

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: P195517

Luminaire Tested: **NAV-AF-01-D-UNV-AFL-7050-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P195517  
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-7050-HSS  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(1) 70 CRI, 5000K, 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: 5128 lumens  
Efficiency: N/A  
Efficacy: 86.9 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

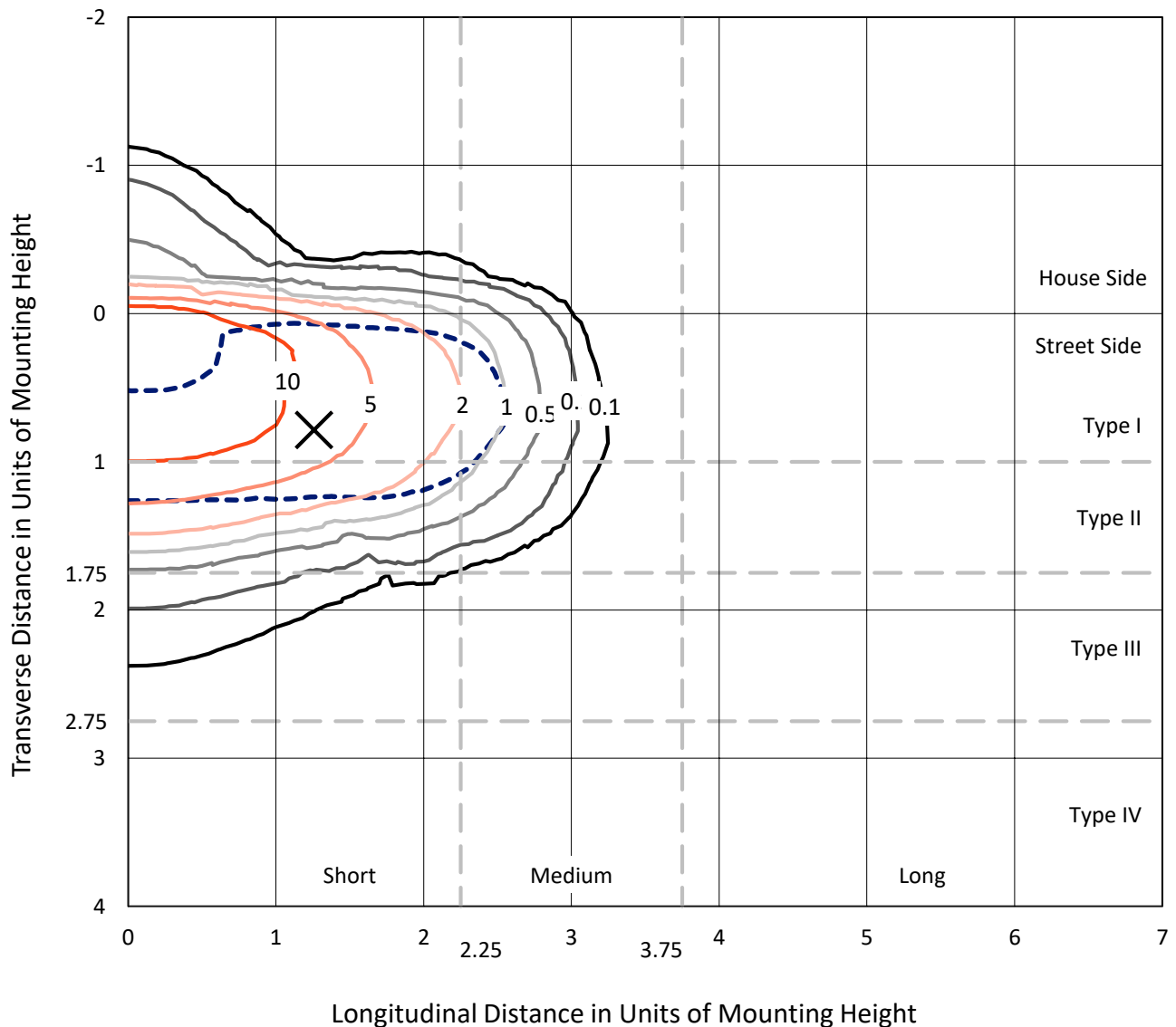
Input Watts (W): 59  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



