

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: P195194

Luminaire Tested: **NAV-AF-02-D-UNV-SL4-7060-600-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195194
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-SL4-7060-600-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 5700K, 615mA 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: 6538 lumens
Efficiency: N/A
Efficacy: 99.1 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): 66
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

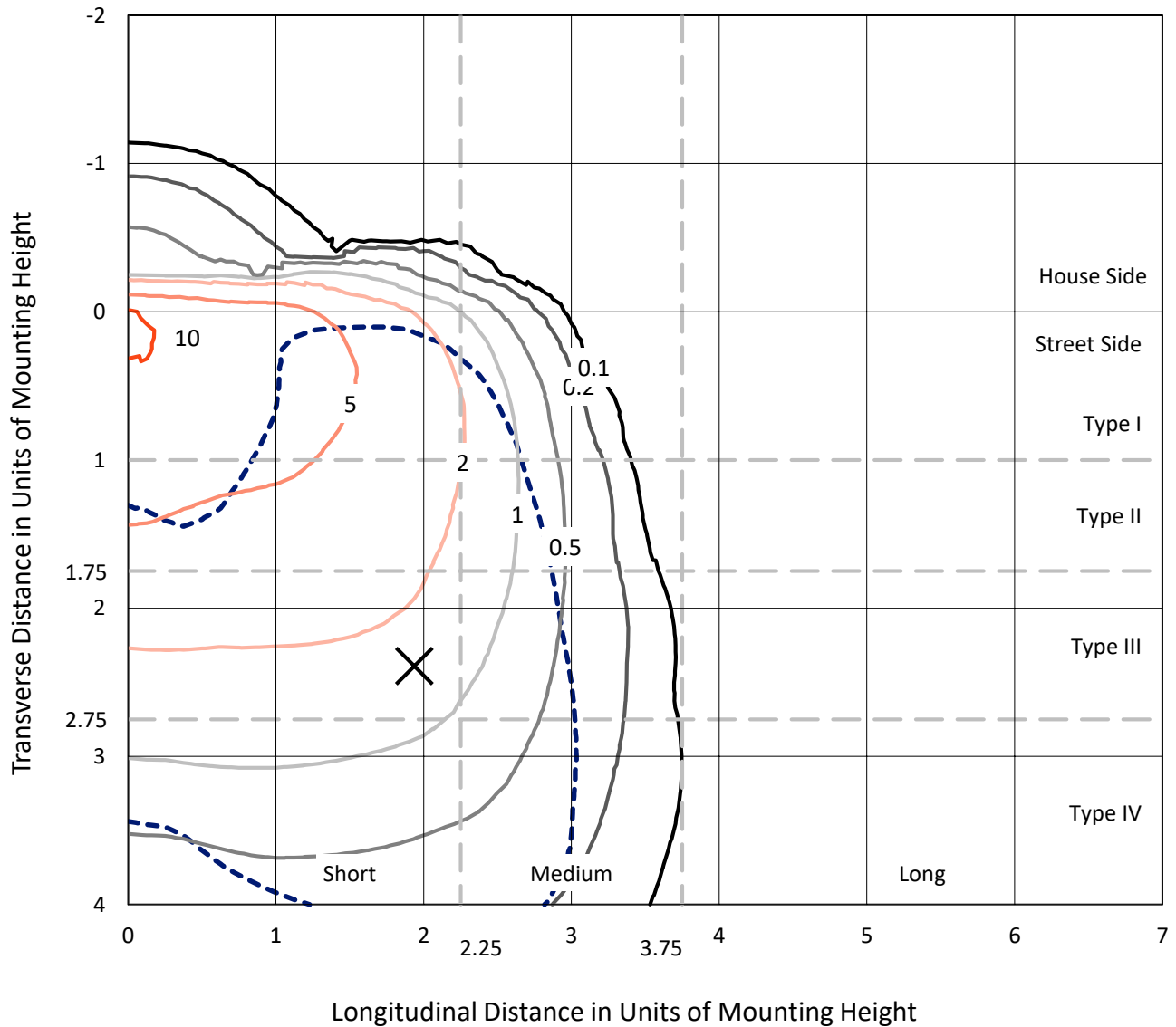


REPORT NUMBER: P195194

CATALOG NUMBER: NAV-AF-02-D-UNV-SL4-7060-600-HSS

Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

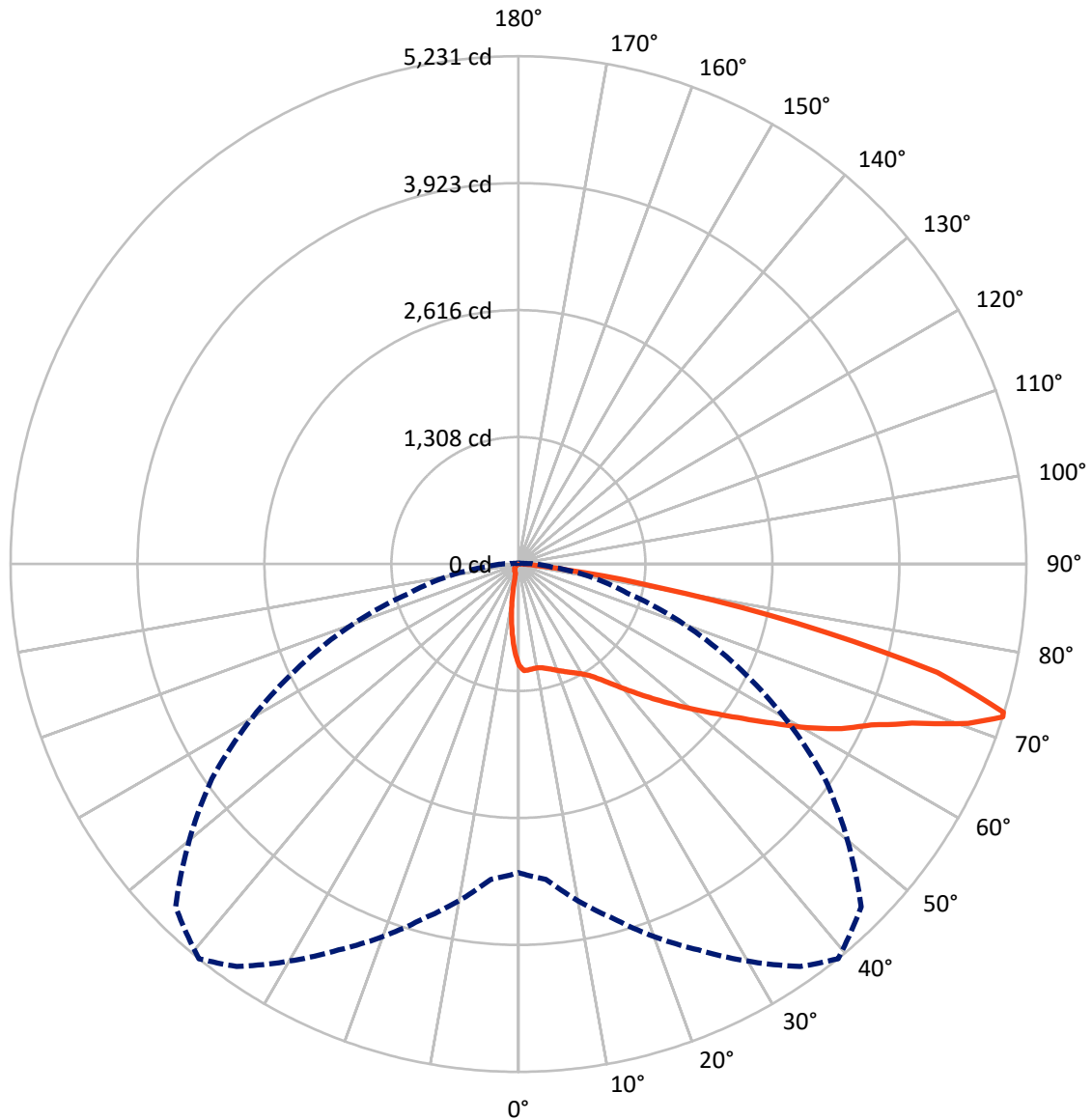


Based on 10 foot mounting height. Maximum calculated value = 11 fc
 Type IV - Short - Non-Cutoff

