

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: INVUE

Report Number:

Luminaire Tested: **ENV-SA1F-740-U-SL4-HSS-ULG**

Issue Date: 3/30/2022

Test Information

Test Method: LM-79-08
Report Number:
REPORT IS A COMBINATION OF REPORTS P401854 AND P226775
Test Lab: INNOVATION CENTER
Issue Date: 3/30/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENV-SA1F-740-U-SL4-HSS-ULG
Description: ENTRI LED LUMINAIRE WITH UPLIGHT
(1) 70 CRI, 4000K, 1200mA LIGHTSQUARE WITH 16 LEDS 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: 8162.9 lumens
Efficiency: N/A
Efficacy: 98.6 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 0.5' x L: 0.5' x H: 0.1')
IES Classification: Type IV - Short
BUG Rating: B1 - U5 - G2

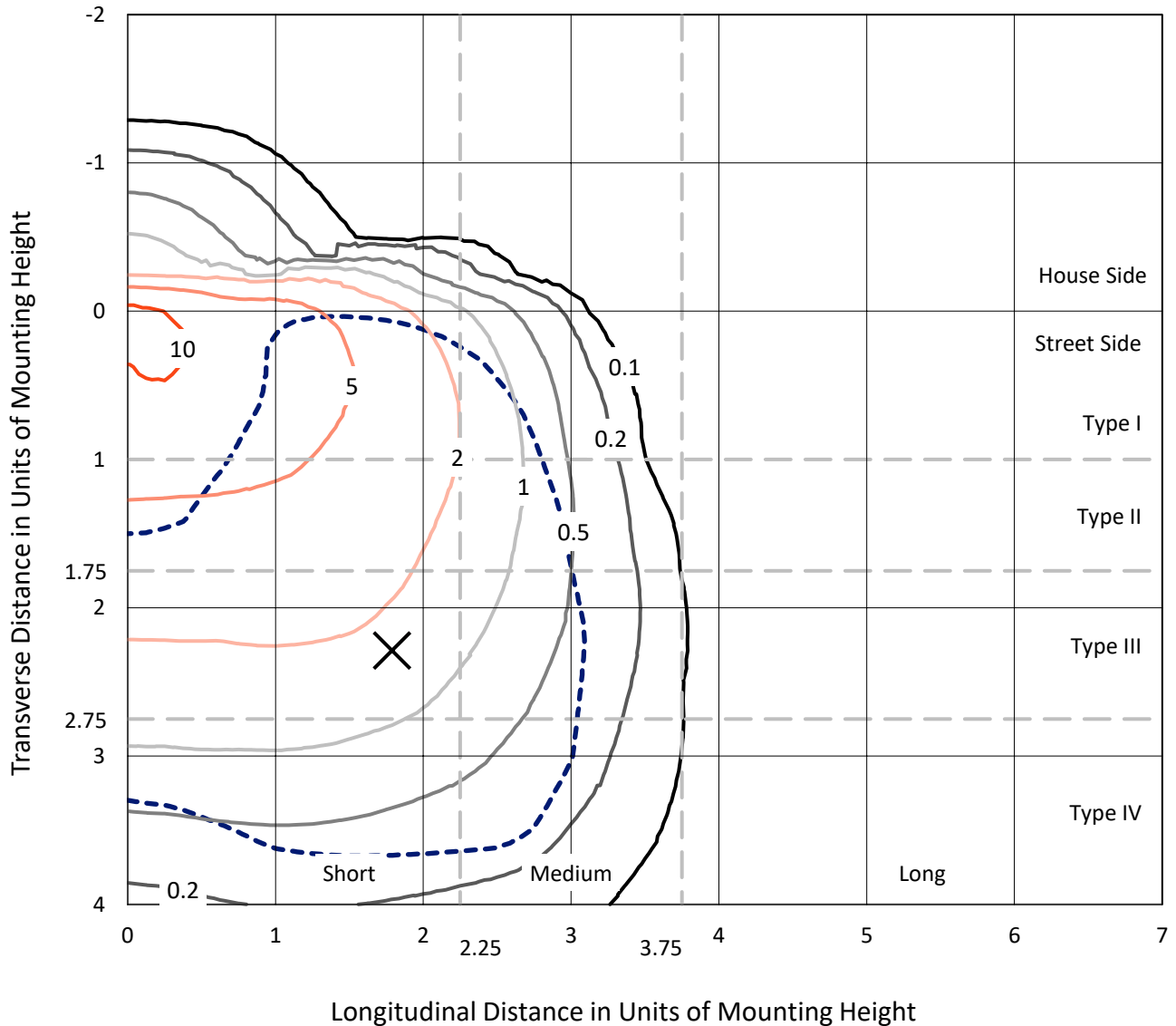
Input Watts (W): 82.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



