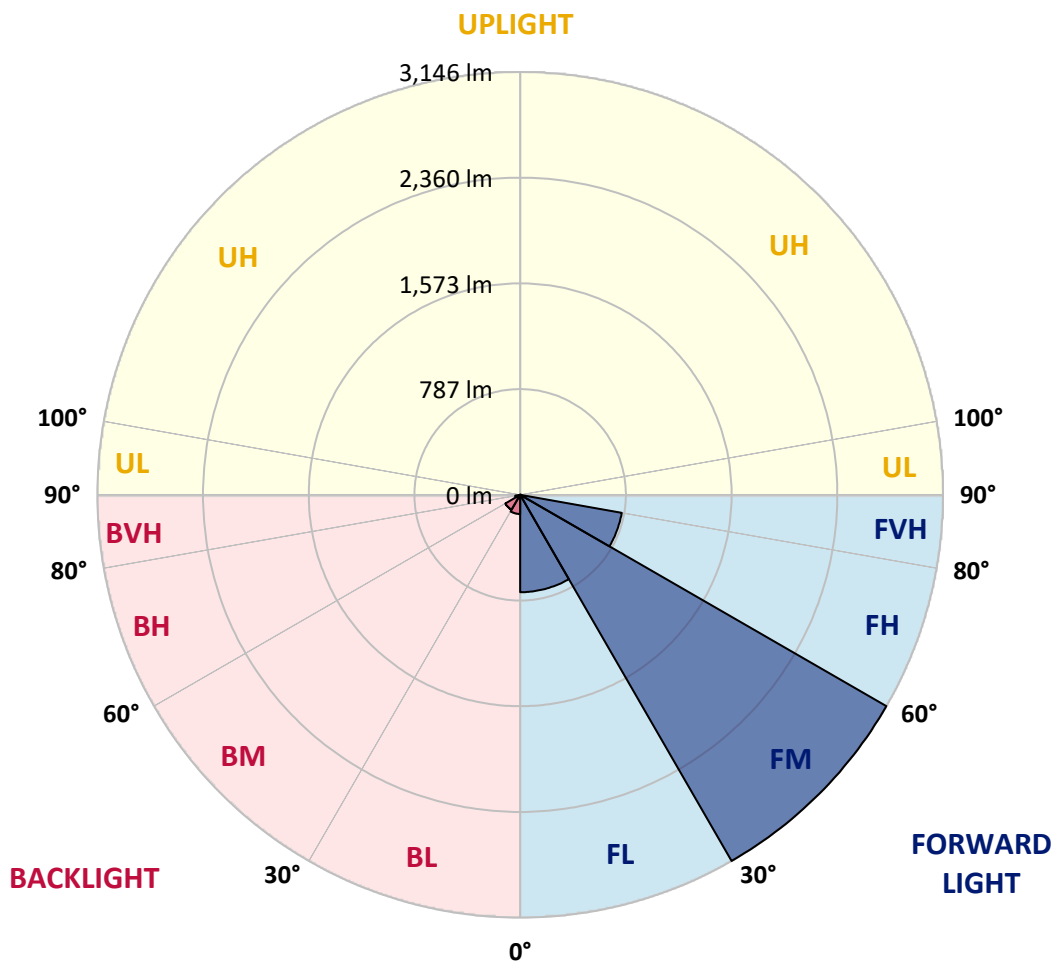
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	724.7	14.6			
FM (30°-60°)	3146.4	63.4			
FH (60°-80°)	767.4	15.5			G1/1800
FVH (80°-90°)	11.3	0.2			G1/100
BL (0°-30°)	142.8	2.9	B1/500		
BM (30°-60°)	128.2	2.6	B0/220		
BH (60°-80°)	36.7	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°	1404.1	1404.1	1404.1	1404.1	1404.1	1404.1	1404.1	1404.1	1404.1	1404.1	1404.1
2.5°	1689.3	1679.2	1668.6	1648.9	1630.8	1602.8	1564.1	1554.8	1524.5	1474.5	1427.9
5°	1835.1	1833.2	1826.0	1810.1	1790.4	1756.4	1712.8	1683.6	1636.8	1558.1	1468.5
7.5°	1748.8	1764.7	1790.8	1827.9	1852.8	1849.4	1816.2	1790.8	1744.4	1636.8	1508.3
10°	1474.1	1477.1	1513.1	1591.1	1714.4	1829.4	1872.9	1866.1	1823.3	1705.6	1543.0
12.5°	1377.2	1379.2	1387.5	1412.4	1492.7	1653.1	1850.2	1885.9	1882.4	1771.5	1580.1
15°	1384.9	1386.0	1388.2	1396.3	1418.8	1499.5	1735.1	1825.6	1920.2	1833.9	1616.4
17.5°	1444.6	1443.9	1436.6	1429.1	1436.3	1462.8	1617.9	1713.3	1912.2	1886.6	1646.3
20°	1561.1	1564.9	1540.7	1507.0	1489.6	1490.8	1560.0	1631.6	1867.6	1927.5	1668.6
22.5°	1724.9	1727.6	1687.9	1629.6	1578.6	1552.8	1572.1	1609.9	1816.2	1965.2	1686.8
25°	1920.6	1920.6	1864.9	1782.1	1703.1	1646.6	1630.0	1644.4	1796.4	2007.9	1704.9
27.5°	2131.7	2139.3	2066.6	1958.0	1853.6	1771.1	1718.9	1716.3	1811.6	2061.7	1725.3
30°	2361.4	2368.2	2281.9	2149.1	2025.4	1919.8	1839.6	1822.2	1869.5	2134.0	1755.2
32.5°	2589.9	2595.6	2500.3	2364.8	2220.5	2096.5	1990.9	1963.4	1973.5	2239.6	1799.2
35°	2880.5	2881.6	2761.0	2599.8	2445.8	2300.1	2166.5	2139.3	2128.0	2372.8	1862.4
37.5°	3111.7	3102.6	3026.2	2873.7	2696.9	2544.8	2387.9	2352.4	2325.0	2560.1	1960.3
40°	3166.3	3166.3	3154.9	3109.1	2968.7	2822.2	2670.2	2617.2	2557.0	2780.6	2092.0
42.5°	3024.3	3033.4	3108.3	3207.9	3209.0	3115.1	2966.4	2921.7	2815.8	3031.8	2235.8
45°	2706.8	2709.5	2889.3	3157.8	3340.3	3393.9	3284.3	3222.6	3075.7	3293.0	2367.4
