

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: P270602

Luminaire Tested: **NAV-AF-05-D-UNV-SL4-7027-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270602
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24284)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-05-D-UNV-SL4-7027-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 70 CRI, 2700K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV SPILL
LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 16420.2 lumens
Efficiency: N/A
Efficacy: 101.4 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B2 - U0 - G3

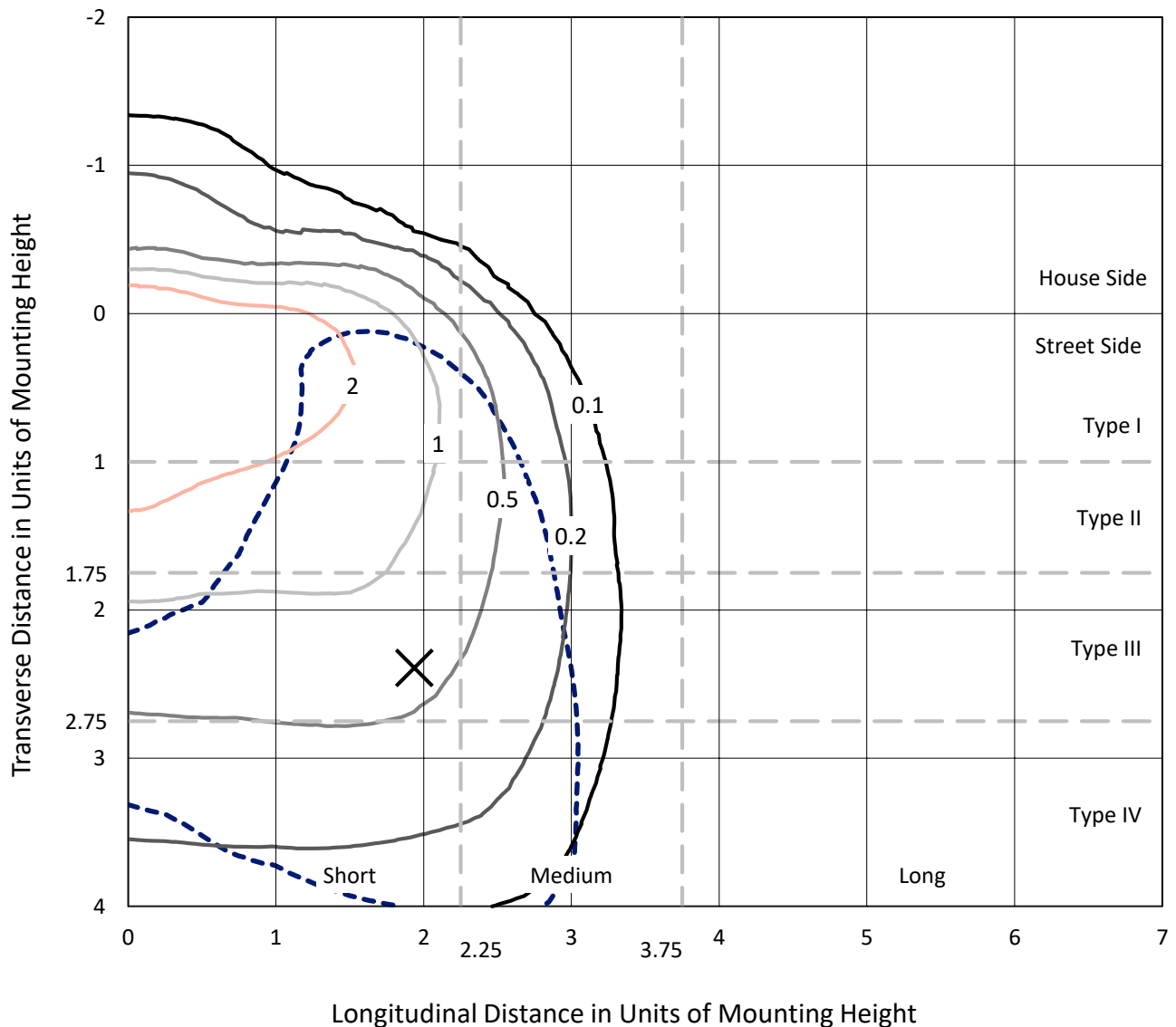
Input Watts (W): 162
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P270602
 CATALOG NUMBER: NAV-AF-05-D-UNV-SL4-7027-600