REPORT NUMBER: P195194

CATALOG NUMBER: NAV-AF-02-D-UNV-SL4-7060-600-HSS

Luminous Intensity Polar Plot



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

REPORT NUMBER: P195194

CATALOG NUMBER: NAV-AF-02-D-UNV-SL4-7060-600-HSS

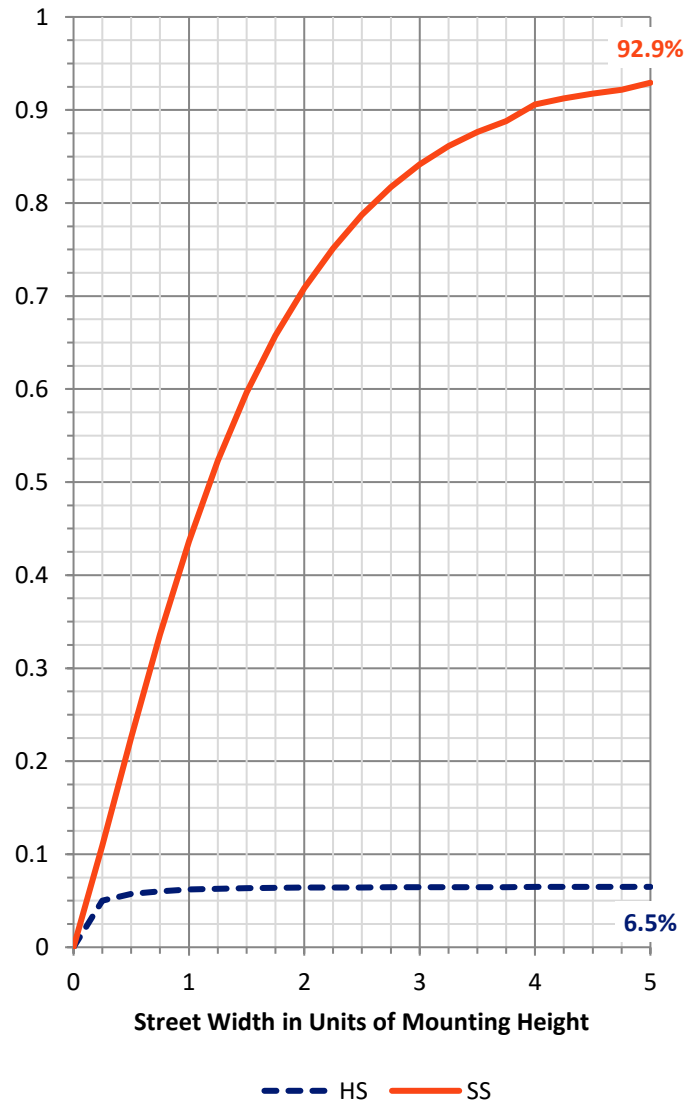
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	428.5	0.0	428.5
	% Fixture	6.6	0.0	6.6
Street Side	Lumens	6109.5	0.0	6109.5
	% Fixture	93.4	0.0	93.4
Total	Lumens	6538.0	0.0	6538.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	85.1	1.3
10°-20°	206.1	3.2
20°-30°	342.2	5.2
30°-40°	545.5	8.3
40°-50°	900.3	13.8
50°-60°	1359.7	20.8
60°-70°	1771.2	27.1
70°-80°	1196.8	18.3
80°-90°	131.1	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°	6538.0	100.0
0°-180°	6538.0	100.0



