

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: P197142

Luminaire Tested: **NAV-AF-06-D-UNV-SL4-8030-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197142
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-06-D-UNV-SL4-8030-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 80 CRI, 3000K, 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: 18476 lumens
Efficiency: N/A
Efficacy: 95.7 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 - G4

Input Watts (W): 193
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

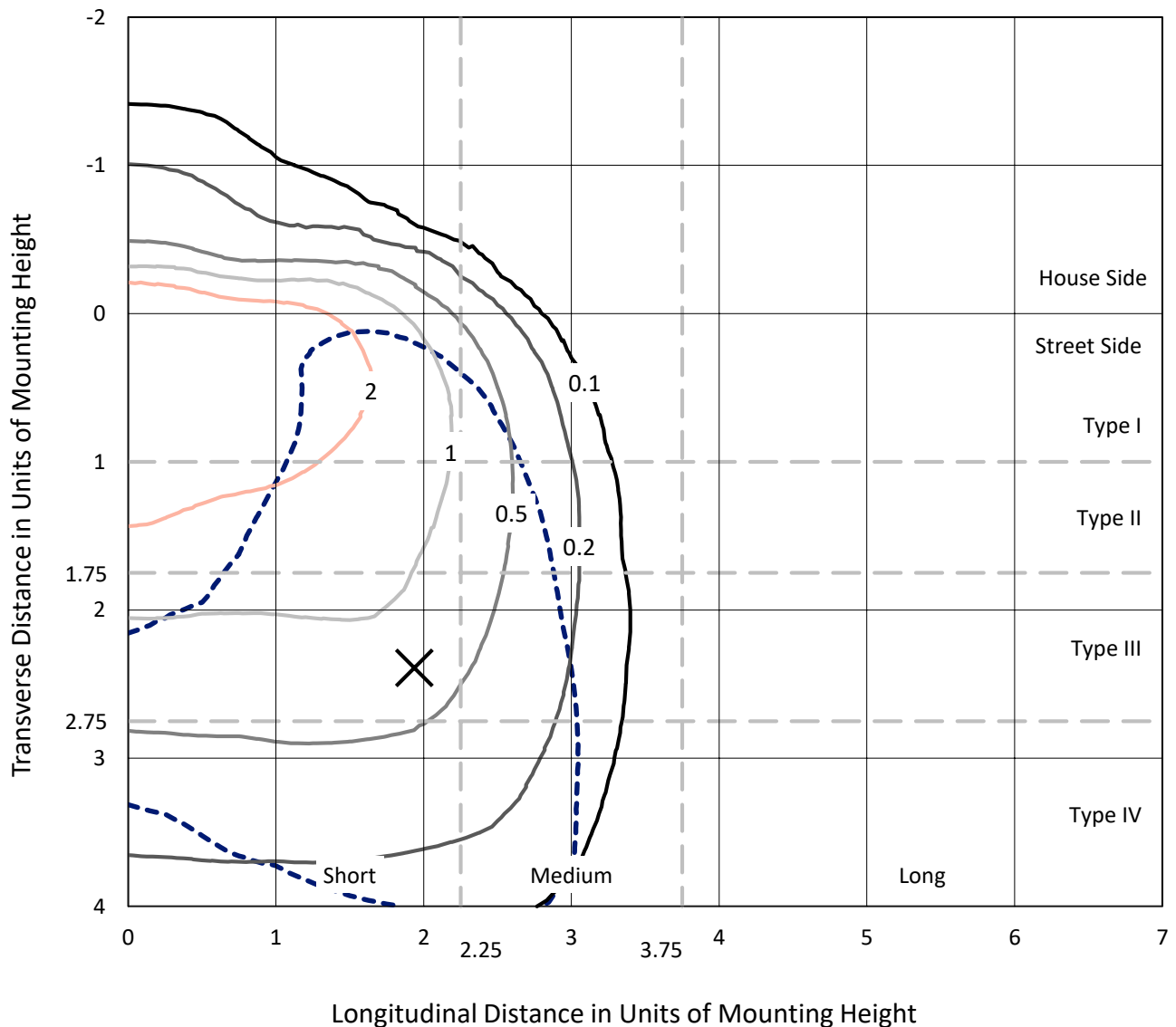


REPORT NUMBER: P197142

CATALOG NUMBER: NAV-AF-06-D-UNV-SL4-8030-600

Iso-Footcandle Lines of Horizontal Illumination

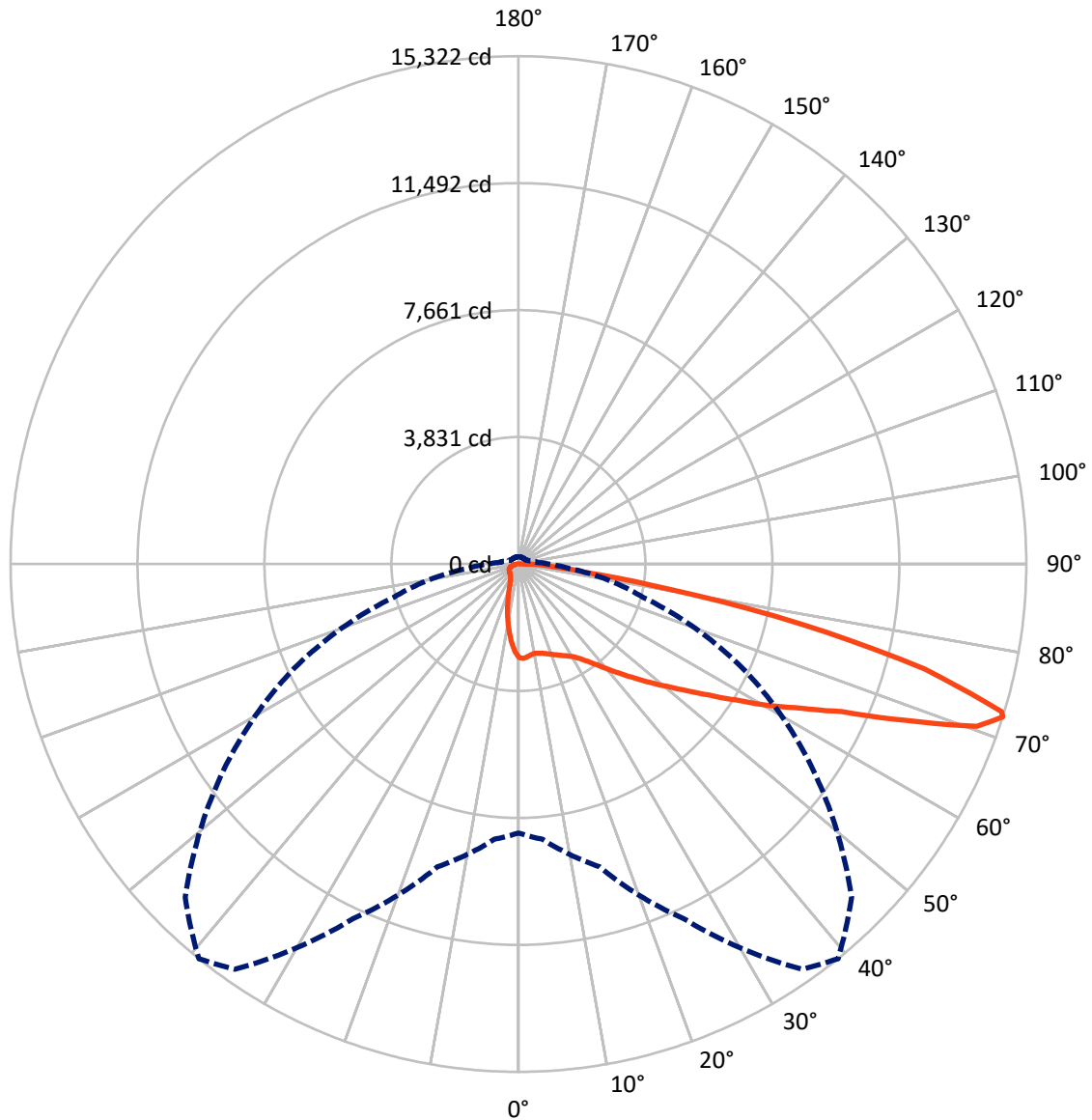
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.5 fc
 Type IV - Short - Non-Cutoff