Iso-Footcandle Lines of Horizontal Illumination

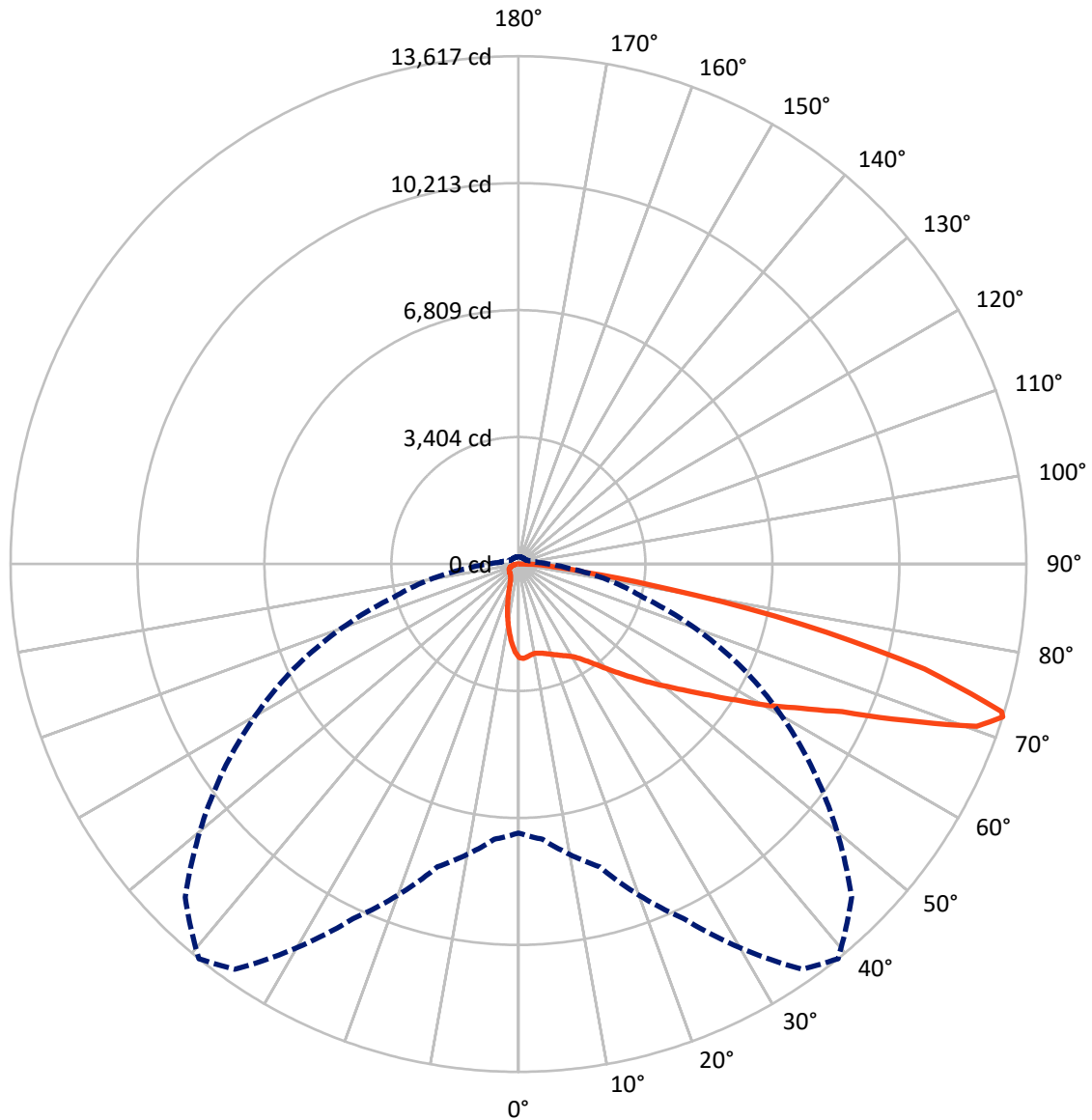
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4 fc
 Type IV - Short - Non-Cutoff

