

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: P270367

Luminaire Tested: **NAV-AF-02-D-UNV-SL4-7027-1200-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270367
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-02-D-UNV-SL4-7027-1200-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 2700K, 1200mA 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: 9456.6 lumens
Efficiency: N/A
Efficacy: 73.3 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B1 - U0 - G2

Input Watts (W): 129
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

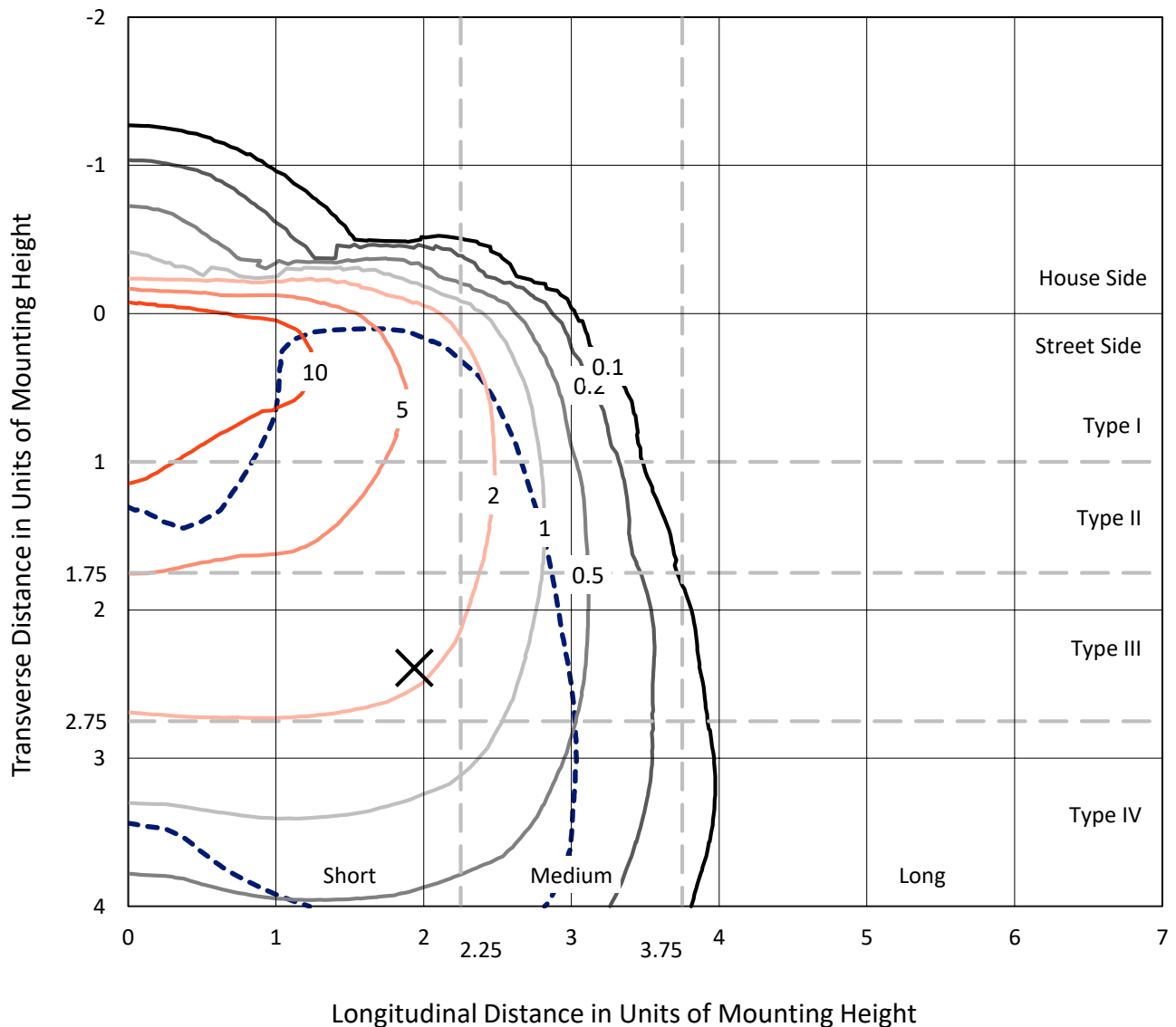


REPORT NUMBER: P270367

CATALOG NUMBER: NAV-AF-02-D-UNV-SL4-7027-1200-HSS

Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

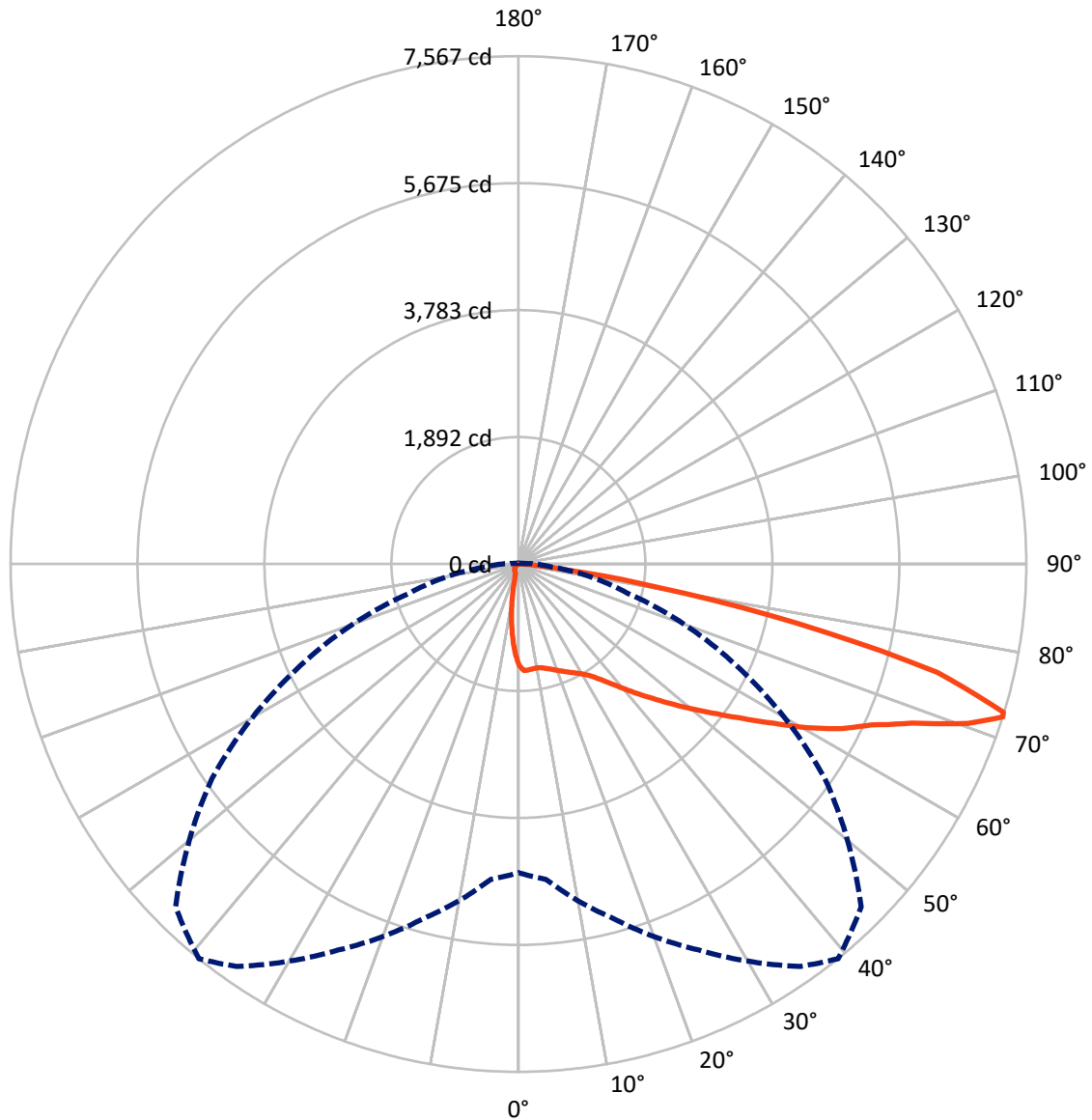


Based on 10 foot mounting height. Maximum calculated value = 15.9 fc
 Type IV - Short - Non-Cutoff