REPORT NUMBER: P195517  
 CATALOG NUMBER: NAV-AF-01-D-UNV-AFL-7050-HSS

### Iso-Footcandle Lines of Horizontal Illumination

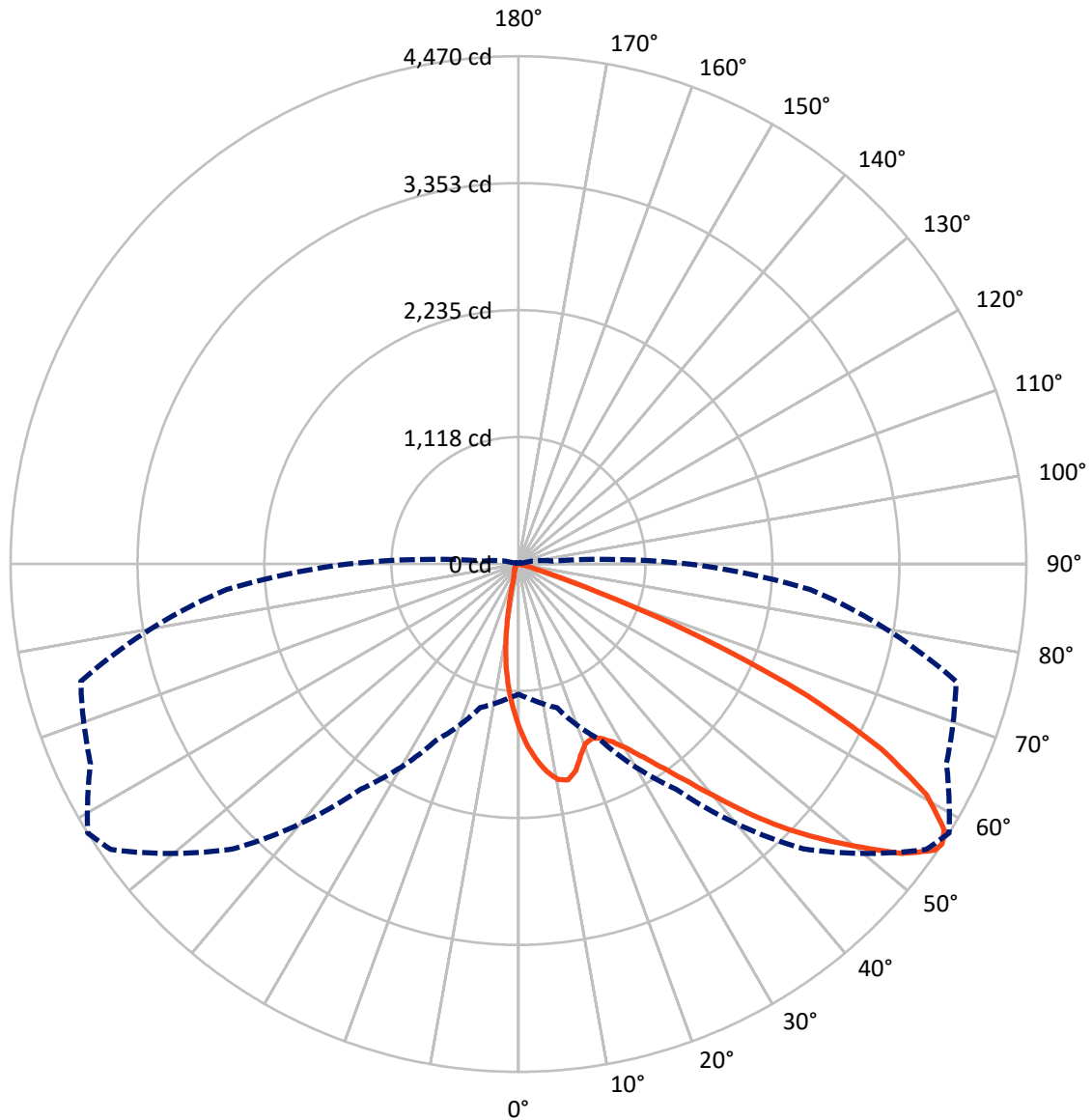
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 18 fc  
 Type II - Short - Full Cutoff