REPORT NUMBER: P197142
CATALOG NUMBER: NAV-AF-06-D-UNV-SL4-8030-600

Luminous Intensity Polar Plot



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

REPORT NUMBER: P197142

CATALOG NUMBER: NAV-AF-06-D-UNV-SL4-8030-600

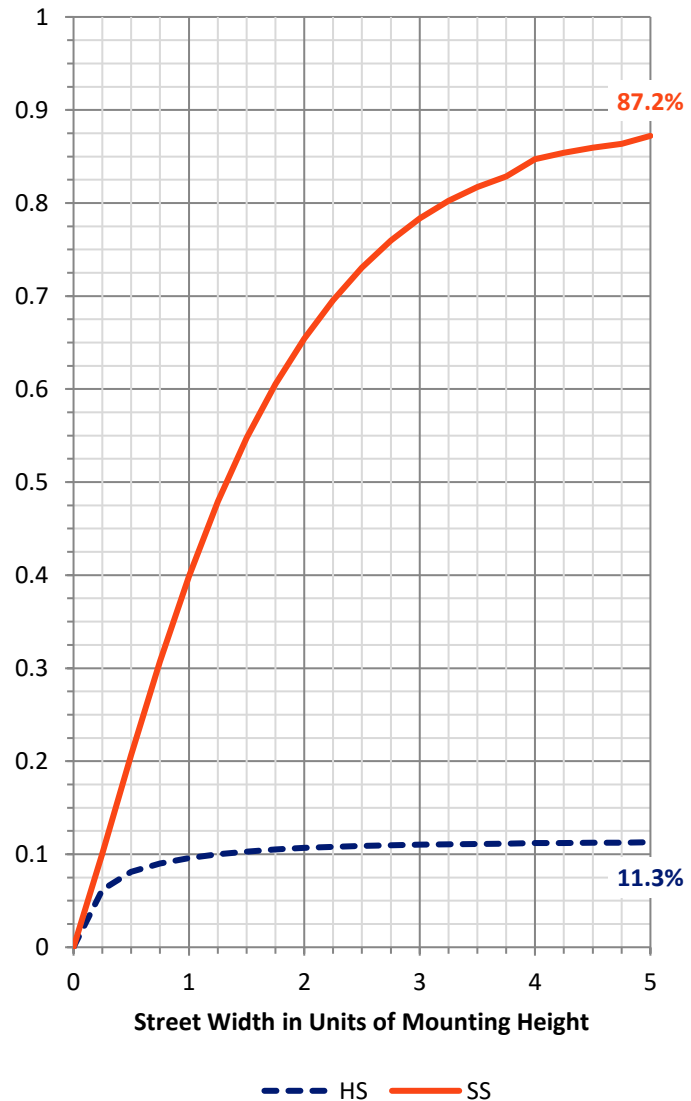
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2118.5	0.0	2118.5
	% Fixture	11.5	0.0	11.5
Street Side	Lumens	16357.5	0.0	16357.5
	% Fixture	88.5	0.0	88.5
Total	Lumens	18476.0	0.0	18476.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	242.5	1.3
10°-20°	609.3	3.3
20°-30°	949.5	5.1
30°-40°	1462.0	7.9
40°-50°	2383.3	12.9
50°-60°	3703.5	20.0
60°-70°	4956.9	26.8
70°-80°	3564.7	19.3
80°-90°	604.3	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°	18476.0	100.0
0°-180°	18476.0	100.0



