

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: **ENT-SA1D-740-U-SL3-HSS-ULG**

Issue Date: 3/30/2022

Test Information

Test Method: LM-79-08
Report Number:
REPORT IS A COMBINATION OF REPORTS P401490 AND P226775
Test Lab: INNOVATION CENTER
Issue Date: 3/30/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENT-SA1D-740-U-SL3-HSS-ULG
Description: ENTRI LED LUMINAIRE WITH UPLIGHT
(1) 70 CRI, 4000K, 800mA LIGHTSQUARE WITH 16 LEDS AND TYPE III SPILL
LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6504.9 lumens
Efficiency: N/A
Efficacy: 108.8 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 0.5' x L: 0.5' x H: 0.1')
IES Classification: Type III - Short
BUG Rating: B1 - U5 - G1

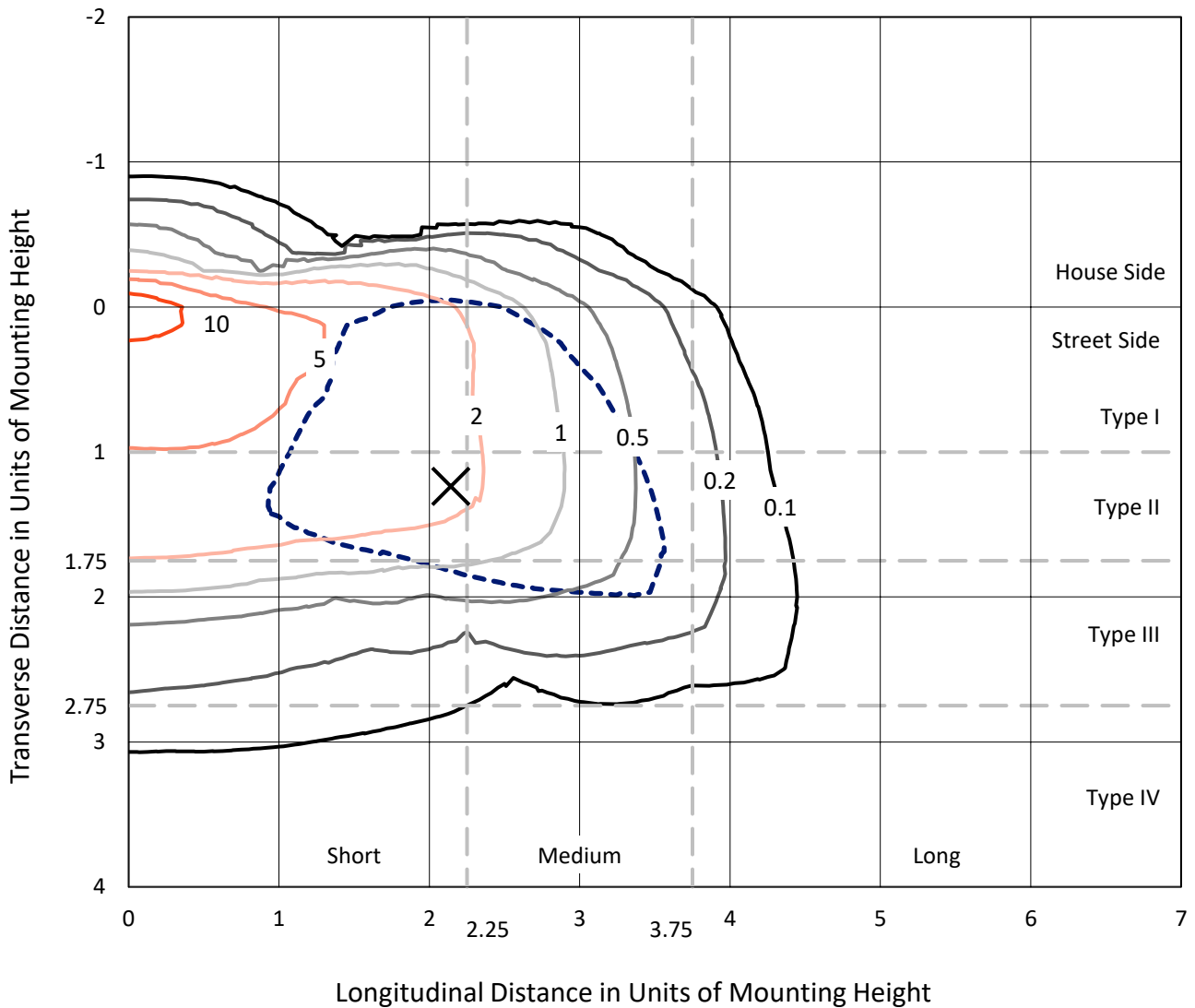
Input Watts (W): 59.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