REPORT NUMBER: P195194

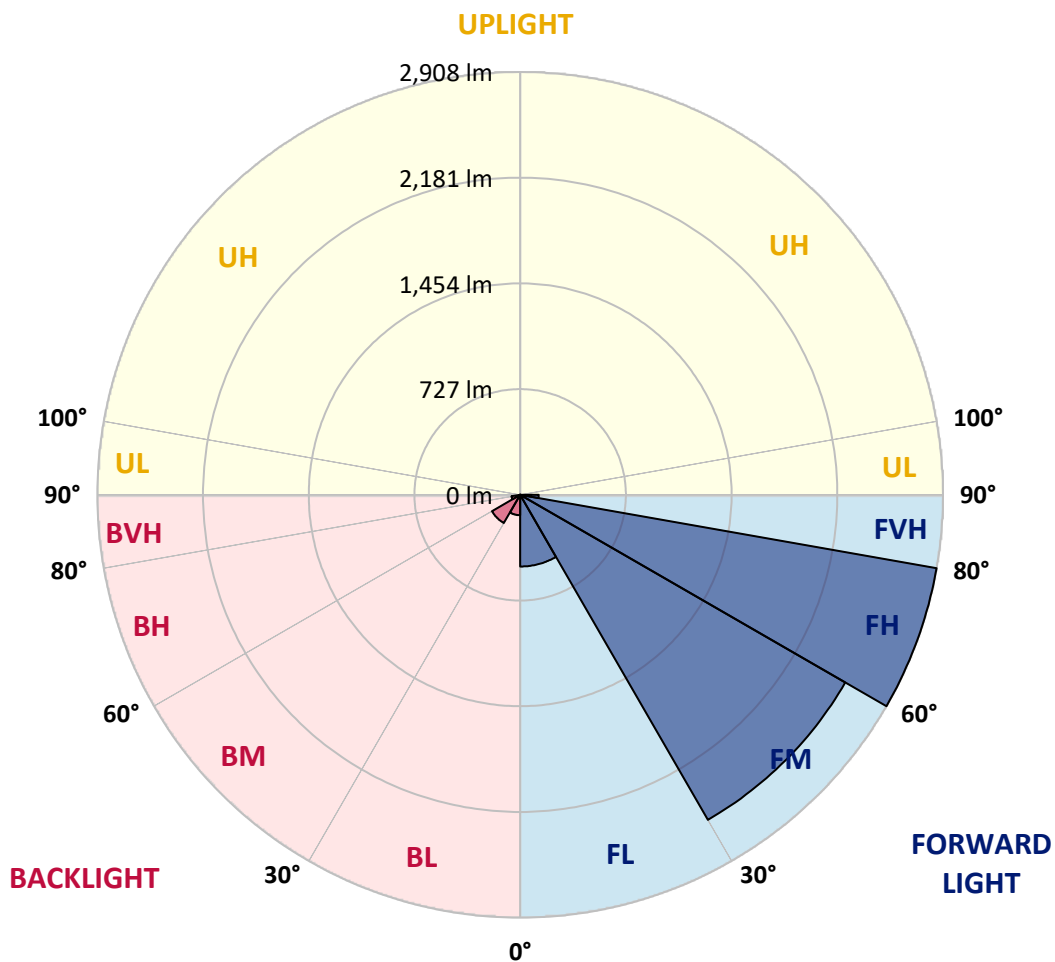
CATALOG NUMBER: NAV-AF-02-D-UNV-SL4-7060-600-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	493.1	7.5			
FM	(30°-60°)	2581.3	39.5			
FH	(60°-80°)	2907.8	44.5			G2/5000
FVH	(80°-90°)	127.3	1.9			G2/225
BL	(0°-30°)	140.3	2.1	B1/500		
BM	(30°-60°)	224.2	3.4	B1/1000		
BH	(60°-80°)	60.2	0.9	B0/110		G0/110
BVH	(80°-90°)	3.8	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: P195194

