

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: P401142

Luminaire Tested: **ENV-SA1B-740-U-SLR-HSS**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401142
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-10)
Test Lab: INNOVATION CENTER
Issue Date: 5/20/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENV-SA1B-740-U-SLR-HSS
Description: ENTRI LED LUMINAIRE
(1) 70 CRI, 4000K, 450mA LIGHTSQUARE WITH 16 LEDS AND SPILL LIGHT
ELIMINATOR RIGHT OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2577 lumens
Efficiency: N/A
Efficacy: 101.5 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B1 - U0 - G1

Input Watts (W): 25.4
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

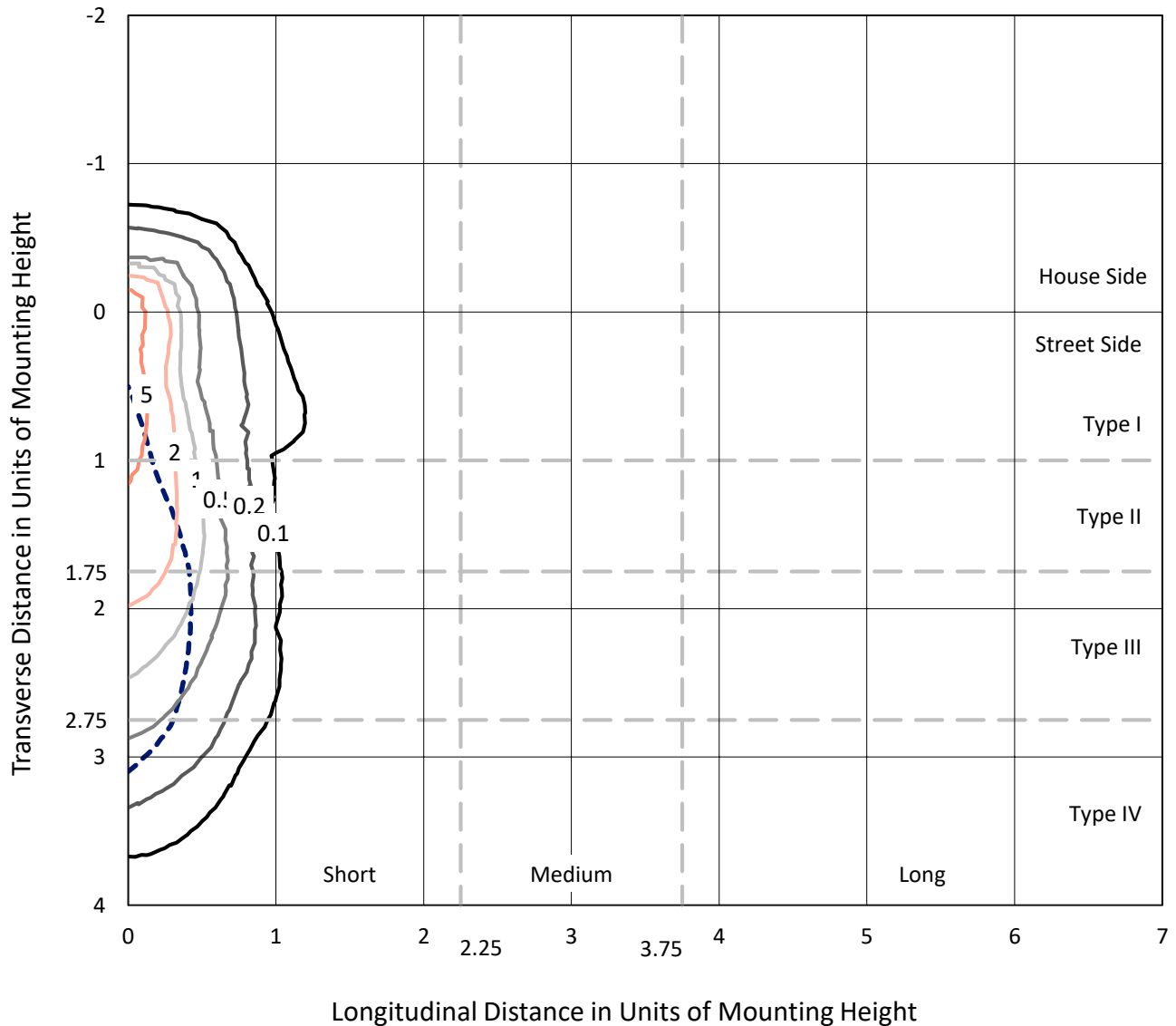


REPORT NUMBER: P401142

CATALOG NUMBER: ENV-SA1B-740-U-SLR-HSS

Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

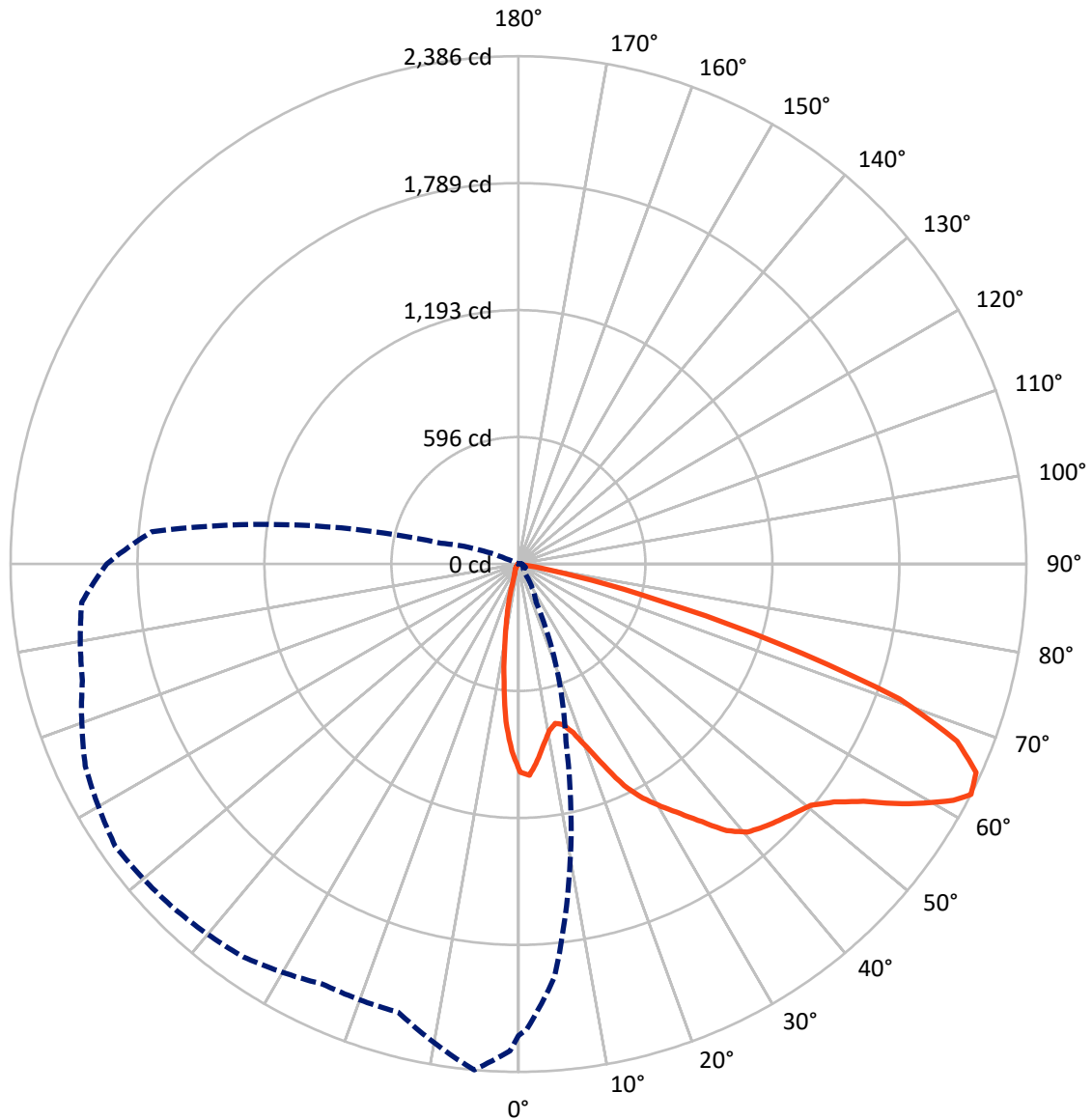


Based on 10 foot mounting height. Maximum calculated value = 9.8 fc
 Type IV - Short - Semi-Cutoff