REPORT NUMBER: P195517  
CATALOG NUMBER: NAV-AF-01-D-UNV-AFL-7050-HSS

### Luminous Intensity Polar Plot



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

REPORT NUMBER: P195517

CATALOG NUMBER: NAV-AF-01-D-UNV-AFL-7050-HSS

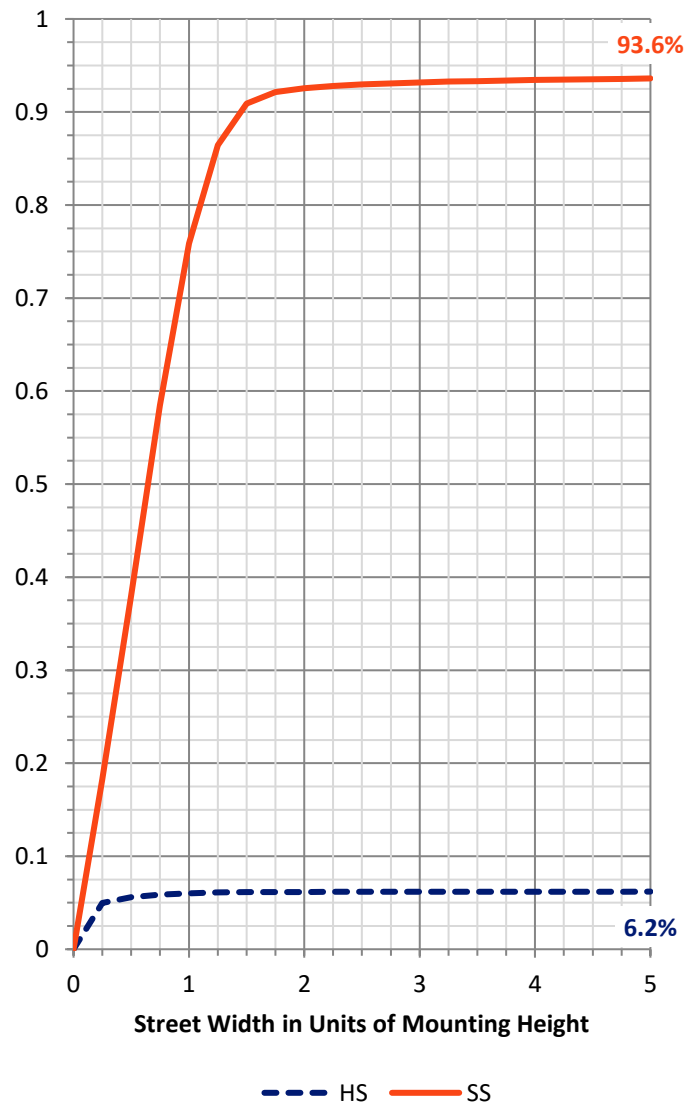
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	320.1	0.0	320.1
	% Fixture	6.2	0.0	6.2
<b>Street Side</b>	Lumens	4807.9	0.0	4807.9
	% Fixture	93.8	0.0	93.8
<b>Total</b>	Lumens	5128.0	0.0	5128.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	123.9	2.4
10°-20°	288.2	5.6
20°-30°	484.9	9.5
30°-40°	830.4	16.2
40°-50°	1253.1	24.4
50°-60°	1302.5	25.4
60°-70°	731.2	14.3
70°-80°	100.2	2.0
80°-90°	13.6	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°	5128.0	100.0
0°-180°	5128.0	100.0