CATALOG NUMBER: NAV-AF-02-D-UNV-SL4-7060-600-HSS

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	39°	45°	55°	65°	75°	85°
0°	1046.4	1046.4	1046.4	1046.4	1046.4	1046.4	1046.4	1046.4	1046.4	1046.4	1046.4
2.5°	1114.3	1116.3	1113.8	1109.2	1102.5	1098.4	1092.7	1080.4	1065.0	1051.6	1036.2
5°	1123.0	1124.1	1121.0	1112.2	1102.0	1096.3	1089.1	1075.7	1059.8	1041.3	1013.6
7.5°	1125.6	1125.1	1121.5	1110.7	1094.8	1087.6	1075.2	1058.8	1042.3	1025.4	994.0
10°	1124.6	1124.6	1122.0	1111.7	1093.7	1087.1	1073.2	1055.7	1035.1	1018.2	984.8
12.5°	1121.0	1123.0	1121.5	1115.8	1102.5	1097.3	1085.0	1067.5	1048.0	1030.5	995.1
15°	1125.6	1128.7	1131.8	1129.7	1122.0	1117.4	1106.1	1088.1	1072.1	1053.6	1015.6
17.5°	1144.1	1150.8	1158.0	1158.5	1150.3	1142.0	1129.2	1110.7	1095.3	1078.3	1037.2
20°	1179.1	1184.2	1197.6	1200.1	1183.7	1171.9	1153.9	1132.3	1116.9	1102.5	1057.2
22.5°	1231.0	1236.6	1247.4	1243.8	1216.1	1202.2	1179.6	1154.9	1139.0	1130.7	1080.4
25°	1309.6	1311.1	1313.7	1297.8	1252.0	1236.6	1208.9	1181.1	1168.3	1167.2	1113.3
27.5°	1402.1	1404.2	1392.9	1357.4	1292.1	1272.1	1240.7	1215.5	1209.4	1217.1	1154.9
30°	1508.0	1508.5	1477.2	1419.6	1338.4	1316.3	1283.9	1256.2	1261.8	1280.8	1208.4
32.5°	1616.4	1611.3	1568.1	1493.1	1401.6	1374.9	1347.1	1319.4	1335.8	1374.4	1286.5
35°	1715.6	1713.6	1662.7	1575.3	1483.8	1460.2	1440.2	1410.9	1437.6	1500.3	1392.9
37.5°	1814.8	1813.3	1755.2	1664.2	1585.1	1568.1	1553.2	1530.6	1574.3	1666.3	1535.2
40°	1924.3	1921.7	1850.3	1762.9	1702.8	1693.5	1684.8	1675.0	1749.6	1877.5	1712.6
42.5°	2059.5	2048.2	1951.0	1870.3	1832.3	1834.9	1835.4	1845.2	1961.8	2128.9	1921.7
45°	2214.7	2189.5	2052.3	1985.5	1974.7	1990.1	2005.5	2046.1	2209.1	2418.2	2153.0
47.5°	2365.3	2324.7	2169.0	2109.3	2131.4	2163.3	2200.3	2279.5	2486.6	2721.0	2362.7
50°	2494.8	2453.2	2284.6	2235.3	2305.7	2353.0	2418.8	2538.5	2779.6	2976.9	2494.8
52.5°	2596.6	2563.7	2406.9	2374.0	2498.9	2563.7	2667.0	2824.3	3056.1	3145.5	2587.3
55°	2671.6	2655.2	2524.1	2528.7	2713.8	2807.3	2935.8	3113.6	3289.4	3276.6	2656.7
57.5°	2756.4	2743.6	2647.0	2711.2	2972.3	3093.1	3241.6	3384.5	3459.0	3381.9	2724.6
60°	2843.3	2847.4	2796.0	2932.2	3292.0	3425.6	3555.2	3590.6	3604.5	3488.8	2796.0
62.5°	2909.1	2926.6	2931.2	3170.7	3619.9	3734.0	3790.0	3764.9	3761.8	3632.2	2790.4
65°	2984.6	3030.4	3106.5	3432.3	3918.0	3993.1	4033.1	4069.6	3992.5	3674.9	2515.9
67.5°	3115.2	3187.1	3358.3	3753.0	4262.4	4373.4	4487.0	4448.4	4027.0	3241.6	1916.6
70°	3291.0	3378.9	3681.1	4171.9	4729.6	4915.6	5010.7	4418.1	3418.9	2239.9	1011.0
72°	3180.0	3259.6	3780.8	4385.7	5060.6	5231.2	4993.2	3853.8	2478.4	1161.1	338.7
72.5°	3072.0	3154.3	3748.9	4383.2	5093.5	5224.0	4879.7	3631.2	2193.1	903.6	233.3
75°	2131.4	2235.3	3213.9	3940.1	4599.5	4456.1	3733.5	2198.8	794.6	155.2	77.1
77.5°	1102.0	1182.1	1949.5	2784.2	3205.7	2935.8	2206.5	953.9	220.0	82.2	50.9
80°	683.1	722.6	911.8	1371.8	1665.3	1456.6	973.5	385.5	140.8	48.8	40.6
82.5°	353.6	383.9	574.1	553.5	615.2	511.4	359.3	322.8	86.9	30.3	41.6
85°	116.2	123.4	352.6	368.0	263.2	176.8	159.3	307.9	25.2	19.5	35.5
87.5°	15.4	18.0	123.9	210.7	129.5	80.2	95.6	108.4	8.7	10.8	9.8
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: P195194