REPORT NUMBER: P401142

CATALOG NUMBER: ENV-SA1B-740-U-SLR-HSS

Luminous Intensity Polar Plot



— Vertical Plane Through 355-Deg Lateral - - - Horizontal Cone Through 62.5-Deg Vertical

REPORT NUMBER: P401142

CATALOG NUMBER: ENV-SA1B-740-U-SLR-HSS

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	362.5	0.0	362.5
	% Fixture	14.1	0.0	14.1
Street Side	Lumens	2214.5	0.0	2214.5
	% Fixture	85.9	0.0	85.9
Total	Lumens	2577.0	0.0	2577.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	73.3	2.8
10°-20°	139.3	5.4
20°-30°	193.9	7.5
30°-40°	280.4	10.9
40°-50°	402.0	15.6
50°-60°	583.3	22.6
60°-70°	631.0	24.5
70°-80°	254.9	9.9
80°-90°	18.9	0.7
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°	2577.0	100.0
0°-180°	2577.0	100.0



REPORT NUMBER: P401142

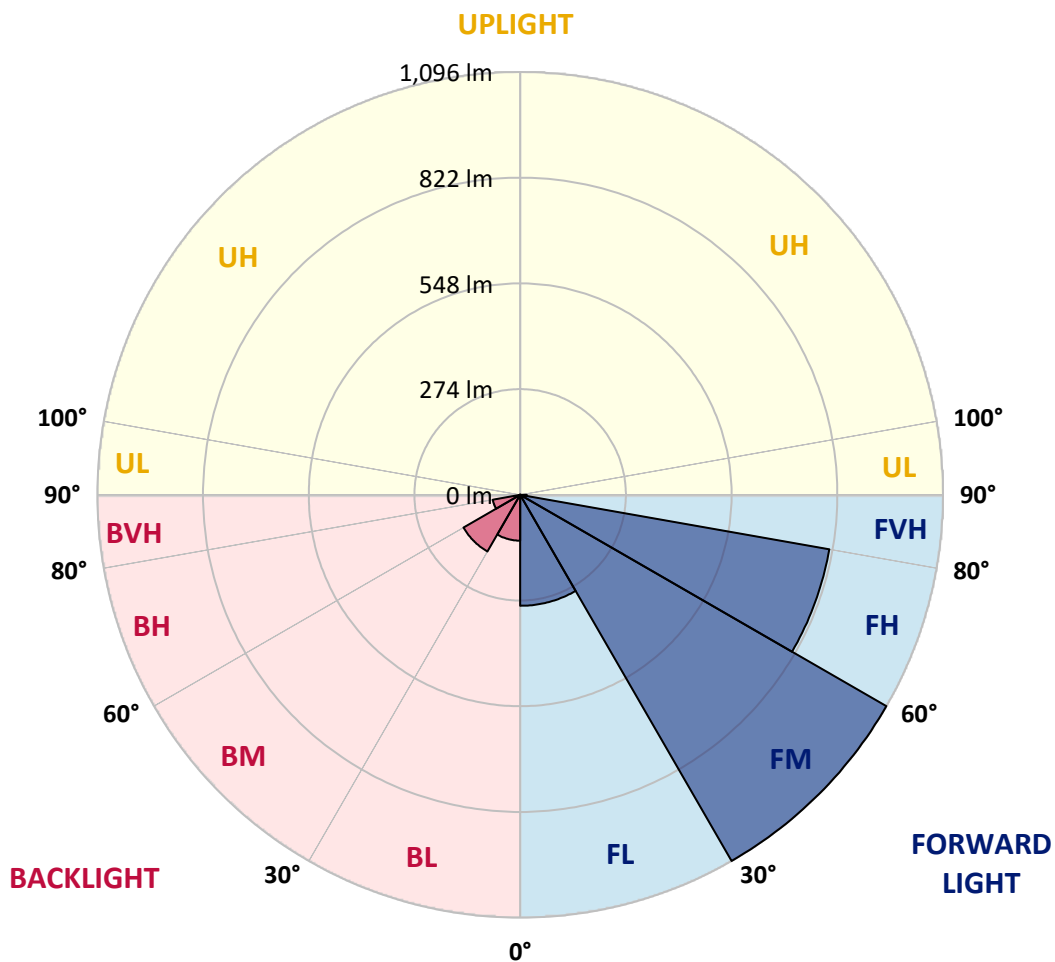
CATALOG NUMBER: ENV-SA1B-740-U-SLR-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	287.7	11.2			
FM	(30°-60°)	1096.1	42.5			
FH	(60°-80°)	813.8	31.6			G1/1800
FVH	(80°-90°)	17.0	0.7			G1/100
BL	(0°-30°)	118.9	4.6	B1/500		
BM	(30°-60°)	169.6	6.6	B0/220		
BH	(60°-80°)	72.1	2.8	B0/110		G0/110
BVH	(80°-90°)	1.9	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-G1