REPORT NUMBER:
 CATALOG NUMBER: ENT-SA1D-740-U-SL3-HSS-ULG

Iso-Footcandle Lines of Horizontal Illumination

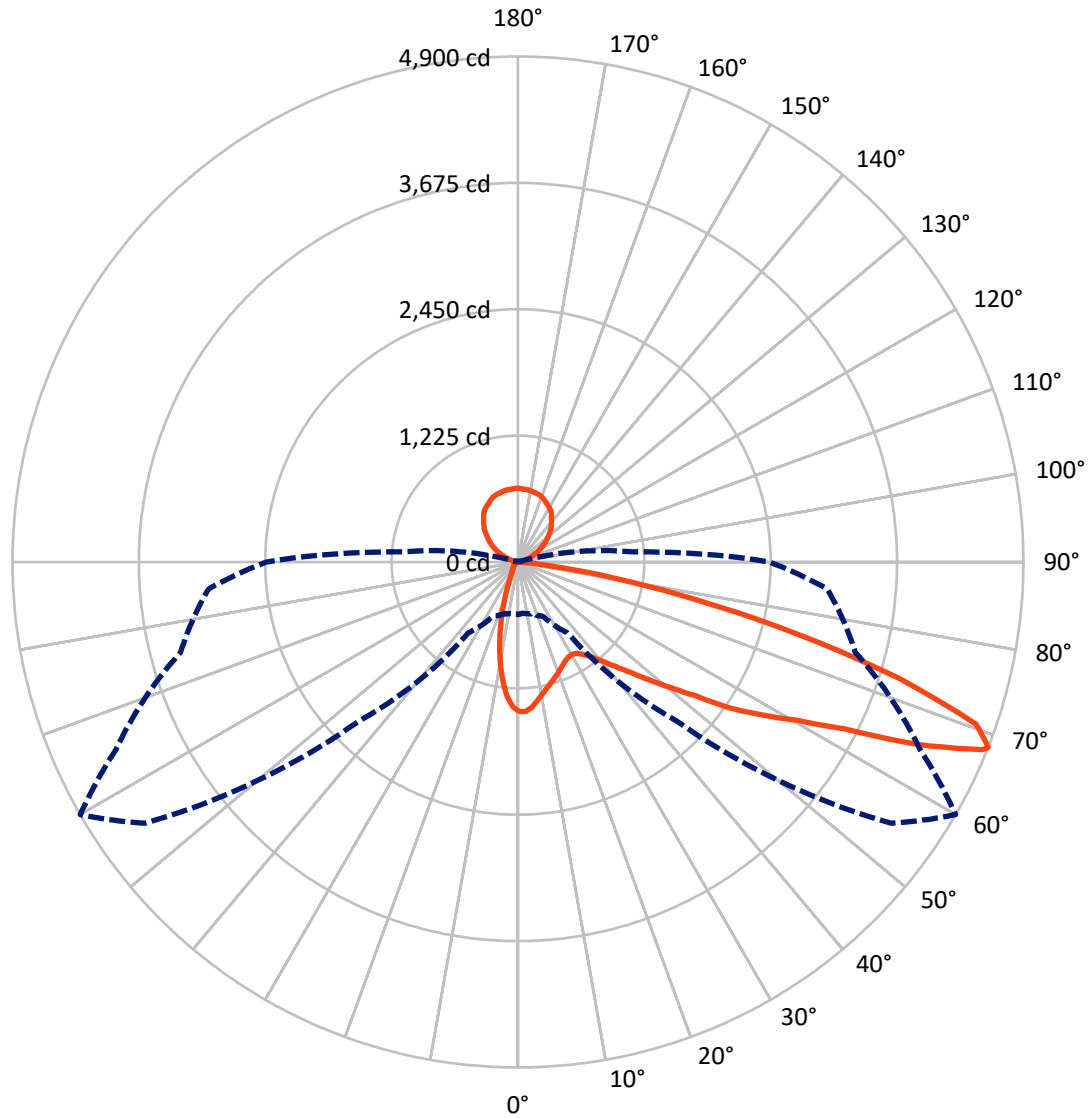
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 14.5 fc
 Type III - Short - N/A