REPORT NUMBER: P197142

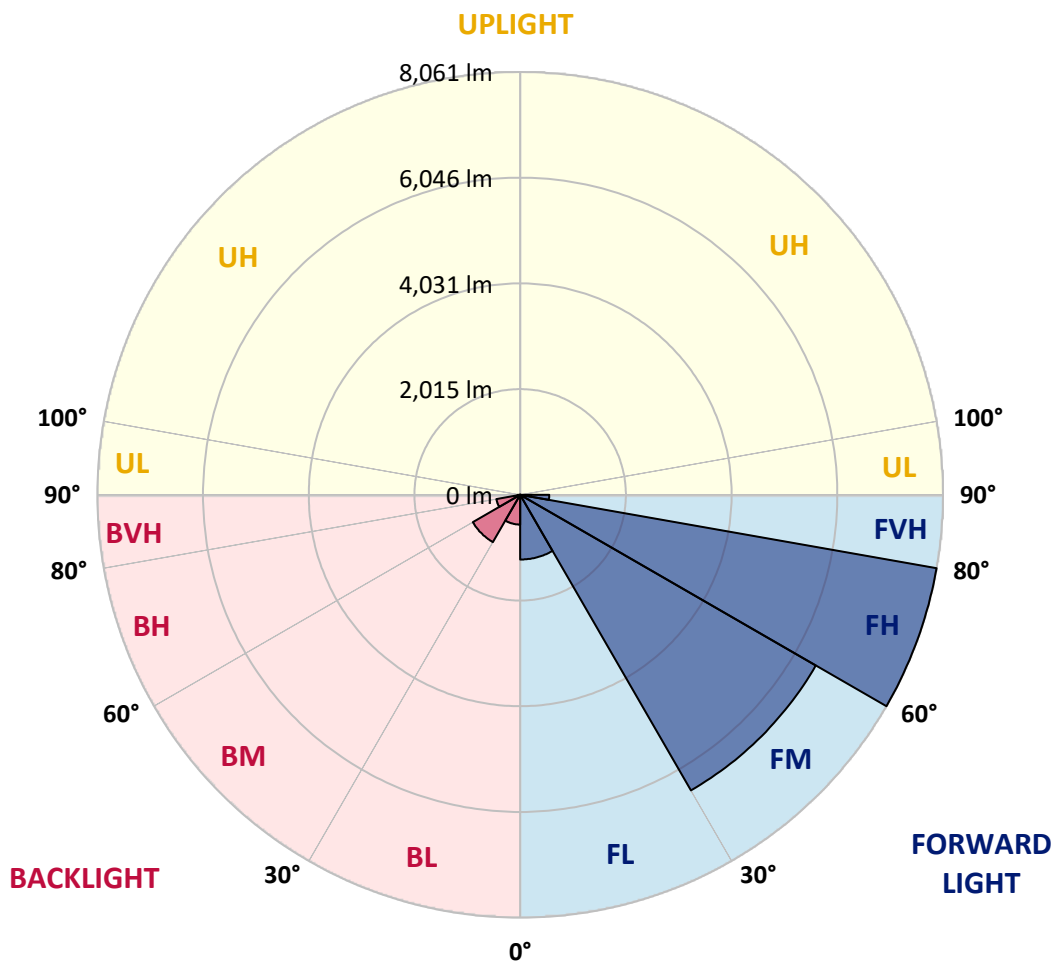
CATALOG NUMBER: NAV-AF-06-D-UNV-SL4-8030-600

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1234.2	6.7			
FM	(30°-60°)	6507.6	35.2			
FH	(60°-80°)	8061.4	43.6			G4/12000
FVH	(80°-90°)	554.3	3.0			G4/750
BL	(0°-30°)	567.1	3.1	B2/1000		
BM	(30°-60°)	1041.1	5.6	B2/2500		
BH	(60°-80°)	460.3	2.5	B1/500		G1/500
BVH	(80°-90°)	50.0	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-G4