REPORT NUMBER: P195517

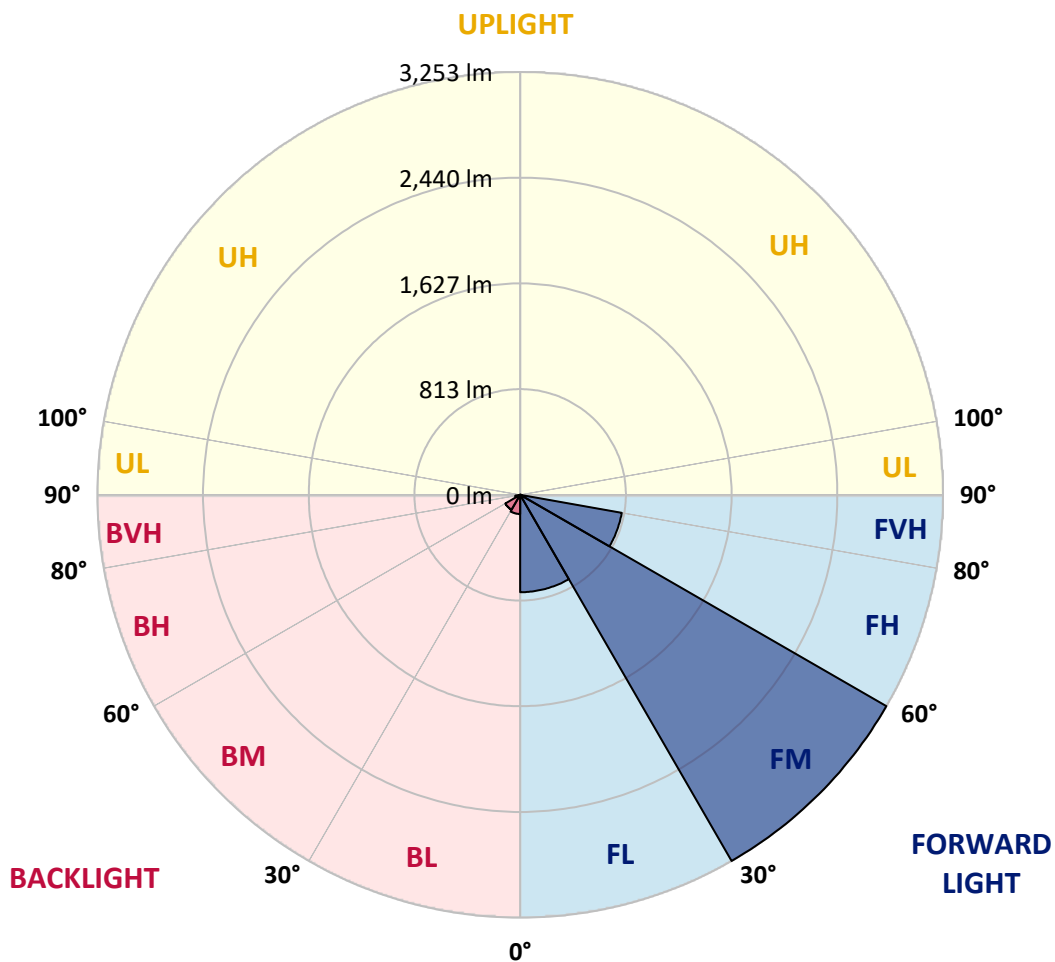
CATALOG NUMBER: NAV-AF-01-D-UNV-AFL-7050-HSS

**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	749.3	14.6			
FM	(30°-60°)	3253.4	63.4			
FH	(60°-80°)	793.5	15.5			G1/1800
FVH	(80°-90°)	11.7	0.2			G1/100
BL	(0°-30°)	147.7	2.9	B1/500		
BM	(30°-60°)	132.6	2.6	B0/220		
BH	(60°-80°)	38.0	0.7	B0/110		G0/110
BVH	(80°-90°)	1.9	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





