

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: P270445

Luminaire Tested: **NAV-AF-03-D-UNV-SL4-7027-800-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270445
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24285)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-03-D-UNV-SL4-7027-800-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 70 CRI, 2700K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV SPILL
LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10357.6 lumens
Efficiency: N/A
Efficacy: 83.5 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B1 - U0 - G2

Input Watts (W): 124
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

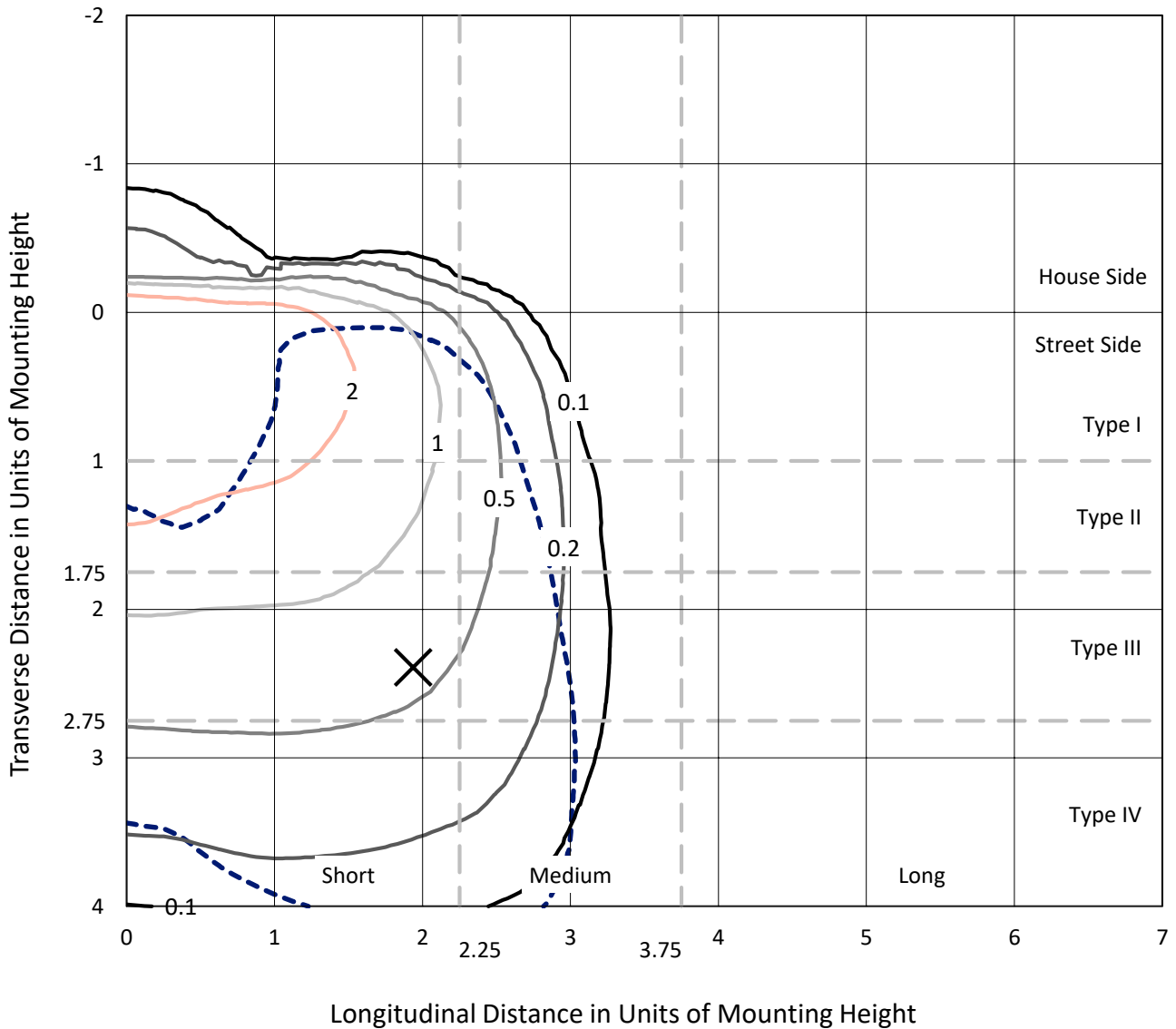


REPORT NUMBER: P270445

CATALOG NUMBER: NAV-AF-03-D-UNV-SL4-7027-800-HSS

Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

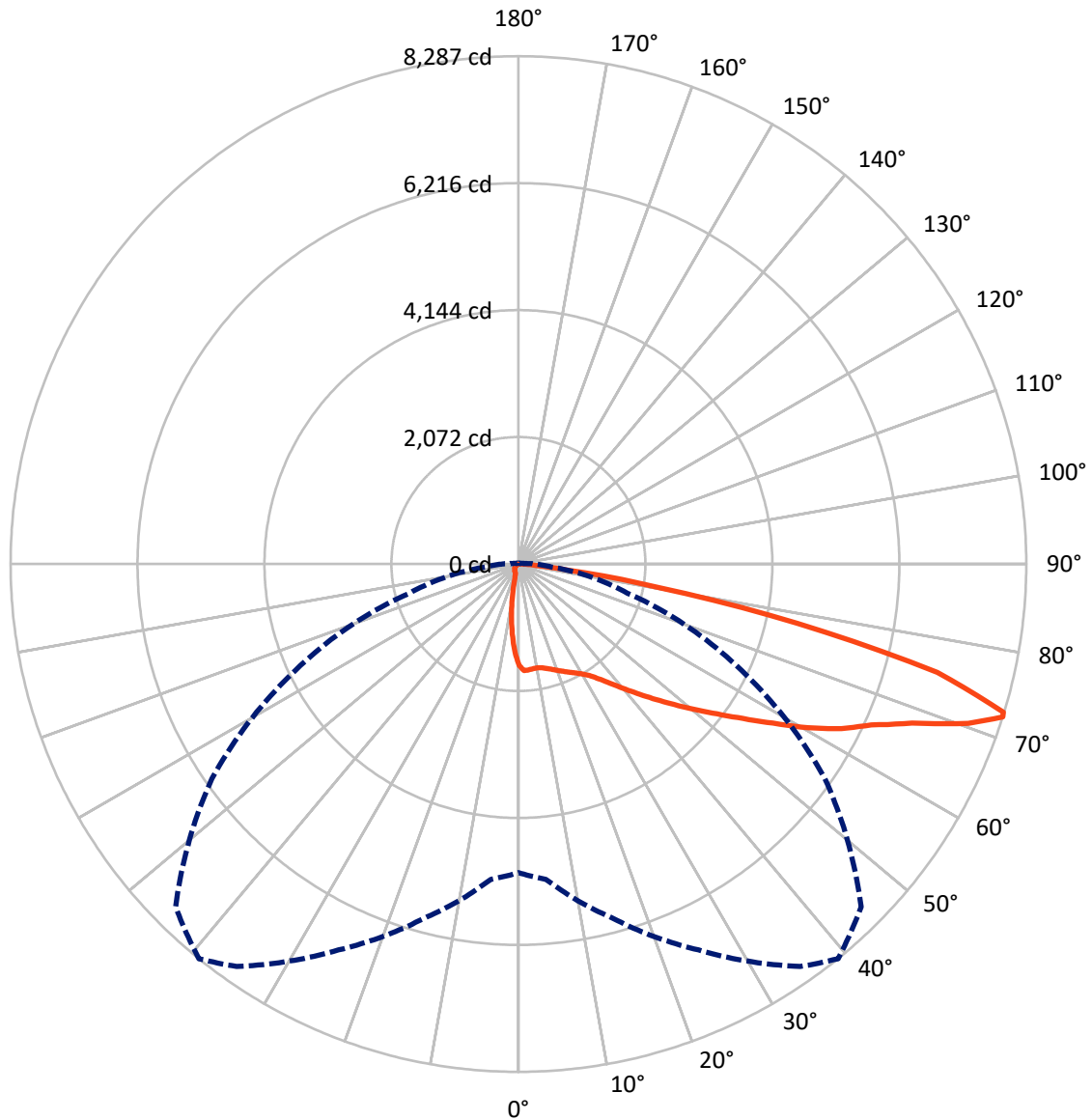


Based on 20 foot mounting height. Maximum calculated value = 4.4 fc
 Type IV - Short - Non-Cutoff

REPORT NUMBER: P270445

CATALOG NUMBER: NAV-AF-03-D-UNV-SL4-7027-800-HSS

Luminous Intensity Polar Plot



— Vertical Plane Through 39-Deg Lateral - - - Horizontal Cone Through 72-Deg Vertical