Type IV Short





REPORT NUMBER: P197142

CATALOG NUMBER: NAV-AF-06-D-UNV-SL4-8030-600

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	39°	45°	55°	65°	75°	85°
0°	2821.6	2821.6	2821.6	2821.6	2821.6	2821.6	2821.6	2821.6	2821.6	2821.6	2821.6
2.5°	2882.4	2883.6	2879.9	2868.7	2858.8	2853.9	2845.2	2830.3	2810.5	2796.8	2785.6
5°	2855.1	2858.8	2856.3	2837.7	2820.4	2810.5	2796.8	2775.7	2749.7	2738.5	2712.5
7.5°	2834.0	2836.5	2829.1	2808.0	2774.5	2762.1	2737.3	2710.0	2686.4	2670.3	2639.3
10°	2819.1	2821.6	2815.4	2794.3	2757.1	2742.2	2712.5	2682.7	2651.7	2631.9	2597.1
12.5°	2798.1	2803.0	2803.0	2793.1	2768.3	2758.4	2728.6	2696.3	2667.8	2646.7	2603.3
15°	2794.3	2800.5	2811.7	2810.5	2803.0	2795.6	2772.0	2739.8	2715.0	2690.1	2636.8
17.5°	2825.3	2839.0	2861.3	2868.7	2863.8	2847.7	2820.4	2790.6	2763.3	2739.8	2674.0
20°	2903.5	2910.9	2944.4	2959.3	2934.5	2910.9	2874.9	2836.5	2811.7	2793.1	2708.8
22.5°	3021.3	3031.2	3058.5	3059.7	3007.7	2979.1	2933.2	2886.1	2862.5	2855.1	2755.9
25°	3209.8	3207.3	3214.8	3183.8	3089.5	3056.0	3000.2	2945.6	2929.5	2944.4	2825.3
27.5°	3435.6	3429.3	3405.8	3325.2	3182.5	3139.1	3072.2	3023.8	3023.8	3058.5	2919.6
30°	3696.0	3689.8	3612.9	3477.7	3292.9	3243.3	3172.6	3121.8	3147.8	3214.8	3047.3
32.5°	3971.3	3949.0	3841.1	3660.0	3450.4	3395.9	3327.6	3275.6	3325.2	3439.3	3230.9
35°	4230.6	4218.2	4085.5	3870.9	3653.8	3607.9	3560.8	3496.3	3575.7	3753.1	3490.1
37.5°	4498.5	4488.5	4326.1	4097.9	3901.9	3870.9	3831.2	3786.5	3914.3	4147.5	3841.1
40°	4797.4	4777.5	4572.9	4344.7	4190.9	4176.0	4154.9	4142.5	4348.4	4695.7	4285.1
42.5°	5136.0	5097.5	4833.3	4616.3	4505.9	4518.3	4507.1	4556.8	4871.8	5328.2	4813.5
45°	5522.9	5446.0	5092.6	4905.3	4854.4	4904.0	4927.6	5054.1	5490.7	6058.7	5403.9
47.5°	5885.1	5785.9	5376.6	5219.1	5247.6	5333.2	5400.1	5623.4	6169.1	6780.6	6006.6
50°	6218.7	6107.1	5680.4	5544.0	5682.9	5804.5	5943.4	6258.4	6890.9	7523.5	6559.8
52.5°	6465.5	6384.9	5984.3	5898.7	6182.8	6344.0	6566.0	6964.1	7620.2	8231.7	7053.4
55°	6656.5	6613.1	6280.7	6305.5	6748.3	6979.0	7248.1	7705.8	8391.7	8866.7	7450.3
57.5°	6877.3	6845.1	6619.3	6796.7	7450.3	7740.5	8058.0	8566.6	9125.9	9426.1	7761.6
60°	7110.5	7110.5	6996.4	7388.3	8328.4	8660.8	8977.1	9372.7	9857.7	9929.6	7888.1
62.5°	7286.6	7332.5	7373.4	8018.4	9161.9	9574.9	9922.2	10301.7	10615.5	10177.7	7590.5
65°	7542.1	7640.1	7870.8	8746.4	10193.8	10734.5	11203.4	11522.1	11229.4	9980.5	6619.3
67.5°	7981.1	8126.3	8617.4	9830.4	11773.9	12583.8	13039.0	12488.3	11109.1	8739.0	5070.2
70°	8376.8	8581.4	9421.1	11205.9	13827.8	14668.7	14459.1	12263.8	9675.4	6406.0	3119.3
72°	8113.9	8337.1	9458.3	11804.9	14925.4	15322.3	14217.2	10868.5	7476.4	3909.3	1537.9
72.5°	7941.5	8173.4	9338.0	11790.0	14955.2	15239.2	13881.1	10314.1	6786.8	3420.7	1244.0
75°	6634.2	6832.7	8029.5	10449.3	13179.1	12658.2	10832.5	6675.1	3119.3	1105.1	640.0
77.5°	4332.3	4483.6	5536.6	7239.5	9231.3	8730.3	6593.3	3125.5	1169.6	671.0	481.2
80°	2176.7	2284.6	2963.0	3806.4	4982.2	4584.0	3043.6	1511.9	782.6	484.9	378.3
82.5°	1514.4	1613.6	2040.2	1943.5	2082.4	2015.4	1431.3	1261.4	585.4	306.3	198.4
85°	1270.0	1373.0	1688.0	1385.4	1133.6	1033.1	1025.7	1191.9	387.0	151.3	167.4
87.5°	1107.6	1263.8	1392.8	1012.1	777.7	685.9	755.3	1092.7	122.8	83.1	50.9
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: P197142
 CATALOG NUMBER: NAV-AF-06-D-UNV-SL4-8030-600