REPORT NUMBER: P270367

CATALOG NUMBER: NAV-AF-02-D-UNV-SL4-7027-1200-HSS

Luminous Intensity Polar Plot



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

REPORT NUMBER: P270367

CATALOG NUMBER: NAV-AF-02-D-UNV-SL4-7027-1200-HSS

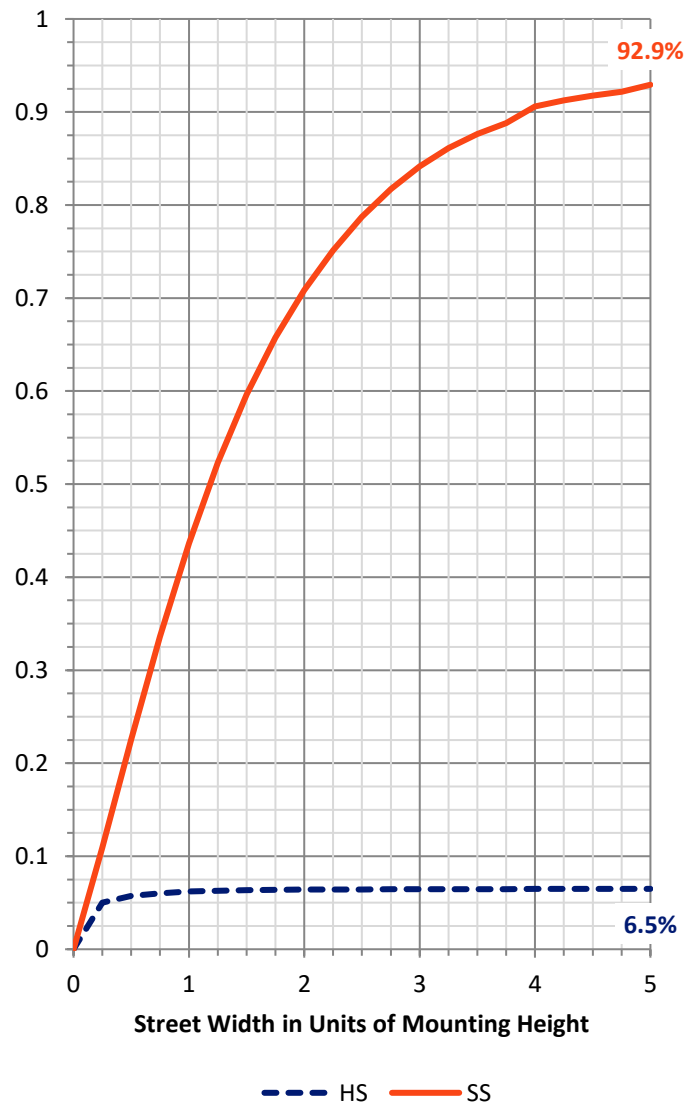
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	619.8	0.0	619.8
	% Fixture	6.6	0.0	6.6
Street Side	Lumens	8836.8	0.0	8836.8
	% Fixture	93.4	0.0	93.4
Total	Lumens	9456.6	0.0	9456.6
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	123.1	1.3
10°-20°	298.1	3.2
20°-30°	495.0	5.2
30°-40°	788.9	8.3
40°-50°	1302.3	13.8
50°-60°	1966.6	20.8
60°-70°	2561.9	27.1
70°-80°	1731.1	18.3
80°-90°	189.6	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°	9456.6	100.0
0°-180°	9456.6	100.0