REPORT NUMBER: P270445

CATALOG NUMBER: NAV-AF-03-D-UNV-SL4-7027-800-HSS

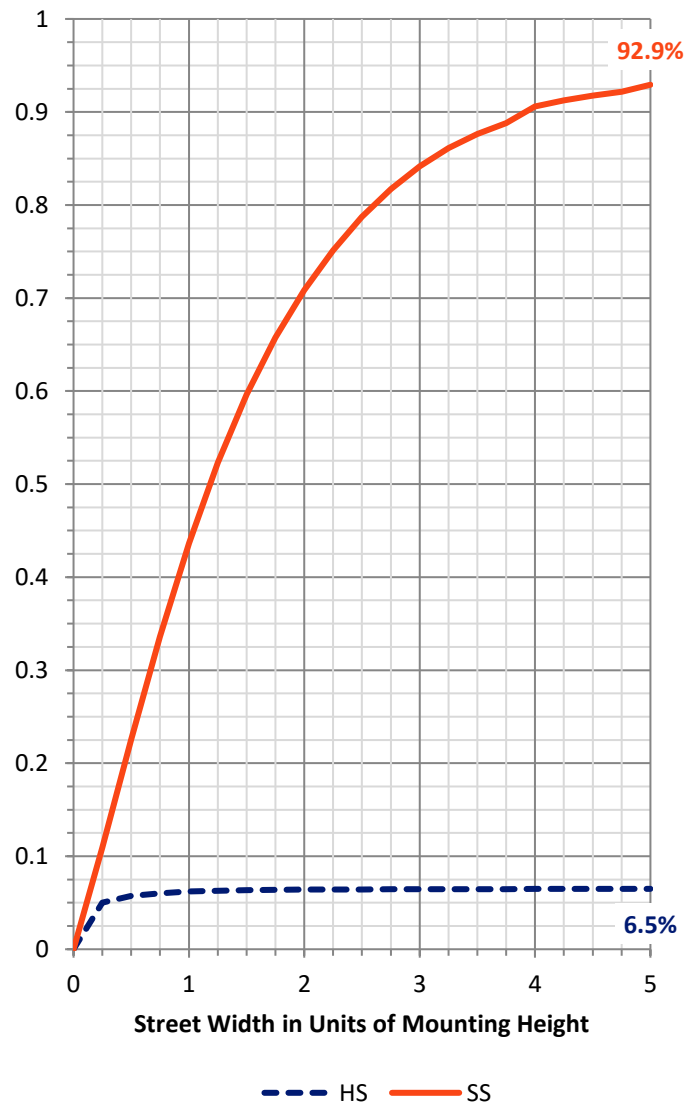
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	678.8	0.0	678.8
	% Fixture	6.6	0.0	6.6
Street Side	Lumens	9678.8	0.0	9678.8
	% Fixture	93.4	0.0	93.4
Total	Lumens	10357.6	0.0	10357.6
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	134.8	1.3
10°-20°	326.5	3.2
20°-30°	542.2	5.2
30°-40°	864.1	8.3
40°-50°	1426.3	13.8
50°-60°	2154.0	20.8
60°-70°	2806.0	27.1
70°-80°	1896.0	18.3
80°-90°	207.7	2.0
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°	10357.6	100.0
0°-180°	10357.6	100.0