Type IV Short





REPORT NUMBER: P401142

CATALOG NUMBER: ENV-SA1B-740-U-SLR-HSS

CANDELA DISTRIBUTION (FULL):

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	977.5	977.5	977.5	977.5	977.5	977.5	977.5	977.5	977.5	977.5	977.5
2.5°	981.6	977.5	968.3	948.4	919.9	901.5	889.8	874.5	858.7	853.6	843.4
5°	895.9	889.3	876.5	826.6	781.7	736.8	704.7	674.1	663.9	643.5	655.8
7.5°	813.3	810.3	780.7	715.9	644.5	586.9	550.2	505.3	492.1	471.2	454.3
10°	748.6	746.0	710.3	625.7	548.7	500.7	471.7	442.6	413.5	384.0	360.5
12.5°	715.9	710.3	669.0	577.7	506.3	466.6	436.0	397.2	366.1	326.3	297.8
15°	721.0	715.9	668.5	570.1	486.0	430.9	385.5	339.6	295.8	256.5	228.4
17.5°	761.8	759.8	702.2	576.7	461.5	388.6	327.9	266.2	214.2	171.8	147.9
20°	841.4	835.2	751.6	591.0	436.0	339.6	256.5	180.5	137.2	108.1	97.9
22.5°	939.8	926.0	829.6	611.9	411.5	287.1	185.6	121.4	97.9	86.7	79.5
25°	1055.5	1056.0	926.5	639.9	387.0	238.1	130.0	96.4	82.6	74.4	68.3
27.5°	1149.4	1142.2	1013.7	668.0	360.5	195.3	109.1	84.1	72.4	63.7	60.2
30°	1218.7	1208.0	1071.3	687.4	326.3	165.2	97.9	80.1	68.3	58.6	54.1
32.5°	1290.1	1276.8	1123.3	698.1	305.9	150.9	86.7	69.9	61.2	57.1	51.0
35°	1373.7	1362.0	1181.0	697.1	295.2	142.8	78.5	63.2	52.0	45.4	41.3
37.5°	1467.0	1443.1	1240.6	692.5	287.6	138.7	71.4	58.6	48.4	41.3	36.2
40°	1547.1	1523.1	1295.7	686.3	282.5	134.6	67.3	55.6	45.9	38.2	33.1
42.5°	1609.8	1586.9	1347.2	678.7	279.9	125.9	69.3	53.5	43.9	36.2	30.6
45°	1663.9	1640.4	1408.4	677.7	278.9	119.8	68.3	53.0	42.8	33.7	28.6
47.5°	1726.6	1714.3	1489.0	694.5	274.8	115.2	62.7	57.1	42.3	32.6	27.0
50°	1819.4	1808.7	1594.5	744.5	268.7	110.7	57.1	62.7	42.3	31.6	25.5
52.5°	1949.4	1937.2	1760.7	809.7	263.1	105.6	51.5	60.7	42.8	30.1	24.5
55°	2084.0	2082.0	1917.8	879.1	258.0	94.3	45.4	54.6	41.8	28.0	22.9
57.5°	2189.6	2188.1	2035.6	926.0	248.3	76.0	41.3	45.4	38.8	25.5	20.9
60°	2232.9	2220.2	2048.3	926.0	225.9	62.7	37.7	35.7	39.3	22.9	18.4
61°	2232.9	2216.6	2025.4	912.2	214.7	59.7	35.7	33.1	40.3	21.9	17.3
62.5°	2215.6	2188.6	1946.9	862.8	196.8	59.7	32.6	29.6	36.7	20.9	15.8
65°	2138.6	2094.2	1762.8	750.1	178.5	61.2	28.0	25.0	26.5	17.8	13.8
67.5°	1948.4	1898.4	1524.1	593.5	163.7	64.8	23.5	21.9	20.4	15.8	12.2
70°	1605.2	1562.9	1243.7	444.6	152.0	65.8	20.4	18.4	17.3	13.8	10.7
72.5°	1026.0	956.1	776.6	301.4	121.9	57.1	16.8	17.3	15.8	11.2	8.7
75°	495.6	515.0	451.8	152.0	82.1	37.2	13.3	14.3	12.7	10.2	7.6
77.5°	221.8	217.7	215.7	38.8	20.9	12.7	8.2	9.7	10.2	9.2	6.6
80°	22.9	31.1	18.4	11.7	7.6	5.6	4.6	5.1	6.1	6.6	3.6
82.5°	1.0	0.5	0.5	1.5	1.5	1.0	0.0	0.0	1.0	1.0	0.5
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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