REPORT NUMBER: P195517

CATALOG NUMBER: NAV-AF-01-D-UNV-AFL-7050-HSS

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	1451.9	1451.9	1451.9	1451.9	1451.9	1451.9	1451.9	1451.9	1451.9	1451.9	1451.9
2.5°	1746.9	1736.3	1725.4	1705.0	1686.2	1657.3	1617.4	1607.6	1576.3	1524.7	1476.5
5°	1897.5	1895.6	1888.1	1871.7	1851.3	1816.1	1771.1	1741.0	1692.5	1611.1	1518.4
7.5°	1808.3	1824.7	1851.7	1890.1	1915.9	1912.4	1878.0	1851.7	1803.6	1692.5	1559.5
10°	1524.3	1527.4	1564.6	1645.2	1772.7	1891.6	1936.6	1929.6	1885.4	1763.7	1595.5
12.5°	1424.1	1426.1	1434.7	1460.5	1543.4	1709.3	1913.2	1949.9	1946.4	1831.8	1633.8
15°	1431.9	1433.1	1435.5	1443.7	1467.2	1550.5	1794.2	1887.7	1985.5	1896.3	1671.4
17.5°	1493.8	1493.0	1485.5	1477.7	1485.1	1512.5	1672.9	1771.5	1977.3	1950.7	1702.3
20°	1614.3	1618.2	1593.1	1558.3	1540.3	1541.5	1613.1	1687.0	1931.2	1993.0	1725.4
22.5°	1783.7	1786.4	1745.3	1685.1	1632.3	1605.6	1625.6	1664.7	1878.0	2032.1	1744.1
25°	1985.9	1985.9	1928.4	1842.7	1761.0	1702.7	1685.5	1700.3	1857.6	2076.3	1762.9
27.5°	2204.2	2212.1	2137.0	2024.7	1916.7	1831.4	1777.4	1774.7	1873.3	2131.9	1784.1
30°	2441.7	2448.8	2359.6	2222.2	2094.3	1985.2	1902.2	1884.2	1933.1	2206.6	1815.0
32.5°	2678.0	2683.9	2585.3	2445.3	2296.2	2167.9	2058.7	2030.1	2040.7	2315.7	1860.3
35°	2978.5	2979.7	2854.9	2688.2	2529.0	2378.3	2240.2	2212.1	2200.3	2453.5	1925.7
37.5°	3217.6	3208.2	3129.1	2971.5	2788.8	2631.5	2469.1	2432.3	2404.2	2647.1	2027.0
40°	3273.9	3273.9	3262.2	3214.8	3069.7	2918.3	2761.0	2706.2	2644.0	2875.2	2163.2
42.5°	3127.2	3136.6	3214.0	3316.9	3318.1	3221.1	3067.3	3021.2	2911.6	3135.0	2311.8
45°	2798.9	2801.7	2987.5	3265.3	3453.9	3509.4	3396.0	3332.2	3180.4	3405.0	2448.0
47.5°	2680.8	2689.4	2768.4	3108.0	3464.0	3743.0	3711.3	3623.7	3429.2	3651.4	2575.1
50°	2499.2	2509.8	2606.4	2876.4	3372.5	3892.8	4012.9	3919.1	3655.7	3856.8	2638.1
52.5°	2065.0	2081.4	2217.9	2570.1	3143.6	3899.1	4289.2	4232.8	3887.8	3966.8	2630.7
55°	1421.0	1433.1	1592.3	2006.3	2682.0	3707.8	4408.1	4446.8	4094.7	3991.4	2594.7
56°	1146.3	1191.7	1308.3	1709.3	2419.0	3545.0	4380.7	4470.3	4156.1	3987.5	2579.1
57.5°	757.8	766.4	893.6	1238.7	1942.5	3191.7	4257.1	4420.2	4235.2	3967.6	2567.7
60°	356.4	360.3	406.1	571.6	1051.3	2325.9	3855.3	4126.0	4264.1	3925.7	2567.3
62.5°	232.4	233.2	238.7	272.7	430.0	1266.8	3196.0	3585.7	4024.3	3921.0	2559.9
65°	191.3	193.3	186.6	190.9	225.0	477.7	2254.3	2795.4	3461.3	3810.7	2476.2
67.5°	168.6	169.0	160.0	154.9	164.7	209.7	1135.8	1763.3	2588.8	3237.9	2039.5
70°	153.8	153.4	143.2	131.5	131.8	139.3	370.1	732.4	1432.3	1922.6	1171.0
72.5°	136.5	137.3	131.5	115.0	109.5	98.6	139.3	197.6	487.5	617.4	308.7
75°	119.7	118.2	112.3	101.7	91.6	66.1	70.0	84.1	127.2	126.0	66.5
77.5°	90.8	89.2	91.9	86.9	71.6	46.2	38.3	43.8	57.5	53.6	27.0
80°	69.2	68.5	62.6	74.3	65.3	34.8	26.2	27.0	31.3	28.6	13.3
82.5°	50.1	49.7	47.3	45.8	41.5	25.4	20.0	21.1	23.5	20.0	9.8
85°	19.2	19.2	37.2	31.3	28.6	17.2	14.1	15.3	18.0	14.5	6.7
87.5°	3.1	3.1	25.0	20.7	12.9	8.6	9.0	9.8	10.6	8.6	5.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P195517