REPORT NUMBER:
 CATALOG NUMBER: ENV-SA1F-740-U-SL4-HSS-ULG

Iso-Footcandle Lines of Horizontal Illumination

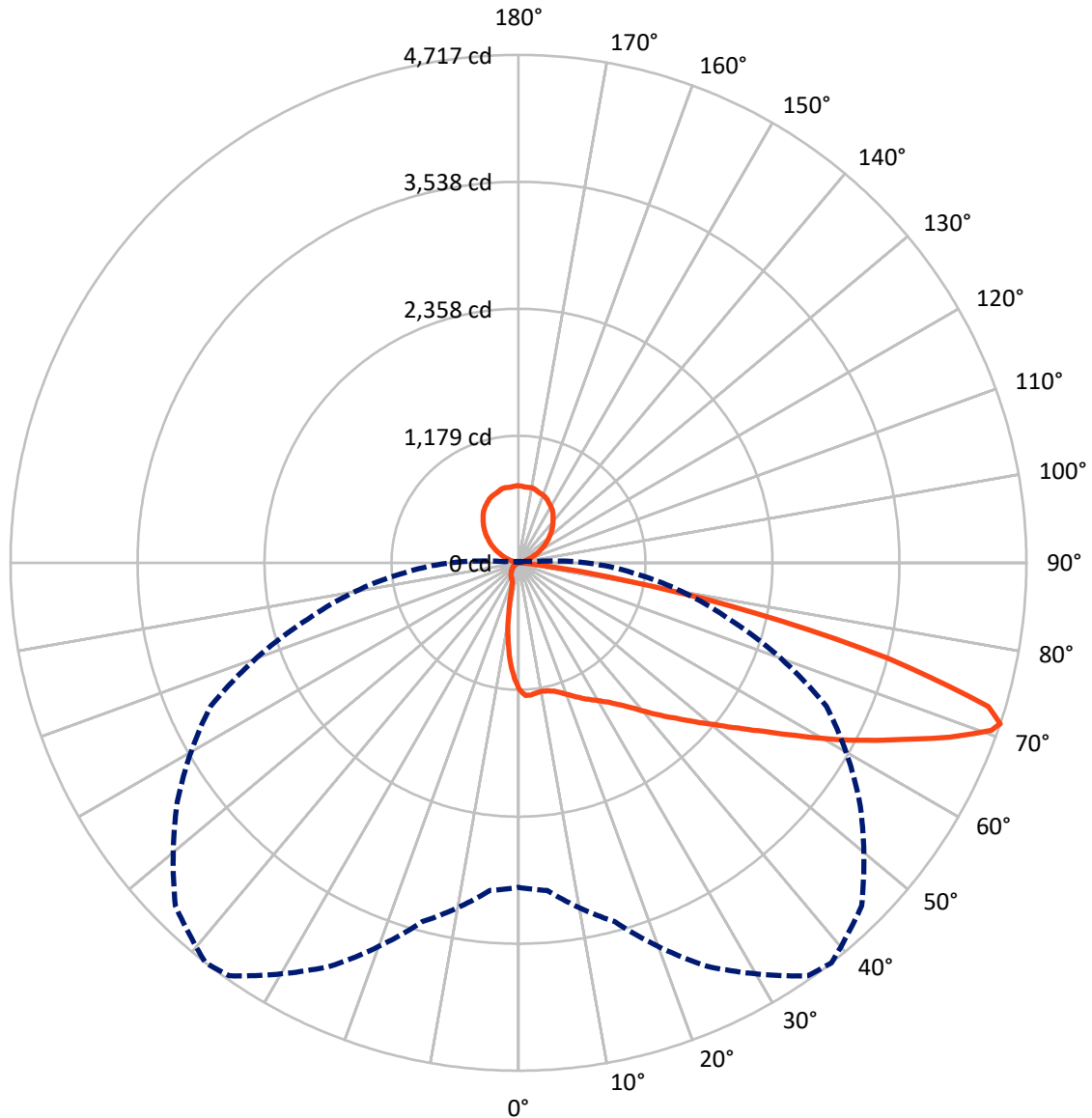
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 12.1 fc
 Type IV - Short - N/A