REPORT NUMBER: P401142

CATALOG NUMBER: ENV-SA1B-740-U-SLR-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	977.5	977.5	977.5	977.5	977.5	977.5	977.5	977.5	977.5	977.5	977.5
2.5°	834.2	848.0	841.9	840.3	848.5	844.4	856.7	857.2	866.3	878.6	886.2
5°	655.8	645.0	666.5	680.7	698.6	693.0	714.4	711.8	723.6	742.9	735.3
7.5°	455.4	456.9	468.1	480.9	528.8	538.5	545.6	551.2	550.7	555.3	563.5
10°	348.3	339.6	332.0	349.8	368.7	389.6	392.6	400.3	379.4	388.0	392.1
12.5°	285.0	274.8	258.0	248.8	253.4	265.7	270.8	275.4	263.1	263.6	272.8
15°	216.2	202.4	195.8	183.6	179.0	178.0	180.5	173.9	172.4	166.7	170.3
17.5°	140.7	136.7	133.1	130.5	127.0	125.9	116.8	101.0	91.8	89.7	89.7
20°	93.8	90.8	90.8	95.9	94.3	90.3	78.0	64.8	58.1	56.1	57.1
22.5°	77.0	75.0	71.9	71.9	73.9	70.9	59.7	50.0	45.4	45.4	45.4
25°	66.8	65.8	62.7	59.7	60.7	58.1	48.4	42.3	39.3	38.8	39.3
27.5°	58.6	58.1	54.6	51.5	51.5	49.5	41.8	36.2	34.2	33.1	33.7
30°	53.0	52.0	47.9	45.4	44.9	42.8	35.7	31.6	29.6	29.1	29.1
32.5°	49.0	46.9	43.3	40.8	39.3	36.2	31.1	27.0	25.0	24.5	24.5
35°	39.3	39.3	37.7	36.2	34.2	29.6	26.0	22.4	20.4	19.9	19.9
37.5°	34.2	32.1	29.6	30.1	29.1	25.0	21.4	17.8	16.3	15.8	15.8
40°	31.1	28.6	25.0	23.5	24.0	21.9	17.8	13.8	11.7	12.2	11.7
42.5°	28.0	26.0	21.9	18.4	17.8	18.4	13.8	9.7	8.2	8.2	8.2
45°	26.0	24.0	19.4	15.3	12.7	14.3	10.7	6.6	5.1	5.1	5.1
47.5°	24.5	22.4	17.3	12.7	9.2	9.7	7.6	4.1	3.1	2.0	2.5
50°	23.5	20.9	15.8	10.2	6.6	5.6	5.1	2.0	0.5	0.5	0.0
52.5°	21.9	19.9	14.3	8.7	5.1	3.6	2.5	0.5	0.0	0.0	0.0
55°	20.9	18.4	12.7	7.6	4.1	2.0	0.5	0.0	0.0	0.0	0.0
57.5°	18.9	16.8	11.2	6.1	3.1	1.0	0.0	0.0	0.0	0.0	0.0
60°	16.8	15.3	9.7	4.6	2.0	0.0	0.0	0.0	0.0	0.0	0.0
61°	15.8	14.3	9.2	4.1	1.5	0.0	0.0	0.0	0.0	0.0	0.0
62.5°	14.8	13.3	8.2	3.1	1.0	0.0	0.0	0.0	0.0	0.0	0.0
65°	12.7	11.2	7.1	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
67.5°	11.2	10.2	6.1	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70°	9.7	8.7	4.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
72.5°	8.2	7.6	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	7.1	6.1	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	5.6	5.1	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	3.1	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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



REPORT NUMBER: P401142

CATALOG NUMBER: ENV-SA1B-740-U-SLR-HSS

CANDELA DISTRIBUTION (continued):