REPORT NUMBER: P270602
CATALOG NUMBER: NAV-AF-05-D-UNV-SL4-7027-600

Luminous Intensity Polar Plot



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

REPORT NUMBER: P270602

CATALOG NUMBER: NAV-AF-05-D-UNV-SL4-7027-600

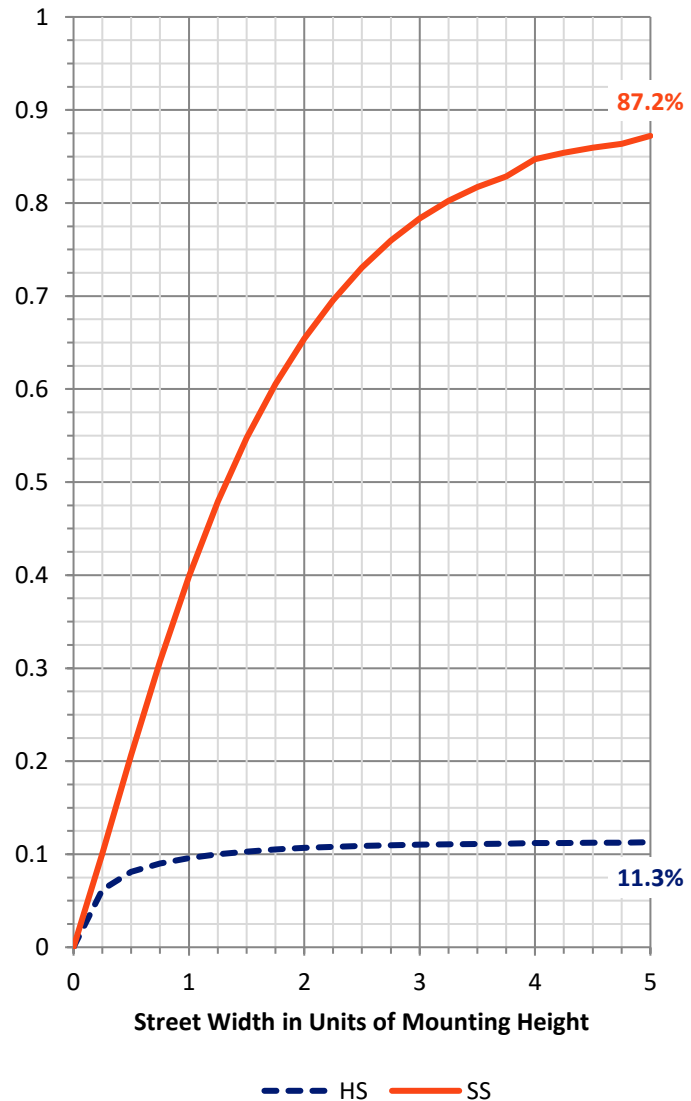
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1882.8	0.0	1882.8
	% Fixture	11.5	0.0	11.5
Street Side	Lumens	14537.4	0.0	14537.4
	% Fixture	88.5	0.0	88.5
Total	Lumens	16420.2	0.0	16420.2
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	215.5	1.3
10°-20°	541.5	3.3
20°-30°	843.9	5.1
30°-40°	1299.3	7.9
40°-50°	2118.1	12.9
50°-60°	3291.4	20.0
60°-70°	4405.4	26.8
70°-80°	3168.1	19.3
80°-90°	537.1	3.3
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°	16420.2	100.0
0°-180°	16420.2	100.0