REPORT NUMBER: P270445

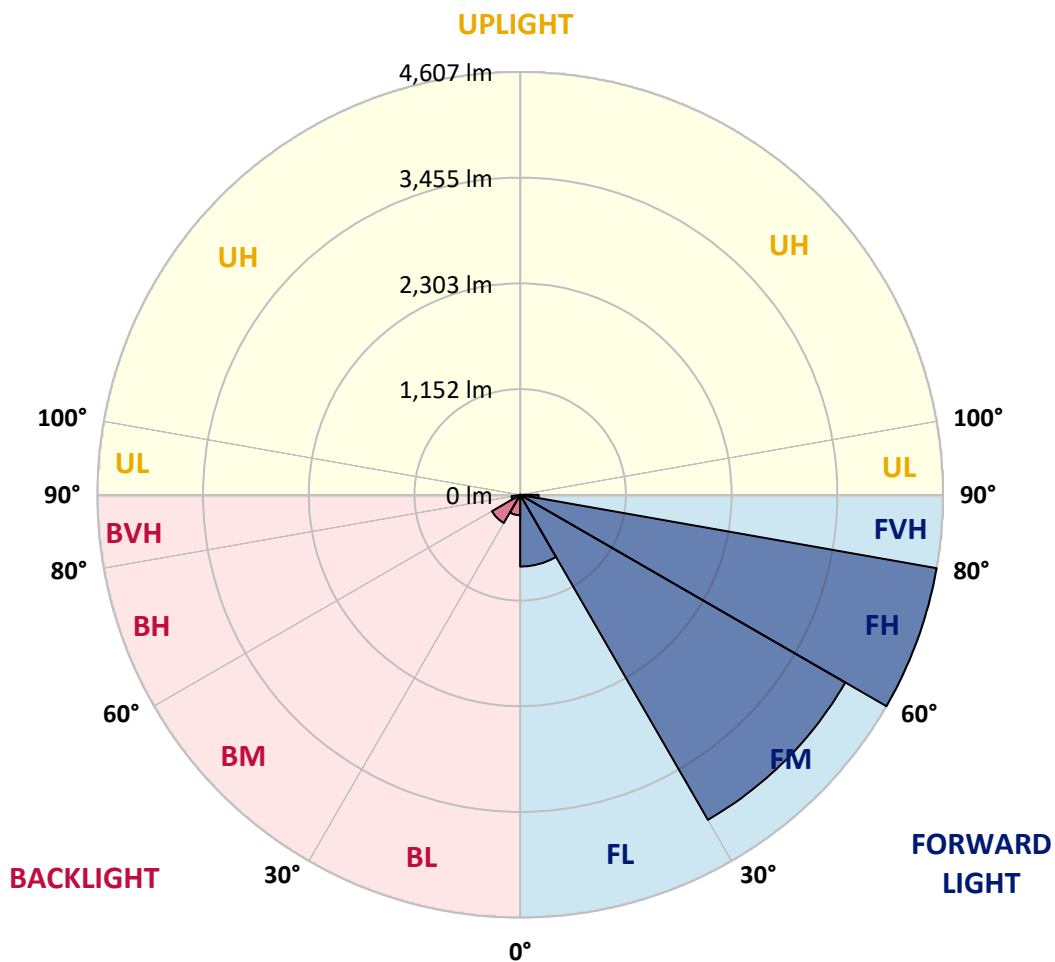
CATALOG NUMBER: NAV-AF-03-D-UNV-SL4-7027-800-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	781.2	7.5			
FM	(30°-60°)	4089.3	39.5			
FH	(60°-80°)	4606.6	44.5			G2/5000
FVH	(80°-90°)	201.7	1.9			G2/225
BL	(0°-30°)	222.3	2.1	B1/500		
BM	(30°-60°)	355.2	3.4	B1/1000		
BH	(60°-80°)	95.4	0.9	B0/110		G0/110
BVH	(80°-90°)	6.0	0.1			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 IV Short