REPORT NUMBER: P270367

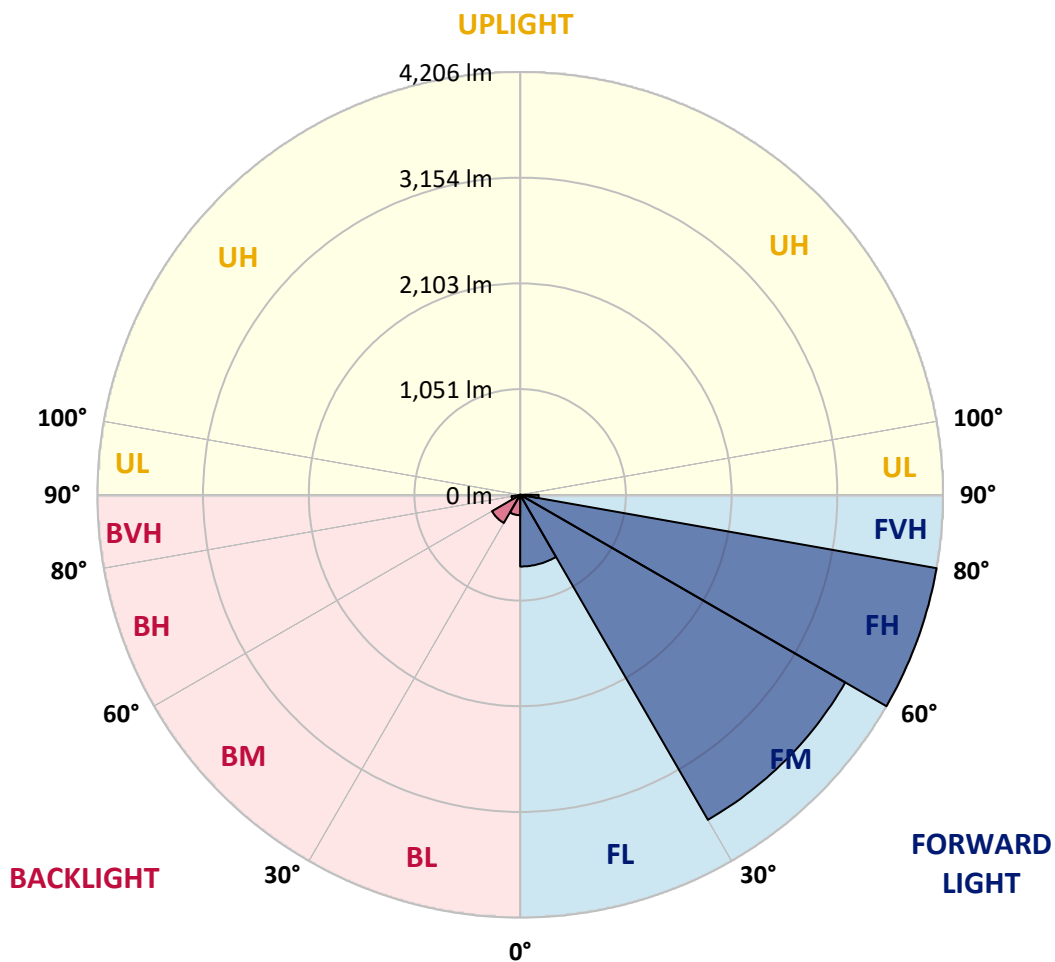
CATALOG NUMBER: NAV-AF-02-D-UNV-SL4-7027-1200-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	713.2	7.5			
FM	(30°-60°)	3733.6	39.5			
FH	(60°-80°)	4205.9	44.5			G2/5000
FVH	(80°-90°)	184.1	1.9			G2/225
BL	(0°-30°)	202.9	2.1	B1/500		
BM	(30°-60°)	324.3	3.4	B1/1000		
BH	(60°-80°)	87.1	0.9	B0/110		G0/110
BVH	(80°-90°)	5.5	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: P270367