Coefficient of Utilization



REPORT NUMBER: P270602

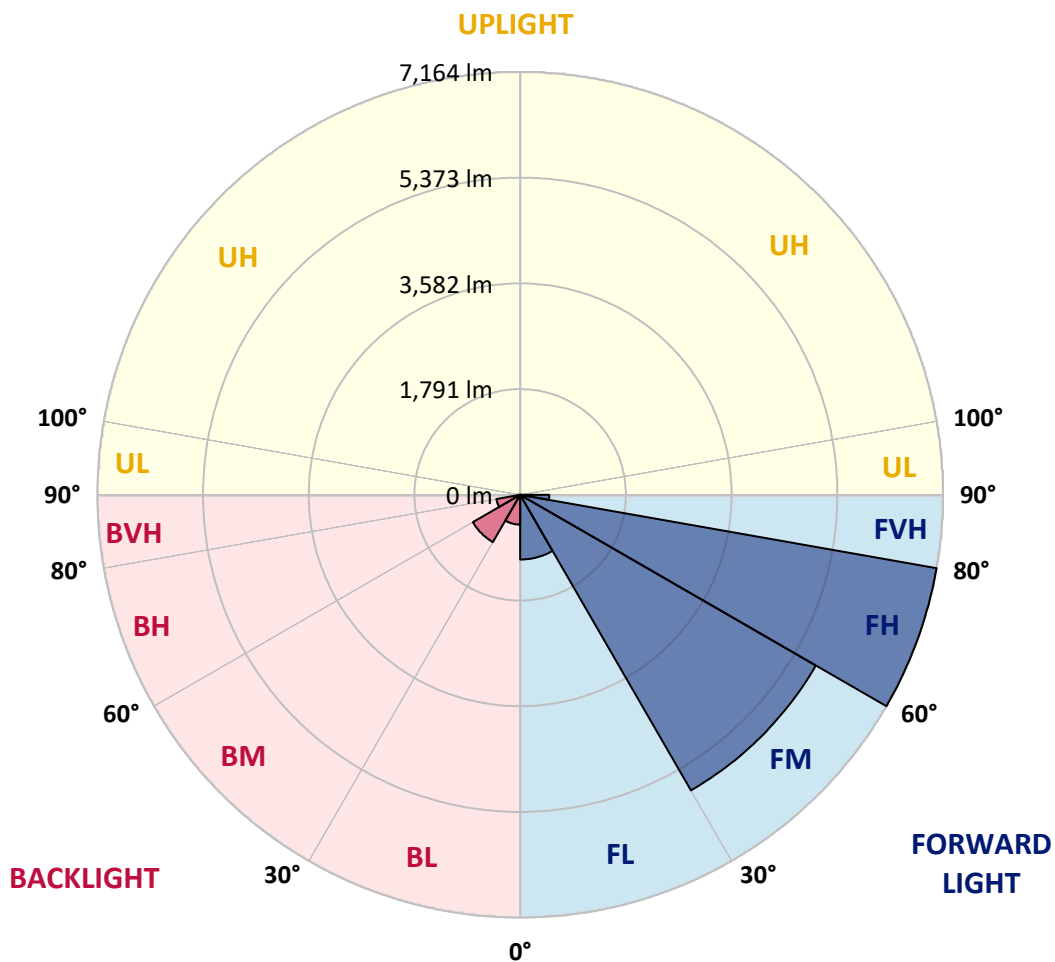
CATALOG NUMBER: NAV-AF-05-D-UNV-SL4-7027-600

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1096.8	6.7			
FM	(30°-60°)	5783.5	35.2			
FH	(60°-80°)	7164.4	43.6			G3/7500
FVH	(80°-90°)	492.7	3.0			G3/500
BL	(0°-30°)	504.0	3.1	B2/1000		
BM	(30°-60°)	925.3	5.6	B1/1000		
BH	(60°-80°)	409.1	2.5	B1/500		G1/500
BVH	(80°-90°)	44.4	0.3			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G3