REPORT NUMBER: P270445

CATALOG NUMBER: NAV-AF-03-D-UNV-SL4-7027-800-HSS

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	39°	45°	55°	65°	75°	85°
0°	1657.8	1657.8	1657.8	1657.8	1657.8	1657.8	1657.8	1657.8	1657.8	1657.8	1657.8
2.5°	1765.3	1768.6	1764.5	1757.2	1746.6	1740.0	1731.0	1711.5	1687.0	1665.9	1641.6
5°	1779.2	1780.7	1775.9	1762.0	1745.8	1736.8	1725.4	1704.3	1678.9	1649.6	1605.7
7.5°	1783.1	1782.3	1776.7	1759.6	1734.4	1722.9	1703.4	1677.3	1651.3	1624.5	1574.8
10°	1781.6	1781.6	1777.4	1761.1	1732.7	1722.1	1700.1	1672.5	1639.9	1612.9	1560.0
12.5°	1775.9	1779.2	1776.7	1767.8	1746.6	1738.4	1718.8	1691.1	1660.2	1632.6	1576.3
15°	1783.1	1788.0	1792.9	1789.8	1777.4	1770.2	1752.2	1723.8	1698.5	1669.2	1609.0
17.5°	1812.5	1823.1	1834.5	1835.2	1822.3	1809.2	1788.9	1759.6	1735.2	1708.2	1643.1
20°	1867.8	1876.0	1897.2	1901.3	1875.2	1856.4	1828.1	1793.7	1769.3	1746.6	1674.9
22.5°	1950.1	1959.1	1976.2	1970.4	1926.4	1904.4	1868.7	1829.6	1804.3	1791.3	1711.5
25°	2074.6	2077.2	2081.3	2056.0	1983.5	1959.1	1915.0	1871.1	1850.8	1849.2	1763.6
27.5°	2221.2	2224.6	2206.5	2150.5	2047.0	2015.3	1965.6	1925.6	1915.9	1928.1	1829.6
30°	2389.0	2389.9	2340.2	2248.9	2120.3	2085.2	2034.0	1990.0	1999.0	2029.1	1914.3
32.5°	2560.8	2552.7	2484.3	2365.3	2220.4	2178.1	2134.2	2090.1	2116.1	2177.3	2038.1
35°	2717.9	2714.7	2634.1	2495.6	2350.8	2313.2	2281.5	2235.2	2277.5	2376.7	2206.5
37.5°	2875.0	2872.6	2780.7	2636.5	2511.1	2484.3	2460.6	2424.9	2494.1	2639.8	2432.2
40°	3048.5	3044.4	2931.3	2792.8	2697.6	2682.9	2669.0	2653.7	2771.7	2974.4	2713.1
42.5°	3262.6	3244.8	3090.9	2963.0	2902.8	2906.8	2907.6	2923.2	3108.0	3372.5	3044.4
45°	3508.6	3468.6	3251.2	3145.4	3128.3	3152.7	3177.1	3241.5	3499.5	3831.0	3410.9
47.5°	3747.1	3682.8	3436.0	3341.7	3376.6	3427.2	3485.8	3611.1	3939.2	4310.5	3743.1
50°	3952.4	3886.3	3619.4	3541.2	3652.7	3727.5	3831.8	4021.5	4403.4	4716.1	3952.4
52.5°	4113.6	4061.4	3813.0	3760.9	3958.8	4061.4	4225.1	4474.3	4841.4	4983.2	4098.8
55°	4232.5	4206.4	3998.7	4006.1	4299.2	4447.4	4651.0	4932.7	5211.2	5190.8	4208.7
57.5°	4366.8	4346.4	4193.4	4295.2	4708.7	4900.2	5135.4	5361.8	5479.8	5357.8	4316.3
60°	4504.5	4510.8	4429.5	4645.2	5215.2	5426.9	5632.2	5688.2	5710.3	5527.1	4429.5
62.5°	4608.7	4636.3	4643.6	5023.1	5734.7	5915.5	6004.2	5964.3	5959.4	5754.3	4420.5
65°	4728.3	4800.8	4921.3	5437.5	6207.0	6325.9	6389.4	6447.1	6325.1	5821.8	3985.7
67.5°	4935.1	5049.2	5320.2	5945.6	6752.5	6928.4	7108.4	7047.3	6379.7	5135.4	3036.4
70°	5213.7	5352.8	5831.5	6609.2	7492.7	7787.3	7938.1	6999.2	5416.3	3548.5	1601.6
72°	5037.8	5163.9	5989.5	6947.9	8017.1	8287.4	7910.4	6105.2	3926.3	1839.4	536.6
72.5°	4866.7	4997.0	5939.1	6943.9	8069.1	8275.9	7730.5	5752.7	3474.4	1431.4	369.7
75°	3376.6	3541.2	5091.5	6242.1	7286.6	7059.5	5914.7	3483.4	1258.9	245.9	122.1
77.5°	1745.8	1872.7	3088.5	4410.8	5078.4	4651.0	3495.6	1511.2	348.5	130.3	80.6
80°	1082.1	1144.8	1444.5	2173.2	2638.1	2307.6	1542.2	610.7	223.0	77.3	64.3
82.5°	560.3	608.2	909.5	876.9	974.7	810.2	569.2	511.3	137.6	48.0	65.9
85°	184.1	195.4	558.6	583.0	417.0	280.1	252.5	487.7	40.0	30.9	56.1
87.5°	24.4	28.4	196.2	333.8	205.3	127.0	151.5	171.8	13.8	17.1	15.5
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: P270445