CATALOG NUMBER: NAV-AF-02-D-UNV-SL4-7027-1200-HSS

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	39°	45°	55°	65°	75°	85°
0°	1513.6	1513.6	1513.6	1513.6	1513.6	1513.6	1513.6	1513.6	1513.6	1513.6	1513.6
2.5°	1611.6	1614.8	1611.0	1604.4	1594.6	1588.7	1580.5	1562.6	1540.4	1521.0	1498.7
5°	1624.3	1625.8	1621.4	1608.8	1593.9	1585.7	1575.3	1556.0	1532.9	1506.2	1466.0
7.5°	1628.1	1627.3	1622.1	1606.4	1583.4	1573.0	1555.2	1531.4	1507.6	1483.1	1437.7
10°	1626.7	1626.7	1622.9	1608.0	1581.9	1572.4	1552.2	1526.9	1497.2	1472.7	1424.4
12.5°	1621.4	1624.3	1622.1	1614.0	1594.6	1587.1	1569.3	1544.0	1515.8	1490.6	1439.3
15°	1628.1	1632.5	1637.0	1633.9	1622.9	1616.2	1599.8	1573.8	1550.7	1524.0	1469.0
17.5°	1654.9	1664.5	1674.9	1675.7	1663.8	1651.9	1633.3	1606.4	1584.3	1559.6	1500.2
20°	1705.4	1712.8	1732.1	1735.9	1712.1	1695.0	1669.0	1637.7	1615.4	1594.6	1529.3
22.5°	1780.5	1788.6	1804.2	1799.0	1758.9	1738.8	1706.2	1670.5	1647.4	1635.5	1562.6
25°	1894.3	1896.4	1900.2	1877.1	1811.0	1788.6	1748.6	1708.3	1689.8	1688.3	1610.2
27.5°	2028.1	2031.0	2014.7	1963.3	1869.0	1840.0	1794.6	1758.2	1749.3	1760.4	1670.5
30°	2181.2	2182.0	2136.6	2053.3	1935.8	1903.9	1857.1	1816.9	1825.0	1852.6	1747.7
32.5°	2338.0	2330.7	2268.1	2159.6	2027.3	1988.6	1948.5	1908.3	1932.2	1987.9	1860.7
35°	2481.5	2478.6	2404.9	2278.6	2146.2	2112.1	2083.0	2040.7	2079.3	2170.0	2014.7
37.5°	2624.9	2622.7	2538.8	2407.2	2292.7	2268.1	2246.7	2214.0	2277.1	2410.2	2220.6
40°	2783.3	2779.6	2676.3	2549.8	2463.0	2449.6	2436.9	2422.8	2530.5	2715.7	2477.0
42.5°	2978.9	2962.5	2821.9	2705.2	2650.3	2654.0	2654.8	2668.9	2837.6	3079.2	2779.6
45°	3203.4	3167.0	2968.4	2871.8	2856.3	2878.4	2900.7	2959.6	3195.2	3497.7	3114.2
47.5°	3421.1	3362.4	3137.2	3051.0	3083.0	3129.1	3182.5	3297.0	3596.6	3935.7	3417.4
50°	3608.5	3548.3	3304.4	3233.1	3335.0	3403.4	3498.4	3671.7	4020.4	4305.8	3608.5
52.5°	3755.8	3708.2	3481.4	3433.9	3614.5	3708.2	3857.5	4085.0	4420.3	4549.6	3742.2
55°	3864.2	3840.4	3650.9	3657.5	3925.2	4060.5	4246.4	4503.7	4757.9	4739.3	3842.7
57.5°	3986.9	3968.4	3828.5	3921.6	4299.2	4473.9	4688.8	4895.4	5003.2	4891.6	3940.9
60°	4112.5	4118.5	4044.2	4241.2	4761.6	4954.8	5142.2	5193.6	5213.6	5046.3	4044.2
62.5°	4207.8	4233.1	4239.7	4586.0	5235.9	5400.9	5481.8	5445.4	5441.0	5253.6	4035.9
65°	4317.0	4383.2	4493.2	4964.6	5667.0	5775.6	5833.6	5886.4	5774.8	5315.5	3639.0
67.5°	4505.8	4609.9	4857.4	5428.4	6165.1	6325.7	6490.0	6434.2	5824.6	4688.8	2772.2
70°	4760.1	4887.1	5324.3	6034.3	6840.9	7109.9	7247.5	6390.4	4945.2	3239.7	1462.4
72°	4599.5	4714.8	5468.5	6343.6	7319.6	7566.5	7222.3	5574.2	3584.7	1679.4	489.9
72.5°	4443.3	4562.3	5422.4	6339.8	7367.2	7556.1	7058.0	5252.2	3172.2	1306.9	337.6
75°	3083.0	3233.1	4648.5	5698.9	6652.8	6445.3	5400.2	3180.3	1149.3	224.4	111.5
77.5°	1593.9	1709.8	2819.8	4027.0	4636.6	4246.4	3191.5	1379.7	318.2	118.9	73.7
80°	988.0	1045.3	1318.8	1984.1	2408.6	2106.9	1408.1	557.6	203.6	70.6	58.7
82.5°	511.5	555.3	830.5	800.7	890.0	739.8	519.6	466.8	125.7	43.8	60.2
85°	168.1	178.5	510.0	532.2	380.6	255.7	230.4	445.3	36.4	28.2	51.4
87.5°	22.3	26.1	179.1	304.7	187.3	116.1	138.2	156.8	12.7	15.6	14.2
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: P270367