Type IV Short





REPORT NUMBER: P270602

CATALOG NUMBER: NAV-AF-05-D-UNV-SL4-7027-600

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	39°	45°	55°	65°	75°	85°
0°	2507.7	2507.7	2507.7	2507.7	2507.7	2507.7	2507.7	2507.7	2507.7	2507.7	2507.7
2.5°	2561.6	2562.8	2559.5	2549.5	2540.8	2536.4	2528.5	2515.3	2497.7	2485.6	2475.6
5°	2537.4	2540.8	2538.5	2522.0	2506.5	2497.7	2485.6	2466.8	2443.7	2433.8	2410.6
7.5°	2518.7	2520.9	2514.3	2495.5	2465.8	2454.8	2432.7	2408.4	2387.5	2373.2	2345.7
10°	2505.5	2507.7	2502.1	2483.5	2450.3	2437.1	2410.6	2384.2	2356.7	2338.9	2308.1
12.5°	2486.7	2491.1	2491.1	2482.2	2460.3	2451.5	2425.0	2396.3	2370.9	2352.2	2313.7
15°	2483.5	2488.9	2498.8	2497.7	2491.1	2484.5	2463.5	2434.9	2412.8	2390.7	2343.4
17.5°	2510.9	2523.1	2542.9	2549.5	2545.2	2530.9	2506.5	2480.1	2455.8	2434.9	2376.5
20°	2580.4	2586.9	2616.9	2630.0	2608.0	2586.9	2555.0	2520.9	2498.8	2482.2	2407.4
22.5°	2685.2	2693.9	2718.2	2719.3	2672.9	2647.7	2606.8	2565.0	2544.0	2537.4	2449.1
25°	2852.7	2850.4	2857.1	2829.5	2745.8	2715.9	2666.3	2617.9	2603.6	2616.9	2510.9
27.5°	3053.2	3047.8	3026.7	2955.2	2828.5	2789.9	2730.3	2687.3	2687.3	2718.2	2594.8
30°	3284.7	3279.3	3210.9	3090.8	2926.5	2882.4	2819.6	2774.4	2797.5	2857.1	2708.3
32.5°	3529.5	3509.6	3413.6	3252.9	3066.5	3018.0	2957.4	2911.0	2955.2	3056.7	2871.4
35°	3759.9	3748.7	3630.9	3440.1	3247.3	3206.5	3164.5	3107.2	3177.8	3335.4	3101.8
37.5°	3997.9	3989.2	3844.7	3641.9	3467.7	3440.1	3404.8	3365.2	3478.7	3685.9	3413.6
40°	4263.5	4245.8	4064.0	3861.3	3724.6	3711.3	3692.7	3681.6	3864.6	4173.2	3808.4
42.5°	4564.5	4530.3	4295.5	4102.6	4004.6	4015.6	4005.6	4049.6	4329.7	4735.3	4277.9
45°	4908.3	4840.1	4525.9	4359.5	4314.3	4358.3	4379.2	4491.7	4879.8	5384.6	4802.6
47.5°	5230.2	5142.1	4778.4	4638.4	4663.7	4739.7	4799.3	4997.7	5482.6	6026.1	5338.3
50°	5526.7	5427.6	5048.4	4927.2	5050.6	5158.5	5282.0	5562.0	6124.1	6686.4	5829.9
52.5°	5746.1	5674.5	5318.4	5242.4	5494.8	5638.1	5835.4	6189.2	6772.3	7315.7	6268.6
55°	5915.9	5877.3	5581.9	5603.9	5997.4	6202.4	6441.7	6848.4	7458.0	7880.1	6621.2
57.5°	6112.1	6083.4	5882.8	6040.5	6621.2	6879.2	7161.4	7613.3	8110.4	8377.2	6897.9
60°	6319.2	6319.2	6217.9	6566.3	7401.8	7697.1	7978.1	8329.9	8760.8	8824.8	7010.5
62.5°	6475.8	6516.7	6553.0	7126.2	8142.4	8509.6	8818.1	9155.4	9434.3	9045.3	6745.9
65°	6703.0	6790.0	6995.0	7773.2	9059.5	9540.1	9956.8	10240.0	9979.9	8870.0	5882.8
67.5°	7093.0	7222.1	7658.6	8736.6	10463.7	11183.5	11588.1	11098.6	9873.0	7766.6	4506.1
70°	7444.8	7626.6	8372.8	9959.0	12289.2	13036.6	12850.3	10899.2	8598.8	5693.2	2772.2
72°	7211.1	7409.4	8405.9	10491.3	13264.7	13617.3	12635.3	9659.1	6644.5	3474.4	1366.9
72.5°	7057.9	7264.0	8299.0	10478.1	13291.1	13543.6	12336.6	9166.5	6031.6	3040.0	1105.5
75°	5896.0	6072.5	7136.0	9286.6	11712.7	11249.7	9627.1	5932.3	2772.2	982.1	568.7
77.5°	3850.2	3984.7	4920.6	6433.9	8204.2	7758.8	5859.6	2777.6	1039.3	596.4	427.7
80°	1934.5	2030.3	2633.3	3382.8	4427.7	4074.0	2704.9	1343.7	695.6	430.9	336.1
82.5°	1345.9	1434.1	1813.1	1727.3	1850.7	1791.2	1272.0	1121.1	520.3	272.2	176.3
85°	1128.7	1220.2	1500.2	1231.2	1007.4	918.2	911.6	1059.3	344.0	134.4	148.8
87.5°	984.4	1123.2	1237.9	899.5	691.2	609.6	671.3	971.1	109.1	73.8	45.2
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: P270602