CATALOG NUMBER: NAV-AF-02-D-UNV-SL4-7060-600-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1046.4	1046.4	1046.4	1046.4	1046.4	1046.4	1046.4	1046.4	1046.4	1046.4	1046.4
2.5°	1025.9	1019.2	998.1	977.1	952.9	930.8	913.3	902.0	907.2	890.2	892.8
5°	996.6	979.6	933.4	883.5	829.6	779.2	739.1	709.3	703.6	677.9	679.0
7.5°	968.3	940.6	865.5	783.3	693.9	621.4	555.6	498.0	477.5	456.4	444.1
10°	952.9	914.9	808.5	688.7	562.8	456.4	363.9	291.4	261.1	239.0	228.2
12.5°	957.5	907.2	765.8	602.9	437.4	302.2	205.6	152.7	134.1	123.9	120.3
15°	973.0	908.7	727.3	519.1	318.1	183.0	120.8	103.3	101.8	101.3	100.7
17.5°	987.3	910.2	686.7	431.7	212.8	116.7	97.1	95.6	95.6	95.6	95.6
20°	1002.2	910.8	642.0	340.3	139.8	95.6	91.5	90.5	91.5	91.5	91.5
22.5°	1019.7	914.4	598.8	251.3	103.3	89.9	87.4	86.9	87.4	87.4	86.9
25°	1041.3	922.1	552.0	179.9	93.5	86.3	83.8	83.3	83.8	83.3	83.3
27.5°	1070.1	932.3	497.5	129.0	89.4	82.7	80.2	80.2	80.2	79.7	79.7
30°	1107.1	944.7	424.5	101.8	85.3	79.2	77.1	77.1	76.6	76.1	76.1
32.5°	1160.0	964.7	344.9	92.0	80.7	74.5	72.5	73.0	72.5	72.0	71.4
35°	1235.1	996.1	266.2	86.9	76.1	69.9	67.8	67.8	67.8	66.8	66.8
37.5°	1341.5	1043.9	199.4	81.7	71.4	65.3	62.7	62.7	62.2	61.2	61.7
40°	1473.0	1104.0	144.4	77.1	66.8	60.1	58.1	57.1	56.0	55.0	55.0
42.5°	1631.4	1162.6	108.4	72.5	62.2	56.0	53.5	52.4	50.4	49.3	48.8
45°	1808.7	1224.8	89.9	66.8	57.1	51.4	49.3	47.3	44.7	43.2	42.7
47.5°	1958.2	1262.8	80.2	61.2	51.9	46.8	44.7	41.6	38.5	37.5	37.5
50°	2048.2	1246.9	72.0	55.5	46.8	42.1	39.6	35.5	33.4	32.4	31.9
52.5°	2098.6	1199.6	65.3	50.9	42.1	37.0	33.4	29.8	28.8	27.8	27.8
55°	2133.0	1131.3	58.1	46.3	38.0	32.4	28.3	25.7	24.7	24.2	23.6
57.5°	2165.9	1048.0	51.4	42.1	33.9	28.8	24.2	23.1	21.1	20.6	20.6
60°	2175.6	933.4	45.2	37.5	30.3	25.2	21.1	19.5	17.5	17.0	17.0
62.5°	2051.3	742.7	40.1	31.9	26.7	21.6	18.5	16.4	14.4	14.4	14.4
65°	1714.1	504.2	34.4	27.8	23.6	18.5	15.9	13.4	12.3	12.3	12.3
67.5°	1194.0	281.1	29.3	23.6	20.0	15.4	13.4	11.3	10.8	11.3	11.3
70°	538.1	111.5	24.7	19.5	16.4	12.8	11.3	9.8	10.8	10.8	10.8
72°	161.4	59.6	20.6	15.9	13.4	11.3	9.8	9.3	10.3	10.8	10.8
72.5°	119.8	53.5	19.5	15.4	13.4	10.8	9.3	9.3	10.3	10.8	10.8
75°	61.7	36.5	14.9	11.3	9.8	8.7	7.7	8.7	10.3	10.3	10.3
77.5°	48.3	29.8	12.3	8.7	8.2	7.7	7.2	8.2	9.3	9.3	9.3
80°	45.2	19.5	9.8	8.2	7.2	6.7	6.7	7.2	8.2	8.7	8.7
82.5°	45.7	15.9	8.7	7.7	6.7	6.2	6.2	6.7	7.7	8.2	8.2
85°	29.3	10.8	7.7	6.7	6.2	5.7	5.7	6.2	7.2	7.7	7.7
87.5°	9.8	8.2	6.7	6.2	5.1	5.1	5.1	5.1	6.2	6.7	7.2
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)