CATALOG NUMBER: NAV-AF-01-D-UNV-AFL-7050-HSS

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1451.9	1451.9	1451.9	1451.9	1451.9	1451.9	1451.9	1451.9	1451.9	1451.9	1451.9
2.5°	1448.0	1421.8	1364.3	1308.7	1260.2	1207.0	1180.0	1148.7	1136.9	1113.5	1115.8
5°	1462.8	1408.1	1292.7	1171.0	1059.5	946.0	865.4	789.5	747.3	705.4	705.4
7.5°	1478.1	1394.4	1216.0	1021.5	833.7	639.3	501.6	391.2	329.8	288.7	287.6
10°	1488.7	1376.8	1128.7	848.2	571.2	329.4	198.7	156.5	141.2	134.6	134.2
12.5°	1502.4	1359.2	1029.4	644.0	317.3	156.5	124.0	117.4	114.6	113.1	113.1
15°	1514.1	1334.1	908.9	433.1	166.7	117.4	106.8	104.5	104.1	103.7	104.1
17.5°	1516.8	1298.5	764.5	253.5	120.9	102.5	97.8	95.9	95.9	95.5	95.5
20°	1510.6	1251.6	604.9	156.5	104.5	94.3	89.2	86.9	86.5	86.5	86.5
22.5°	1497.7	1191.7	447.2	118.5	95.1	86.9	80.2	77.9	77.9	78.2	78.6
25°	1481.6	1120.9	307.1	102.1	88.0	79.0	72.4	70.0	70.8	71.6	72.0
27.5°	1461.3	1036.4	201.1	88.4	78.6	71.2	65.3	63.8	65.3	66.9	67.7
30°	1440.9	943.7	136.2	76.7	68.1	62.6	59.1	58.7	61.0	64.6	64.9
32.5°	1427.6	848.6	102.9	68.9	59.9	55.2	53.6	54.4	57.9	61.8	62.6
35°	1426.5	755.9	87.6	62.6	54.4	50.1	49.3	51.6	55.6	58.7	59.5
37.5°	1444.8	669.0	79.4	57.9	50.1	45.8	44.6	48.9	52.4	55.6	56.3
40°	1482.0	591.2	73.9	53.6	46.6	41.5	40.7	44.2	47.7	51.3	52.4
42.5°	1528.6	518.4	67.7	49.3	42.6	36.8	36.0	38.7	42.3	47.3	48.1
45°	1568.9	450.7	61.0	44.6	38.3	31.7	31.3	34.4	37.2	41.9	42.6
47.5°	1602.9	394.4	54.8	39.5	32.9	28.2	27.8	29.3	30.9	35.2	36.0
50°	1584.9	346.6	48.5	32.5	26.6	24.3	23.9	23.9	25.8	30.1	30.9
52.5°	1540.7	316.9	42.6	27.0	21.9	20.7	19.6	20.0	21.9	23.9	24.3
55°	1505.1	302.8	37.6	23.9	18.4	17.2	16.0	15.6	16.0	15.3	14.5
56°	1496.5	301.3	36.4	23.1	17.6	16.0	14.5	13.7	13.3	11.7	11.3
57.5°	1492.6	301.3	34.4	21.5	16.4	14.5	12.5	11.0	9.4	8.2	8.2
60°	1489.5	303.2	32.1	18.8	14.1	11.7	9.0	6.7	5.5	5.5	5.5
62.5°	1482.8	302.4	29.3	15.6	12.1	9.0	5.5	4.3	3.9	4.3	4.7
65°	1408.1	280.9	25.8	12.5	9.4	6.3	3.1	3.1	3.5	4.3	4.7
67.5°	1134.6	212.8	21.1	9.8	6.7	4.7	2.7	2.7	3.5	4.3	4.7
70°	623.2	112.3	18.0	7.0	5.1	3.9	2.7	2.3	3.5	4.3	4.7
72.5°	152.2	46.9	16.4	5.5	4.7	3.5	2.3	2.3	3.5	4.3	4.7
75°	37.6	35.2	13.3	4.3	3.9	3.1	2.3	2.3	3.5	4.3	4.7
77.5°	17.6	46.6	9.0	3.9	3.5	2.7	2.3	2.3	3.5	4.3	4.3
80°	10.6	35.2	5.5	3.5	3.1	2.7	2.3	2.3	3.5	4.3	4.7
82.5°	6.3	10.2	3.9	3.5	3.1	2.3	2.3	2.3	3.5	4.3	4.7
85°	5.5	5.1	3.9	3.5	3.1	2.7	2.3	2.3	3.9	4.7	4.7
87.5°	4.3	3.9	3.5	3.1	3.1	2.7	2.3	2.3	3.5	4.3	4.7
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)