CATALOG NUMBER: NAV-AF-05-D-UNV-SL4-7027-600

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2507.7	2507.7	2507.7	2507.7	2507.7	2507.7	2507.7	2507.7	2507.7	2507.7	2507.7
2.5°	2459.2	2455.8	2439.3	2413.9	2395.2	2383.2	2359.9	2358.9	2361.0	2341.3	2349.0
5°	2389.8	2376.5	2333.4	2275.0	2227.6	2182.5	2132.8	2116.3	2102.0	2072.3	2075.5
7.5°	2317.0	2293.8	2218.9	2123.0	2031.4	1947.7	1865.1	1824.3	1793.3	1754.7	1754.7
10°	2274.0	2237.6	2123.0	1983.0	1837.5	1715.1	1591.6	1517.9	1463.8	1414.2	1410.9
12.5°	2271.8	2216.7	2056.8	1864.0	1664.4	1492.4	1323.8	1210.2	1129.8	1071.4	1065.8
15°	2289.4	2212.3	2001.8	1752.7	1501.2	1277.5	1069.3	924.9	822.3	757.2	750.7
17.5°	2304.8	2206.7	1942.1	1635.8	1342.5	1070.3	838.8	688.9	592.0	539.1	533.6
20°	2319.2	2194.6	1866.0	1512.2	1167.3	876.2	655.9	534.6	470.6	440.9	437.7
22.5°	2340.2	2183.6	1786.8	1373.4	995.3	713.2	541.1	454.2	420.0	405.7	403.3
25°	2374.3	2184.7	1709.7	1231.2	837.7	594.0	468.5	414.5	395.8	385.8	385.8
27.5°	2423.8	2198.0	1633.6	1086.8	704.4	512.6	425.4	393.5	381.4	373.6	371.4
30°	2496.6	2222.1	1553.1	950.1	598.5	456.2	400.1	380.3	370.3	363.8	362.6
32.5°	2602.5	2265.2	1468.2	825.6	518.1	416.6	381.4	369.3	361.6	356.0	354.9
35°	2760.1	2341.3	1385.5	719.8	460.7	388.0	366.0	356.0	351.6	349.4	348.4
37.5°	2991.5	2463.5	1307.4	637.1	423.3	369.3	350.5	344.9	342.9	342.9	342.9
40°	3282.5	2624.5	1236.7	578.7	402.4	354.9	339.5	335.1	335.1	336.1	336.1
42.5°	3636.3	2826.2	1176.2	539.1	390.3	344.9	331.7	329.6	328.5	328.5	329.6
45°	4047.6	3064.3	1138.6	508.1	381.4	339.5	326.3	325.1	320.8	318.5	318.5
47.5°	4460.9	3318.9	1136.4	490.6	370.3	332.9	320.8	320.8	311.9	307.5	308.7
50°	4846.6	3547.0	1160.7	486.2	363.8	323.0	315.2	316.4	304.3	298.7	297.6
52.5°	5157.4	3721.3	1190.4	491.6	363.8	314.1	305.3	310.9	297.6	291.1	290.0
55°	5397.7	3842.5	1201.5	503.7	368.1	306.4	296.5	305.3	295.5	286.6	286.6
57.5°	5569.8	3881.0	1154.1	509.2	374.8	305.3	287.6	304.3	298.7	287.6	287.6
60°	5506.9	3657.3	977.7	488.3	373.6	303.1	281.1	306.4	309.7	297.6	297.6
62.5°	5016.4	3059.8	784.8	440.9	354.9	295.5	273.4	304.3	317.5	313.1	310.9
65°	4084.0	2244.2	608.4	384.7	323.0	278.8	256.8	284.5	299.9	304.3	305.3
67.5°	2878.0	1420.8	472.9	327.4	283.2	254.6	238.1	251.3	256.8	259.0	263.5
70°	1574.0	769.4	375.9	275.6	242.5	230.3	218.3	219.4	217.1	215.0	217.1
72°	790.2	502.6	317.5	239.2	215.0	207.1	201.7	198.4	198.4	195.1	196.2
72.5°	680.0	467.4	306.4	230.3	208.3	201.7	197.3	194.0	192.9	190.7	191.8
75°	453.0	370.3	255.7	192.9	177.4	173.1	175.3	171.9	173.1	170.9	171.9
77.5°	366.0	318.5	217.1	163.1	152.2	145.4	149.8	151.1	153.3	151.1	149.8
80°	306.4	271.2	181.8	134.4	126.8	121.2	123.4	131.2	132.3	125.7	124.5
82.5°	198.4	218.3	143.3	104.7	96.9	94.9	100.3	108.1	110.2	101.4	99.3
85°	166.5	175.3	103.7	71.7	63.9	61.8	72.8	80.5	86.0	77.2	75.0
87.5°	46.4	86.0	50.8	34.1	28.7	28.7	35.3	42.0	49.5	50.8	50.8
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)