REPORT NUMBER:
CATALOG NUMBER: ENV-SA1F-740-U-SL4-HSS-ULG

Luminous Intensity Polar Plot



— Vertical Plane Through 38-Deg Lateral - - - Horizontal Cone Through 71-Deg Vertical

REPORT NUMBER:
 CATALOG NUMBER: ENV-SA1F-740-U-SL4-HSS-ULG

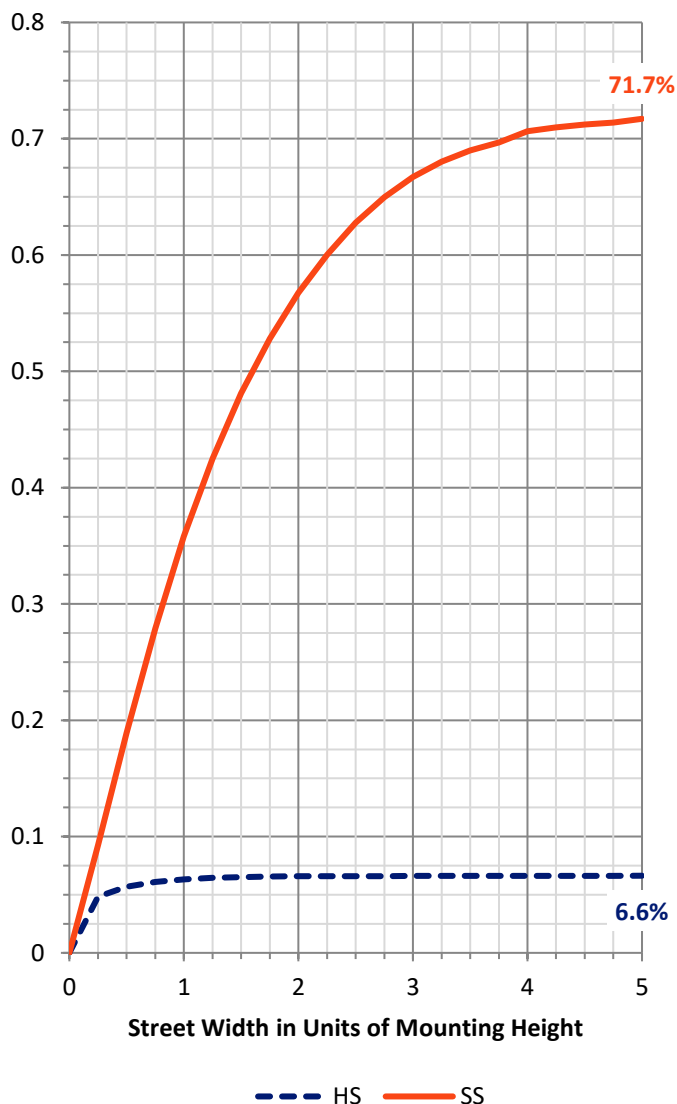
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	545.7	887.0	1432.7
	% Fixture	6.7	10.9	17.6
Street Side	Lumens	5843.3	887.0	6730.2
	% Fixture	71.6	10.9	82.4
Total	Lumens	6389.0	1773.9	8162.9
	% Fixture	78.3	21.7	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	99.5	1.2
10°-20°	240.9	3.0
20°-30°	386.2	4.7
30°-40°	587.6	7.2
40°-50°	915.7	11.2
50°-60°	1339.1	16.4
60°-70°	1717.5	21.0
70°-80°	1049.8	12.9
80°-90°	52.7	0.6
90°-100°	8.4	0.1
100°-110°	58.7	0.7
110°-120°	169.9	2.1
120°-130°	279.4	3.4
130°-140°	344.6	4.2
140°-150°	352.5	4.3
150°-160°	297.0	3.6
160°-170°	195.5	2.4
170°-180°	67.8	0.8
0°-90°	6389.0	78.3
0°-180°	8162.9	100.0

Coefficient of Utilization



REPORT NUMBER:

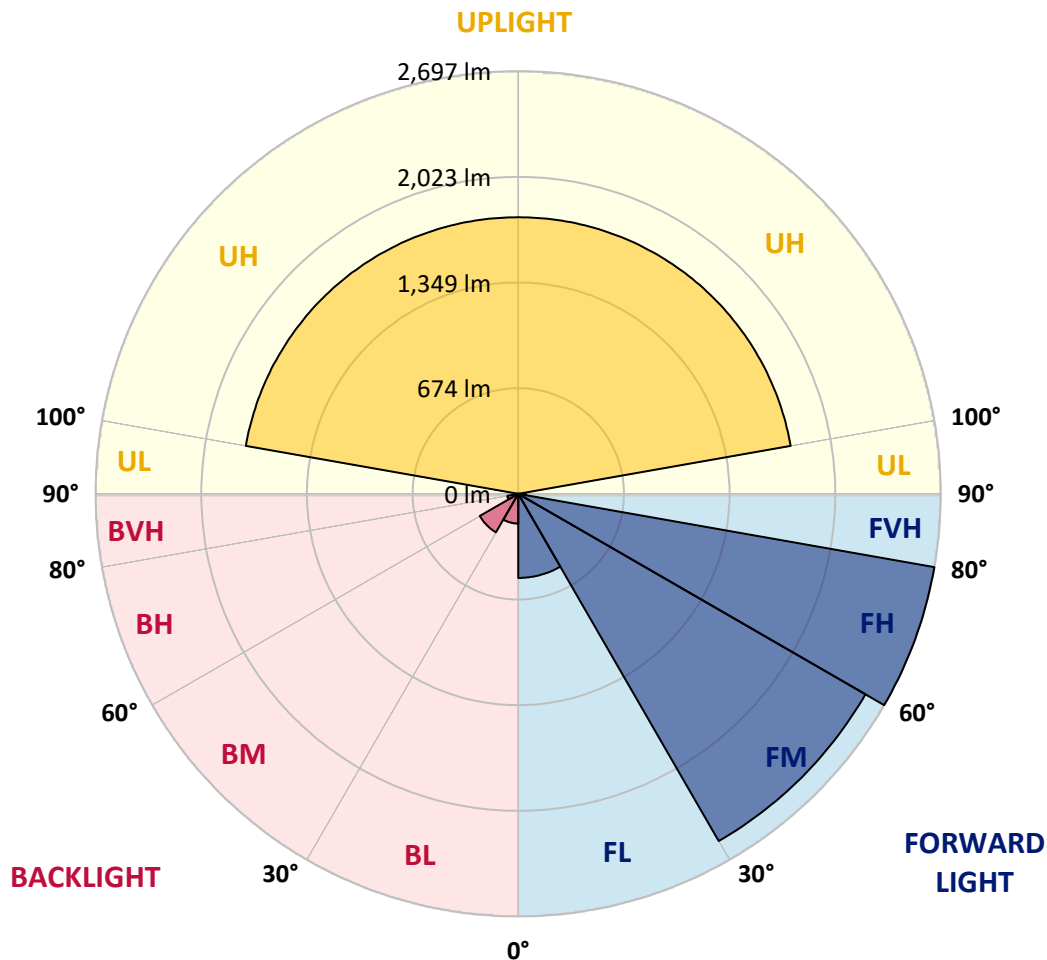
CATALOG NUMBER: ENV-SA1F-740-U-SL4-HSS-ULG

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	536.8	6.6			
FM (30°-60°)	2558.9	31.3			
FH (60°-80°)	2697.2	33.0			G2/5000
FVH (80°-90°)	50.4	0.6			G1/100
BL (0°-30°)	189.8	2.3	B1/500		
BM (30°-60°)	283.5	3.5	B1/1000		
BH (60°-80°)	70.2	0.9	B0/110		G0/110
BVH (80°-90°)	2.3	0.0			G0/10
UL (90°-100°)	8.4	0.1		U1/10	
UH (100°-180°)	1765.5	21.6		U5	

BUG Rating: B1-U5-G2

Type IV Short





REPORT NUMBER:

CATALOG NUMBER: ENV-SA1F-740-U-SL4-HSS-ULG

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	38°	45°	55°	65°	75°	85°
0°	1177.8	1177.8	1177.8	1177.8	1177.8	1177.8	1177.8	1177.8	1177.8	1177.8	1177.8
2.5°	1247.6	1244.2	1247.6	1244.2	1237.6	1234.3	1229.9	1217.7	1206.6	1193.3	1173.4
5°	1249.8	1247.6	1247.6	1243.1	1235.4	1232.1	1227.6	1215.5	1201.1	1181.1	1151.3
7.5°	1237.6	1236.5	1234.3	1229.9	1221.0	1218.8	1215.5	1201.1	1186.7	1165.6	1129.1
10°	1217.7	1219.9	1218.8	1218.8	1215.5	1213.2	1211.0	1194.4	1178.9	1154.6	1115.8
12.5°	1198.9	1201.1	1206.6	1215.5	1218.8	1219.9	1219.9	1203.3	1184.5	1157.9	1118.0
15°	1186.7	1191.1	1206.6	1224.3	1234.3	1237.6	1240.9	1223.2	1201.1	1172.3	1130.2
17.5°	1183.4	1190.0	1219.9	1247.6	1266.4	1268.6	1268.6	1246.5	1223.2	1190.0	1144.6
20°	1194.4	1203.3	1242.0	1280.8	1304.0	1306.2	1301.8	1273.0	1245.4	1208.8	1156.8
22.5°	1227.6	1235.4	1279.7	1325.1	1347.2	1349.4	1339.4	1299.6	1269.7	1239.8	1173.4
25°	1285.2	1289.6	1337.2	1380.4	1392.6	1395.9	1379.3	1331.7	1297.4	1269.7	1196.6
27.5°	1361.6	1363.8	1407.0	1439.1	1441.3	1440.2	1422.5	1372.7	1338.3	1315.1	1232.1
30°	1441.3	1444.6	1480.0	1501.1	1492.2	1487.8	1472.3	1419.1	1388.2	1370.4	1283.0
32.5°	1515.5	1518.8	1557.5	1568.6	1548.7	1545.3	1534.3	1477.8	1451.2	1460.1	1356.0
35°	1588.5	1588.5	1632.8	1638.3	1620.6	1620.6	1620.6	1553.1	1548.7	1578.6	1457.9
37.5°	1653.8	1664.9	1711.4	1709.2	1705.9	1708.1	1714.7	1663.8	1679.3	1730.2	1591.8
40°	1709.2	1723.6	1785.6	1791.1	1805.5	1817.7	1827.6	1801.1	1837.6	1920.6	1763.4
42.5°	1759.0	1775.6	1855.3	1880.8	1920.6	1937.2	1956.0	1949.4	2030.2	2181.9	1982.6
45°	1823.2	1840.9	1922.8	1983.7	2039.1	2061.2	2103.3	2132.0	2266.0	2438.7	2219.5
47.5°	1908.4	1920.6	1995.9	2092.2	2167.5	2207.3	2272.6	2346.8	2509.5	2711.0	2430.9
50°	2024.7	2025.8	2082.2	2207.3	2319.1	2362.3	2475.2	2571.5	2775.2	2951.2	2583.7
52.5°	2153.1	2146.4	2190.7	2349.0	2490.7	2549.4	2682.2	2816.2	3020.9	3125.0	2652.3
55°	2274.8	2278.2	2305.8	2499.6	2706.6	2763.0	2931.3	3067.4	3245.7	3231.3	2690.0
57.5°	2415.4	2414.3	2449.7	2664.5	2959.0	3024.3	3200.3	3312.1	3381.8	3307.7	2696.6
60°	2548.3	2544.9	2599.2	2861.5	3227.9	3324.3	3482.6	3478.1	3518.0	3356.4	2691.1
62.5°	2666.7	2674.5	2769.7	3090.7	3529.0	3633.1	3712.8	3657.5	3668.5	3412.8	2622.4
65°	2810.6	2825.0	2978.9	3368.5	3901.0	3950.8	3981.8	3892.1	3781.4	3367.4	2414.3
67.5°	2992.2	3035.3	3252.3	3778.1	4288.4	4322.7	4323.9	4033.8	3777.0	3138.3	2030.2
70°	3064.1	3109.5	3454.9	4102.5	4615.0	4658.2	4523.1	4011.7	3479.2	2457.5	1370.4
71°	3014.3	3055.3	3449.3	4133.5	4682.5	4716.8	4505.4	3866.7	3154.9	2024.7	1061.6
72.5°	2654.5	2760.8	3236.8	3938.6	4561.9	4563.0	4218.7	3524.6	2509.5	1264.2	533.6
75°	1433.5	1561.9	2372.3	2997.7	3519.1	3546.8	3245.7	2447.5	1214.4	327.7	129.5
77.5°	472.7	532.5	1063.8	1556.4	2207.3	2250.5	1984.8	1087.1	383.0	110.7	67.5
80°	296.7	303.3	359.8	654.2	981.9	1018.4	816.9	440.6	172.7	60.9	46.5
82.5°	49.8	59.8	169.4	192.6	346.5	274.5	186.0	224.7	80.8	27.7	39.9
85°	0.0	0.0	1.1	1.1	5.5	1.1	1.1	45.4	4.4	4.4	21.0
87.5°	0.0	0.0	1.1	1.1	1.1	1.1	1.1	1.1	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
92.5°	4.1	4.1	5.1	6.1	6.1	6.1	6.1	7.2	7.2	6.1	6.1
95°	5.1	5.1	6.1	7.2	7.2	7.2	7.2	7.2	8.2	7.2	7.2
97.5°	7.2	7.2	8.2	8.2	9.2	9.2	9.2	12.3	10.2	9.2	8.2
100°	8.2	8.2	9.2	10.2	12.3	15.1	21.5	29.7	26.6	23.5	19.4
102.5°	11.3	11.3	13.3	18.4	27.6	31.6	40.9	51.1	48.1	43.0	39.9
105°	21.5	22.5	27.6	36.8	49.1	53.7	64.4	73.7	71.6	66.5	62.4
107.5°	41.9	43.0	50.1	59.3	74.7	79.3	90.0	97.2	96.2	92.1	89.0