	185°	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°
0°	977.5	977.5	977.5	977.5	977.5	977.5	977.5	977.5	977.5	977.5	977.5
2.5°	893.4	911.2	928.0	949.5	961.2	993.3	1016.3	1035.6	1050.9	1054.0	1066.2
5°	755.7	780.7	797.0	841.9	866.9	920.4	961.7	1010.7	1054.5	1078.5	1100.4
7.5°	569.1	581.3	609.4	654.2	713.4	759.8	829.6	891.3	970.4	1013.7	1054.5
10°	401.8	413.0	454.3	501.2	555.3	633.3	718.0	799.0	879.1	934.7	982.6
12.5°	282.5	319.2	360.0	419.7	472.7	529.8	620.1	714.9	814.8	867.9	919.9
15°	185.6	218.2	274.8	349.8	416.1	471.7	555.8	667.0	793.9	853.1	902.6
17.5°	91.8	115.8	165.7	246.3	334.5	422.2	523.7	658.3	821.0	887.8	934.2
20°	57.6	64.8	83.1	139.2	240.7	370.2	499.7	675.6	894.4	968.3	998.4
22.5°	46.4	48.4	55.6	73.9	146.9	305.9	478.8	699.1	975.0	1065.2	1096.3
25°	39.8	41.3	45.4	54.6	85.2	229.5	453.3	740.4	1068.8	1177.9	1185.6
27.5°	34.2	35.7	39.3	46.4	60.7	154.5	416.6	788.8	1181.0	1276.8	1271.7
30°	29.1	31.1	34.7	39.8	47.9	104.5	348.3	837.8	1263.6	1340.6	1332.4
32.5°	25.0	26.5	29.6	34.2	39.8	71.9	261.6	869.9	1332.4	1400.7	1382.9
35°	20.4	21.9	24.5	28.6	32.1	51.0	197.8	870.9	1403.3	1475.2	1430.3
37.5°	16.3	17.3	19.9	23.5	26.5	39.8	145.3	854.1	1491.0	1572.1	1484.4
40°	12.2	13.8	16.3	19.4	22.4	33.7	108.6	813.3	1576.7	1669.0	1549.6
42.5°	8.2	10.2	12.7	15.8	21.4	27.0	76.5	745.5	1646.0	1755.1	1613.4
45°	5.1	6.6	9.7	13.3	21.9	21.4	51.0	664.4	1695.5	1820.9	1656.7
47.5°	2.5	4.1	7.1	12.7	19.4	15.8	31.6	586.9	1740.3	1859.2	1676.6
50°	0.5	1.5	5.1	15.8	16.3	11.7	20.9	538.5	1763.8	1849.5	1674.6
52.5°	0.0	0.0	3.6	15.3	11.7	9.2	16.3	531.3	1800.5	1862.2	1709.7
55°	0.0	0.0	1.5	6.6	6.6	7.6	14.3	521.6	1865.8	1938.2	1815.8
57.5°	0.0	0.0	0.0	3.1	4.1	6.1	13.3	496.1	1934.6	2018.8	1944.8
60°	0.0	0.0	0.0	1.5	2.5	5.1	11.7	438.0	1871.4	2019.3	2051.9
61°	0.0	0.0	0.0	1.5	2.0	4.6	10.7	417.6	1814.8	1986.6	2065.2
62.5°	0.0	0.0	0.0	0.5	1.5	3.6	9.2	377.3	1730.1	1934.1	2059.0
65°	0.0	0.0	0.0	0.0	0.5	2.0	7.1	304.9	1588.9	1802.0	1988.7
67.5°	0.0	0.0	0.0	0.0	0.0	0.5	4.6	214.7	1386.0	1652.6	1838.2
70°	0.0	0.0	0.0	0.0	0.0	0.0	2.0	124.4	1116.7	1399.2	1574.6
72.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.0	56.6	724.6	1080.5	1242.2
75°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	24.0	446.2	780.7	928.0
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.7	302.4	519.6	624.6
80°	0.0	1.0	0.5	0.0	0.0	0.0	0.0	4.1	186.1	324.3	352.4
82.5°	0.0	0.5	0.5	0.0	0.0	0.0	0.0	0.0	96.4	229.0	233.5
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	40.3	48.4
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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



REPORT NUMBER: P401142

CATALOG NUMBER: ENV-SA1B-740-U-SLR-HSS

CANDELA DISTRIBUTION (continued):