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2821.6	2821.6	2821.6	2821.6	2821.6	2821.6	2821.6	2821.6	2821.6	2821.6	2821.6
2.5°	2767.0	2763.3	2744.7	2716.2	2695.1	2681.5	2655.4	2654.2	2656.7	2634.3	2643.0
5°	2688.9	2674.0	2625.7	2559.9	2506.6	2455.7	2399.9	2381.3	2365.2	2331.7	2335.4
7.5°	2607.1	2581.0	2496.7	2388.8	2285.8	2191.6	2098.5	2052.6	2017.9	1974.5	1974.5
10°	2558.7	2517.8	2388.8	2231.2	2067.5	1929.9	1791.0	1707.9	1647.1	1591.3	1587.5
12.5°	2556.2	2494.2	2314.3	2097.3	1872.8	1679.3	1489.6	1361.8	1271.3	1205.5	1199.3
15°	2576.0	2489.2	2252.3	1972.0	1689.2	1437.5	1203.1	1040.6	925.2	852.1	844.6
17.5°	2593.4	2483.0	2185.4	1840.6	1510.7	1204.3	943.8	775.2	666.0	606.5	600.3
20°	2609.5	2469.4	2099.8	1701.7	1313.4	986.0	738.0	601.5	529.6	496.1	492.4
22.5°	2633.1	2457.0	2010.5	1545.4	1120.0	802.5	609.0	511.0	472.5	456.4	453.9
25°	2671.5	2458.2	1923.7	1385.4	942.6	668.5	527.1	466.3	445.3	434.1	434.1
27.5°	2727.4	2473.1	1838.1	1222.9	792.5	576.7	478.7	442.8	429.1	420.5	418.0
30°	2809.2	2500.4	1747.5	1069.1	673.5	513.5	450.2	427.9	416.7	409.3	408.0
32.5°	2928.3	2548.8	1652.0	929.0	582.9	468.8	429.1	415.5	406.8	400.6	399.4
35°	3105.6	2634.3	1559.0	809.9	518.4	436.6	411.8	400.6	395.6	393.2	391.9
37.5°	3366.1	2772.0	1471.0	716.9	476.3	415.5	394.4	388.2	385.7	385.7	385.7
40°	3693.5	2953.1	1391.6	651.1	452.7	399.4	382.0	377.0	377.0	378.3	378.3
42.5°	4091.7	3180.1	1323.4	606.5	439.1	388.2	373.3	370.8	369.6	369.6	370.8
45°	4554.3	3448.0	1281.2	571.8	429.1	382.0	367.1	365.9	360.9	358.4	358.4
47.5°	5019.4	3734.5	1278.7	551.9	416.7	374.6	360.9	360.9	351.0	346.0	347.3
50°	5453.5	3991.2	1306.0	547.0	409.3	363.4	354.7	356.0	342.3	336.1	334.9
52.5°	5803.2	4187.2	1339.5	553.2	409.3	353.5	343.6	349.8	334.9	327.4	326.2
55°	6073.6	4323.6	1351.9	566.8	414.3	344.8	333.6	343.6	332.4	322.5	322.5
57.5°	6267.1	4367.0	1298.6	573.0	421.7	343.6	323.7	342.3	336.1	323.7	323.7
60°	6196.4	4115.2	1100.1	549.4	420.5	341.1	316.3	344.8	348.5	334.9	334.9
62.5°	5644.5	3443.0	883.1	496.1	399.4	332.4	307.6	342.3	357.2	352.2	349.8
65°	4595.2	2525.2	684.6	432.9	363.4	313.8	289.0	320.0	337.4	342.3	343.6
67.5°	3238.3	1598.7	532.1	368.4	318.7	286.5	267.9	282.8	289.0	291.5	296.4
70°	1771.1	865.7	422.9	310.1	272.9	259.2	245.6	246.8	244.3	241.9	244.3
72°	889.3	565.6	357.2	269.1	241.9	233.2	227.0	223.2	223.2	219.5	220.8
72.5°	765.2	525.9	344.8	259.2	234.4	227.0	222.0	218.3	217.0	214.6	215.8
75°	509.8	416.7	287.7	217.0	199.7	194.7	197.2	193.5	194.7	192.2	193.5
77.5°	411.8	358.4	244.3	183.6	171.2	163.7	168.7	169.9	172.4	169.9	168.7
80°	344.8	305.1	204.6	151.3	142.6	136.4	138.9	147.6	148.8	141.4	140.2
82.5°	223.2	245.6	161.2	117.8	109.1	106.7	112.9	121.5	124.0	114.1	111.6
85°	187.3	197.2	116.6	80.6	71.9	69.5	81.9	90.5	96.7	86.8	84.3
87.5°	52.1	96.7	57.1	38.4	32.2	32.2	39.7	47.1	55.8	57.1	57.1
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)