REPORT NUMBER:

CATALOG NUMBER: ENV-SA1F-740-U-SL4-HSS-ULG

CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	38°	45°	55°	65°	75°	85°
110°	67.5	69.6	75.7	89.0	104.3	108.0	116.6	122.8	123.8	121.7	118.7
112.5°	101.3	101.3	108.4	123.8	137.1	139.9	146.3	151.4	153.4	152.4	150.4
115°	143.2	142.2	150.4	162.6	171.9	173.7	178.0	183.1	186.2	183.1	181.1
117.5°	188.2	188.2	193.3	201.5	206.6	207.5	209.7	215.8	219.9	214.8	212.8
120°	230.2	228.1	231.2	238.3	242.4	244.3	248.6	251.6	255.7	250.6	248.6
122.5°	269.0	266.0	267.0	273.1	277.2	279.1	283.4	285.4	289.5	284.4	282.3
125°	304.8	300.7	302.8	305.9	312.0	313.5	317.1	320.2	322.2	317.1	317.1
127.5°	337.6	336.6	336.6	340.6	346.8	347.1	347.8	352.9	353.9	353.9	352.9
130°	371.3	369.3	370.3	374.4	378.5	379.1	380.5	385.7	389.7	389.7	387.7
132.5°	405.1	403.0	402.0	410.2	413.3	413.6	414.3	420.4	425.5	423.5	423.5
135°	438.8	435.8	435.8	441.9	445.0	445.6	447.0	453.2	458.3	457.3	460.3
137.5°	470.6	467.5	469.5	470.6	474.6	475.8	478.7	483.9	485.9	486.9	492.0
140°	499.2	496.1	498.2	500.2	502.3	504.1	508.4	511.5	513.5	515.6	520.7
142.5°	529.9	526.8	528.9	529.9	533.0	534.2	537.0	539.1	545.2	545.2	546.3
145°	562.6	558.5	556.5	559.6	562.6	562.9	563.6	568.8	574.9	573.9	570.8
147.5°	588.2	585.1	584.1	587.2	587.2	587.5	588.2	593.3	598.4	599.4	596.4
150°	608.7	605.6	606.6	606.6	606.6	606.6	606.6	610.7	613.8	616.8	619.9
152.5°	625.0	622.0	622.0	623.0	624.0	624.0	624.0	625.0	628.1	632.2	637.3
155°	643.4	639.3	639.3	641.4	644.5	643.9	642.4	640.4	645.5	650.6	652.6
157.5°	660.8	657.8	657.8	658.8	660.8	660.5	659.8	658.8	662.9	664.9	664.9
160°	678.2	675.1	674.1	671.1	670.0	670.0	670.0	673.1	679.2	676.2	675.1
162.5°	688.4	684.4	684.4	680.3	676.2	676.8	678.2	682.3	686.4	685.4	683.3
165°	696.6	693.6	691.5	691.5	688.4	688.4	688.4	687.4	692.5	695.6	693.6
167.5°	705.8	702.8	699.7	701.7	703.8	702.9	700.7	693.6	699.7	703.8	703.8
170°	714.0	711.0	707.9	707.9	708.9	708.3	706.9	701.7	704.8	709.9	712.0
172.5°	715.0	713.0	711.0	708.9	705.8	705.8	705.8	704.8	707.9	709.9	712.0
175°	716.1	714.0	713.0	711.0	706.9	706.6	705.8	705.8	711.0	712.0	709.9
177.5°	723.2	721.2	716.1	715.0	713.0	712.4	711.0	709.9	715.0	717.1	714.0
180°	716.1	716.1	716.1	716.1	716.1	716.1	716.1	716.1	716.1	716.1	716.1



REPORT NUMBER:

CATALOG NUMBER: ENV-SA1F-740-U-SL4-HSS-ULG

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1177.8	1177.8	1177.8	1177.8	1177.8	1177.8	1177.8	1177.8	1177.8	1177.8	1177.8
2.5°	1164.5	1155.7	1138.0	1119.2	1095.9	1076.0	1069.3	1055.0	1048.3	1042.8	1042.8
5°	1132.4	1116.9	1079.3	1040.6	1002.9	963.1	926.5	892.2	875.6	852.4	863.4
7.5°	1105.9	1079.3	1026.2	965.3	887.8	809.2	748.3	695.2	650.9	636.5	626.5
10°	1087.1	1053.8	976.4	883.4	770.5	658.7	564.6	477.1	426.2	395.2	395.2
12.5°	1084.8	1042.8	942.0	799.2	636.5	484.9	368.6	285.6	244.6	225.8	224.7
15°	1092.6	1041.7	911.0	722.9	513.6	336.5	230.3	193.7	183.8	181.5	181.5
17.5°	1099.2	1040.6	874.5	636.5	378.6	221.4	182.7	176.0	173.8	172.7	172.7
20°	1105.9	1035.0	832.4	539.1	267.9	180.4	170.5	167.2	166.0	164.9	164.9
22.5°	1114.7	1029.5	789.3	428.4	198.1	168.3	162.7	159.4	158.3	158.3	158.3
25°	1126.9	1026.2	736.1	324.3	170.5	159.4	153.9	151.7	151.7	150.5	150.5
27.5°	1150.2	1029.5	678.6	232.5	159.4	150.5	147.2	145.0	145.0	143.9	143.9
30°	1182.3	1039.5	606.6	181.5	150.5	141.7	138.4	137.3	136.2	136.2	136.2
32.5°	1227.6	1055.0	528.0	155.0	139.5	132.8	129.5	128.4	128.4	128.4	127.3
35°	1297.4	1087.1	431.7	141.7	129.5	122.9	119.6	119.6	119.6	118.4	119.6
37.5°	1403.6	1139.1	334.3	130.6	118.4	112.9	110.7	109.6	109.6	109.6	109.6
40°	1537.6	1223.2	243.5	120.7	108.5	102.9	100.7	99.6	98.5	98.5	98.5
42.5°	1710.3	1316.2	177.1	109.6	99.6	94.1	91.9	89.7	87.5	86.3	86.3
45°	1889.6	1426.9	138.4	100.7	90.8	86.3	84.1	80.8	77.5	74.2	74.2
47.5°	2063.4	1512.1	118.4	90.8	83.0	78.6	76.4	72.0	66.4	63.1	63.1
50°	2173.0	1538.7	106.3	81.9	75.3	72.0	68.6	63.1	55.3	52.0	52.0
52.5°	2207.3	1490.0	95.2	74.2	68.6	65.3	60.9	53.1	45.4	41.0	41.0
55°	2220.6	1395.9	84.1	68.6	62.0	57.6	52.0	44.3	36.5	32.1	32.1
57.5°	2204.0	1263.1	75.3	62.0	55.3	50.9	44.3	35.4	27.7	24.4	24.4
60°	2147.5	1070.4	67.5	55.3	48.7	43.2	36.5	27.7	21.0	16.6	17.7
62.5°	1994.8	828.0	58.7	46.5	42.1	36.5	28.8	21.0	13.3	11.1	11.1
65°	1751.2	573.4	49.8	38.7	35.4	29.9	22.1	14.4	7.7	6.6	6.6
67.5°	1422.5	370.8	38.7	32.1	29.9	24.4	16.6	8.9	4.4	4.4	3.3
70°	893.3	183.8	31.0	24.4	24.4	18.8	12.2	5.5	3.3	3.3	3.3
71°	632.1	125.1	27.7	22.1	22.1	17.7	11.1	4.4	3.3	3.3	3.3
72.5°	285.6	78.6	23.2	19.9	18.8	14.4	10.0	4.4	4.4	4.4	4.4
75°	89.7	43.2	16.6	15.5	15.5	12.2	8.9	5.5	5.5	5.5	5.5
77.5°	59.8	33.2	11.1	10.0	12.2	12.2	8.9	6.6	6.6	6.6	6.6
80°	48.7	17.7	6.6	6.6	8.9	11.1	8.9	6.6	7.7	6.6	6.6
82.5°	47.6	8.9	2.2	3.3	5.5	6.6	6.6	5.5	6.6	6.6	6.6
85°	19.9	2.2	1.1	2.2	2.2	3.3	3.3	4.4	5.5	5.5	5.5
87.5°	0.0	0.0	0.0	0.0	1.1	1.1	2.2	2.2	3.3	4.4	4.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
92.5°	6.1	6.1	6.1	7.2	7.2	6.1	6.1	6.1	5.1	4.1	4.1
95°	7.2	7.2	7.2	8.2	7.2	7.2	7.2	7.2	6.1	5.1	5.1
97.5°	8.2	8.2	9.2	10.2	12.3	9.2	9.2	8.2	8.2	7.2	7.2
100°	19.4	19.4	23.5	26.6	29.7	21.5	12.3	10.2	9.2	8.2	8.2
102.5°	38.9	39.9	43.0	48.1	51.1	40.9	27.6	18.4	13.3	11.3	11.3
105°	62.4	62.4	66.5	71.6	73.7	64.4	49.1	36.8	27.6	22.5	21.5
107.5°	88.0	89.0	92.1	96.2	97.2	90.0	74.7	59.3	50.1	43.0	41.9