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	977.5	977.5	977.5	977.5	977.5	977.5	977.5	977.5	977.5	977.5
2.5°	1077.5	1080.5	1082.6	1079.0	1057.1	1044.8	1020.3	993.3	984.1	981.6
5°	1140.2	1157.5	1154.5	1131.0	1092.8	1045.8	987.7	927.5	904.6	895.9
7.5°	1127.9	1173.3	1182.0	1157.5	1092.8	1010.7	926.5	855.1	822.0	813.3
10°	1065.7	1122.8	1150.4	1142.7	1082.0	987.2	883.7	796.0	759.8	748.6
12.5°	1005.6	1060.6	1078.0	1084.1	1050.9	968.8	862.3	767.9	730.2	715.9
15°	965.3	999.4	998.4	1009.6	1007.1	961.7	876.0	782.2	739.9	721.0
17.5°	952.0	941.8	928.6	937.7	955.6	963.7	920.9	833.2	783.7	761.8
20°	960.2	910.2	881.1	880.6	918.4	980.6	986.7	917.3	870.9	841.4
22.5°	1002.0	894.4	849.5	850.5	896.9	1005.6	1062.7	1027.5	976.5	939.8
25°	1063.7	897.5	837.3	843.4	894.9	1027.5	1144.8	1152.9	1087.7	1055.5
27.5°	1126.4	924.0	837.8	844.4	903.6	1039.2	1191.7	1245.2	1189.1	1149.4
30°	1170.3	956.6	847.0	854.1	917.3	1048.4	1209.5	1321.2	1263.1	1218.7
32.5°	1211.6	990.3	861.8	868.9	944.9	1067.3	1243.2	1397.7	1333.9	1290.1
35°	1251.8	1023.4	889.3	902.0	989.2	1101.4	1277.3	1487.4	1434.4	1373.7
37.5°	1286.5	1060.1	936.7	963.7	1049.4	1153.9	1323.7	1589.4	1534.8	1467.0
40°	1315.6	1103.5	1034.6	1064.7	1141.2	1209.5	1375.2	1656.2	1620.0	1547.1
42.5°	1339.0	1179.9	1174.8	1217.2	1270.7	1273.3	1390.0	1688.3	1674.6	1609.8
45°	1378.3	1317.1	1358.9	1428.3	1424.7	1349.7	1386.0	1717.9	1718.9	1663.9
47.5°	1442.6	1489.0	1609.8	1656.7	1632.8	1454.3	1390.0	1747.0	1769.9	1726.6
50°	1534.3	1683.7	1841.8	1904.0	1834.2	1559.3	1426.2	1781.6	1851.0	1819.4
52.5°	1612.9	1831.1	2056.0	2111.6	2016.2	1671.5	1510.9	1856.6	1959.6	1949.4
55°	1725.0	1958.1	2208.4	2251.3	2174.8	1798.5	1624.6	1966.7	2078.9	2084.0
57.5°	1839.8	2072.8	2307.9	2351.2	2293.1	1956.5	1786.2	2124.8	2191.1	2189.6
60°	1967.3	2179.9	2352.8	2376.7	2343.6	2114.6	1960.1	2269.6	2268.1	2232.9
61°	2040.2	2214.1	2349.7	2356.8	2324.7	2161.0	2049.9	2325.2	2279.3	2232.9
62.5°	2120.7	2245.2	2312.0	2288.0	2253.3	2177.3	2179.9	2385.9	2287.0	2215.6
65°	2202.3	2167.1	2138.1	2023.3	1990.7	2027.4	2289.5	2363.0	2240.6	2138.6
67.5°	2062.6	1857.1	1794.4	1679.2	1550.1	1700.1	2185.5	2222.7	2084.0	1948.4
70°	1685.8	1364.5	1290.1	1286.0	1193.2	1357.9	1927.5	1900.5	1729.6	1605.2
72.5°	1321.2	931.1	829.6	853.1	834.7	1012.2	1576.7	1275.3	1109.1	1026.0
75°	1035.6	661.9	571.1	567.0	547.1	689.4	1154.5	672.1	554.8	495.6
77.5°	683.3	476.8	475.2	439.0	423.7	373.8	518.1	269.2	219.8	221.8
80°	393.7	292.2	342.7	271.8	272.3	219.3	209.6	39.3	31.6	22.9
82.5°	225.9	140.2	106.1	41.8	87.7	87.7	16.8	0.5	0.5	1.0
85°	21.9	6.6	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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

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