CATALOG NUMBER: NAV-AF-03-D-UNV-SL4-7027-800-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1657.8	1657.8	1657.8	1657.8	1657.8	1657.8	1657.8	1657.8	1657.8	1657.8	1657.8
2.5°	1625.3	1614.7	1581.2	1547.9	1509.6	1474.6	1446.9	1429.1	1437.2	1410.2	1414.3
5°	1578.9	1551.9	1478.7	1399.6	1314.2	1234.5	1170.9	1123.7	1114.6	1074.0	1075.6
7.5°	1534.0	1490.1	1371.3	1240.9	1099.3	984.5	880.2	789.0	756.5	723.0	703.6
10°	1509.6	1449.3	1280.9	1091.1	891.6	723.0	576.5	461.6	413.6	378.6	361.5
12.5°	1517.0	1437.2	1213.3	955.1	693.0	478.7	325.6	241.9	212.4	196.2	190.5
15°	1541.3	1439.5	1152.2	822.4	503.9	289.9	191.3	163.8	161.2	160.3	159.5
17.5°	1564.2	1442.0	1087.8	684.0	337.1	184.8	153.9	151.5	151.5	151.5	151.5
20°	1587.8	1442.9	1017.1	539.1	221.5	151.5	144.9	143.3	144.9	144.9	144.9
22.5°	1615.4	1448.5	948.6	398.2	163.8	142.6	138.3	137.6	138.3	138.3	137.6
25°	1649.6	1460.7	874.5	285.0	148.2	136.8	132.7	132.0	132.7	132.0	132.0
27.5°	1695.2	1477.1	788.3	204.4	141.8	131.2	127.0	127.0	127.0	126.2	126.2
30°	1753.9	1496.5	672.7	161.2	135.1	125.5	122.1	122.1	121.4	120.6	120.6
32.5°	1837.8	1528.3	546.3	145.7	127.7	118.0	114.9	115.6	114.9	113.9	113.1
35°	1956.6	1578.1	421.8	137.6	120.6	110.8	107.4	107.4	107.4	105.8	105.8
37.5°	2125.2	1653.7	315.9	129.4	113.1	103.5	99.4	99.4	98.5	96.8	97.7
40°	2333.5	1749.0	228.8	122.1	105.8	95.3	91.9	90.4	88.8	87.1	87.1
42.5°	2584.5	1841.9	171.8	114.9	98.5	88.8	84.7	83.1	79.8	78.2	77.3
45°	2865.4	1940.2	142.6	105.8	90.4	81.4	78.2	74.9	70.8	68.5	67.6
47.5°	3102.2	2000.5	127.0	96.8	82.3	74.1	70.8	65.9	61.1	59.5	59.5
50°	3244.8	1975.4	113.9	87.9	74.1	66.7	62.7	56.1	52.9	51.4	50.5
52.5°	3324.5	1900.5	103.5	80.6	66.7	58.6	52.9	47.3	45.6	43.9	43.9
55°	3379.2	1792.2	91.9	73.3	60.2	51.4	44.7	40.8	39.0	38.3	37.5
57.5°	3431.3	1660.2	81.4	66.7	53.8	45.6	38.3	36.7	33.3	32.6	32.6
60°	3446.6	1478.7	71.7	59.5	48.0	40.0	33.3	30.9	27.7	26.9	26.9
62.5°	3249.7	1176.6	63.5	50.5	42.3	34.1	29.4	26.1	22.7	22.7	22.7
65°	2715.4	798.8	54.5	43.9	37.5	29.4	25.2	21.2	19.6	19.6	19.6
67.5°	1891.6	445.4	46.4	37.5	31.8	24.4	21.2	18.0	17.1	18.0	18.0
70°	852.5	176.6	39.0	30.9	26.1	20.3	18.0	15.5	17.1	17.1	17.1
72°	255.7	94.4	32.6	25.2	21.2	18.0	15.5	14.6	16.3	17.1	17.1
72.5°	189.7	84.7	30.9	24.4	21.2	17.1	14.6	14.6	16.3	17.1	17.1
75°	97.7	57.9	23.6	18.0	15.5	13.8	12.1	13.8	16.3	16.3	16.3
77.5°	76.5	47.3	19.6	13.8	13.0	12.1	11.4	13.0	14.6	14.6	14.6
80°	71.7	30.9	15.5	13.0	11.4	10.6	10.6	11.4	13.0	13.8	13.8
82.5°	72.5	25.2	13.8	12.1	10.6	9.8	9.8	10.6	12.1	13.0	13.0
85°	46.4	17.1	12.1	10.6	9.8	9.0	9.0	9.8	11.4	12.1	12.1
87.5°	15.5	13.0	10.6	9.8	8.2	8.2	8.2	8.2	9.8	10.6	11.4
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)