REPORT NUMBER:

CATALOG NUMBER: ENV-SA1F-740-U-SL4-HSS-ULG

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
110°	119.7	118.7	121.7	123.8	122.8	116.6	104.3	89.0	75.7	69.6	67.5
112.5°	150.4	150.4	152.4	153.4	151.4	146.3	137.1	123.8	108.4	101.3	101.3
115°	182.1	181.1	183.1	186.2	183.1	178.0	171.9	162.6	150.4	142.2	143.2
117.5°	213.8	212.8	214.8	219.9	215.8	209.7	206.6	201.5	193.3	188.2	188.2
120°	248.6	248.6	250.6	255.7	251.6	248.6	242.4	238.3	231.2	228.1	230.2
122.5°	283.4	282.3	284.4	289.5	285.4	283.4	277.2	273.1	267.0	266.0	269.0
125°	317.1	317.1	317.1	322.2	320.2	317.1	312.0	305.9	302.8	300.7	304.8
127.5°	355.0	352.9	353.9	353.9	352.9	347.8	346.8	340.6	336.6	336.6	337.6
130°	388.7	387.7	389.7	389.7	385.7	380.5	378.5	374.4	370.3	369.3	371.3
132.5°	424.5	423.5	423.5	425.5	420.4	414.3	413.3	410.2	402.0	403.0	405.1
135°	461.4	460.3	457.3	458.3	453.2	447.0	445.0	441.9	435.8	435.8	438.8
137.5°	493.1	492.0	486.9	485.9	483.9	478.7	474.6	470.6	469.5	467.5	470.6
140°	522.7	520.7	515.6	513.5	511.5	508.4	502.3	500.2	498.2	496.1	499.2
142.5°	548.3	546.3	545.2	545.2	539.1	537.0	533.0	529.9	528.9	526.8	529.9
145°	572.9	570.8	573.9	574.9	568.8	563.6	562.6	559.6	556.5	558.5	562.6
147.5°	598.4	596.4	599.4	598.4	593.3	588.2	587.2	587.2	584.1	585.1	588.2
150°	624.0	619.9	616.8	613.8	610.7	606.6	606.6	606.6	606.6	605.6	608.7
152.5°	642.4	637.3	632.2	628.1	625.0	624.0	624.0	623.0	622.0	622.0	625.0
155°	655.7	652.6	650.6	645.5	640.4	642.4	644.5	641.4	639.3	639.3	643.4
157.5°	670.0	664.9	664.9	662.9	658.8	659.8	660.8	658.8	657.8	657.8	660.8
160°	681.3	675.1	676.2	679.2	673.1	670.0	670.0	671.1	674.1	675.1	678.2
162.5°	689.5	683.3	685.4	686.4	682.3	678.2	676.2	680.3	684.4	684.4	688.4
165°	697.7	693.6	695.6	692.5	687.4	688.4	688.4	691.5	691.5	693.6	696.6
167.5°	709.9	703.8	703.8	699.7	693.6	700.7	703.8	701.7	699.7	702.8	705.8
170°	717.1	712.0	709.9	704.8	701.7	706.9	708.9	707.9	707.9	711.0	714.0
172.5°	717.1	712.0	709.9	707.9	704.8	705.8	705.8	708.9	711.0	713.0	715.0
175°	715.0	709.9	712.0	711.0	705.8	705.8	706.9	711.0	713.0	714.0	716.1
177.5°	718.1	714.0	717.1	715.0	709.9	711.0	713.0	715.0	716.1	721.2	723.2
180°	716.1	716.1	716.1	716.1	716.1	716.1	716.1	716.1	716.1	716.1	716.1

(END OF REPORT)