47.5°	2592.6	2600.9	2677.3	3005.7	3350.1	3619.9	3589.1	3504.5	3316.3	3531.3	2490.4
50°	2417.1	2427.2	2520.7	2781.7	3261.5	3764.7	3880.9	3790.1	3535.4	3729.9	2551.3
52.5°	1997.0	2012.9	2145.0	2485.5	3040.1	3770.7	4148.0	4093.5	3759.8	3836.3	2544.1
55°	1374.3	1386.0	1540.0	1940.2	2593.7	3585.8	4263.1	4300.6	3960.0	3860.1	2509.3
56°	1108.7	1152.4	1265.2	1653.1	2339.5	3428.3	4236.5	4323.3	4019.4	3856.3	2494.2
57.5°	732.9	741.3	864.2	1197.9	1878.6	3086.7	4117.0	4274.8	4095.8	3837.0	2483.3
60°	344.7	348.4	392.8	552.8	1016.6	2249.4	3728.5	3990.2	4123.8	3796.5	2482.8
62.5°	224.7	225.5	230.7	263.8	415.8	1225.2	3090.8	3467.8	3892.0	3792.0	2475.7
65°	184.9	187.0	180.5	184.6	217.5	461.9	2180.2	2703.4	3347.3	3685.4	2394.6
67.5°	163.2	163.5	154.7	149.8	159.3	202.7	1098.4	1705.3	2503.6	3131.4	1972.4
70°	148.7	148.4	138.4	127.2	127.5	134.7	358.0	708.3	1385.2	1859.3	1132.5
72.5°	132.1	132.9	127.2	111.2	106.0	95.4	134.7	191.1	471.5	597.1	298.5
75°	115.9	114.2	108.6	98.4	88.5	63.9	67.7	81.4	122.9	121.9	64.4
77.5°	87.7	86.4	88.9	84.0	69.3	44.7	37.0	42.4	55.6	51.8	26.1
80°	66.9	66.2	60.5	71.9	63.2	33.7	25.3	26.1	30.3	27.7	12.9
82.5°	48.4	48.1	45.8	44.2	40.1	24.6	19.3	20.4	22.7	19.3	9.5
85°	18.6	18.6	35.9	30.3	27.7	16.6	13.6	14.7	17.4	13.9	6.4
87.5°	3.1	3.1	24.2	20.1	12.4	8.3	8.7	9.5	10.3	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°	1404.1	1404.1	1404.1	1404.1	1404.1	1404.1	1404.1	1404.1	1404.1	1404.1	1404.1
2.5°	1400.3	1375.0	1319.5	1265.7	1218.7	1167.2	1141.1	1110.8	1099.5	1076.9	1079.2
5°	1414.7	1361.7	1250.2	1132.5	1024.7	914.9	836.9	763.5	722.6	682.3	682.3
7.5°	1429.4	1348.5	1175.9	987.9	806.4	618.3	485.1	378.4	318.9	279.2	278.1
10°	1439.7	1331.5	1091.6	820.3	552.5	318.6	192.2	151.4	136.6	130.1	129.8
12.5°	1452.9	1314.5	995.5	622.8	306.9	151.4	119.9	113.5	110.9	109.4	109.4
15°	1464.3	1290.3	879.0	418.9	161.1	113.5	103.2	101.1	100.6	100.3	100.6