CATALOG NUMBER: NAV-AF-02-D-UNV-SL4-7027-1200-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1513.6	1513.6	1513.6	1513.6	1513.6	1513.6	1513.6	1513.6	1513.6	1513.6	1513.6
2.5°	1483.8	1474.2	1443.7	1413.3	1378.3	1346.3	1321.0	1304.7	1312.2	1287.6	1291.4
5°	1441.5	1416.9	1350.1	1277.8	1199.9	1127.1	1069.1	1026.0	1017.7	980.6	982.0
7.5°	1400.5	1360.5	1251.9	1132.9	1003.5	898.8	803.7	720.4	690.6	660.2	642.3
10°	1378.3	1323.3	1169.5	996.2	814.0	660.2	526.3	421.6	377.6	345.7	330.0
12.5°	1384.9	1312.2	1107.7	872.1	632.6	437.1	297.3	220.9	194.0	179.1	173.9
15°	1407.3	1314.4	1051.9	750.9	460.2	264.6	174.7	149.4	147.2	146.5	145.7
17.5°	1428.0	1316.6	993.2	624.4	307.8	168.7	140.6	138.2	138.2	138.2	138.2
20°	1449.7	1317.4	928.5	492.1	202.2	138.2	132.3	130.9	132.3	132.3	132.3
22.5°	1474.9	1322.6	866.1	363.5	149.4	130.2	126.4	125.7	126.4	126.4	125.7
25°	1506.2	1333.7	798.5	260.1	135.4	124.9	121.2	120.5	121.2	120.5	120.5
27.5°	1547.8	1348.5	719.6	186.6	129.4	119.7	116.1	116.1	116.1	115.3	115.3
30°	1601.3	1366.4	614.0	147.2	123.3	114.4	111.5	111.5	110.9	110.0	110.0
32.5°	1677.9	1395.3	498.7	133.0	116.7	107.7	104.8	105.6	104.8	104.1	103.3
35°	1786.4	1440.7	385.2	125.7	110.0	101.1	98.2	98.2	98.2	96.7	96.7
37.5°	1940.2	1510.0	288.4	118.1	103.3	94.4	90.6	90.6	90.0	88.5	89.2
40°	2130.6	1596.8	208.9	111.5	96.7	87.0	84.0	82.6	81.0	79.5	79.5
42.5°	2359.6	1681.5	156.8	104.8	90.0	81.0	77.3	75.8	72.9	71.3	70.6
45°	2616.0	1771.5	130.2	96.7	82.6	74.3	71.3	68.5	64.7	62.4	61.8
47.5°	2832.4	1826.6	116.1	88.5	75.1	67.6	64.7	60.2	55.8	54.3	54.3
50°	2962.5	1803.4	104.1	80.3	67.6	60.9	57.2	51.4	48.2	46.8	46.2
52.5°	3035.4	1735.2	94.4	73.7	60.9	53.4	48.2	43.1	41.6	40.2	40.2
55°	3085.1	1636.3	84.0	67.0	55.1	46.8	41.0	37.2	35.8	34.9	34.1
57.5°	3132.7	1515.8	74.3	60.9	49.0	41.6	34.9	33.4	30.5	29.7	29.7
60°	3146.9	1350.1	65.4	54.3	43.8	36.4	30.5	28.2	25.3	24.6	24.6
62.5°	2966.9	1074.3	58.0	46.2	38.6	31.3	26.8	23.7	20.8	20.8	20.8
65°	2479.3	729.2	49.8	40.2	34.1	26.8	23.0	19.4	17.8	17.8	17.8
67.5°	1726.9	406.7	42.4	34.1	28.9	22.3	19.4	16.3	15.6	16.3	16.3
70°	778.3	161.3	35.8	28.2	23.7	18.5	16.3	14.2	15.6	15.6	15.6
72°	233.4	86.2	29.7	23.0	19.4	16.3	14.2	13.4	14.8	15.6	15.6
72.5°	173.3	77.3	28.2	22.3	19.4	15.6	13.4	13.4	14.8	15.6	15.6
75°	89.2	52.8	21.6	16.3	14.2	12.7	11.1	12.7	14.8	14.8	14.8
77.5°	69.9	43.1	17.8	12.7	11.9	11.1	10.4	11.9	13.4	13.4	13.4
80°	65.4	28.2	14.2	11.9	10.4	9.6	9.6	10.4	11.9	12.7	12.7
82.5°	66.1	23.0	12.7	11.1	9.6	9.0	9.0	9.6	11.1	11.9	11.9
85°	42.4	15.6	11.1	9.6	9.0	8.2	8.2	9.0	10.4	11.1	11.1
87.5°	14.2	11.9	9.6	9.0	7.5	7.5	7.5	7.5	9.0	9.6	10.4
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)