17.5°	1467.0	1255.8	739.3	245.2	116.9	99.1	94.6	92.7	92.7	92.4	92.4
20°	1460.9	1210.4	585.0	151.4	101.1	91.2	86.4	84.0	83.6	83.6	83.6
22.5°	1448.3	1152.4	432.4	114.6	92.0	84.0	77.6	75.3	75.3	75.7	76.1
25°	1432.8	1084.1	296.9	98.8	85.1	76.5	70.0	67.7	68.5	69.3	69.6
27.5°	1413.2	1002.4	194.5	85.5	76.1	68.9	63.2	61.6	63.2	64.7	65.4
30°	1393.5	912.7	131.6	74.2	65.9	60.5	57.2	56.7	59.0	62.4	62.9
32.5°	1380.7	820.6	99.5	66.5	57.9	53.3	51.8	52.6	56.0	59.8	60.5
35°	1379.5	731.1	84.7	60.5	52.6	48.4	47.6	49.9	53.7	56.7	57.5
37.5°	1397.3	647.1	76.8	56.0	48.4	44.2	43.1	47.3	50.7	53.7	54.5
40°	1433.3	571.8	71.6	51.8	45.1	40.1	39.4	42.7	46.1	49.6	50.7
42.5°	1478.3	501.4	65.4	47.6	41.2	35.6	34.9	37.4	40.9	45.8	46.6
45°	1517.3	435.8	59.0	43.1	37.0	30.7	30.3	33.4	35.9	40.5	41.2
47.5°	1550.2	381.5	53.0	38.2	31.8	27.2	26.9	28.4	29.9	34.1	34.9
50°	1532.8	335.2	46.9	31.3	25.6	23.5	23.1	23.1	25.0	29.2	29.9
52.5°	1490.0	306.5	41.2	26.1	21.2	20.1	18.9	19.3	21.2	23.1	23.5
55°	1455.6	292.9	36.3	23.1	17.8	16.6	15.6	15.2	15.6	14.7	13.9
56°	1447.2	291.4	35.2	22.3	17.1	15.6	13.9	13.2	12.9	11.4	10.9
57.5°	1443.5	291.4	33.4	20.8	15.9	13.9	12.1	10.6	9.1	7.9	7.9
60°	1440.5	293.3	31.0	18.1	13.6	11.4	8.7	6.4	5.3	5.3	5.3
62.5°	1434.0	292.5	28.4	15.2	11.7	8.7	5.3	4.2	3.9	4.2	4.6
65°	1361.7	271.6	25.0	12.1	9.1	6.0	3.1	3.1	3.4	4.2	4.6
67.5°	1097.3	205.9	20.4	9.5	6.4	4.6	2.6	2.6	3.4	4.2	4.6
70°	602.8	108.6	17.4	6.8	4.9	3.9	2.6	2.3	3.4	4.2	4.6
72.5°	147.2	45.5	15.9	5.3	4.6	3.4	2.3	2.3	3.4	4.2	4.6
75°	36.3	34.1	12.9	4.2	3.9	3.1	2.3	2.3	3.4	4.2	4.6
77.5°	17.1	45.1	8.7	3.9	3.4	2.6	2.3	2.3	3.4	4.2	4.2
80°	10.3	34.1	5.3	3.4	3.1	2.6	2.3	2.3	3.4	4.2	4.6
82.5°	6.0	9.9	3.9	3.4	3.1	2.3	2.3	2.3	3.4	4.2	4.6
85°	5.3	4.9	3.9	3.4	3.1	2.6	2.3	2.3	3.9	4.6	4.6
87.5°	4.2	3.9	3.4	3.1	3.1	2.6	2.3	2.3	3.4	4.2	4.6
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)