REPORT NUMBER:
CATALOG NUMBER: ENT-SA1D-740-U-SL3-HSS-ULG

Luminous Intensity Polar Plot



— Vertical Plane Through 60-Deg Lateral - - - Horizontal Cone Through 68-Deg Vertical

REPORT NUMBER:
 CATALOG NUMBER: ENT-SA1D-740-U-SL3-HSS-ULG

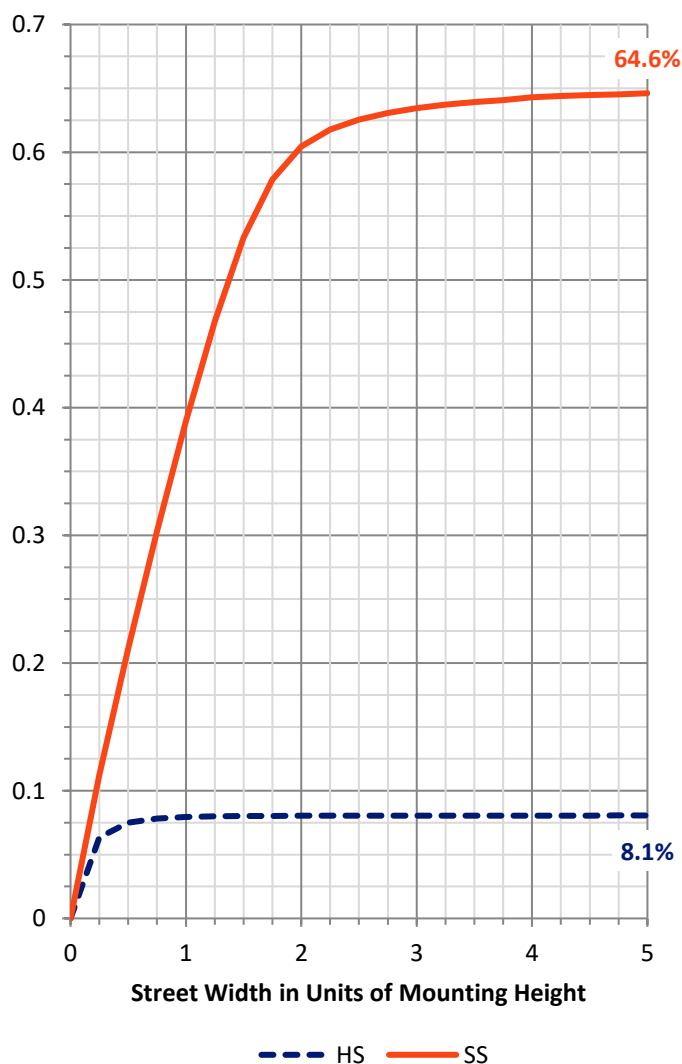
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	528.9	887.0	1415.9
	% Fixture	8.1	13.6	21.8
Street Side	Lumens	4202.1	887.0	5089.0
	% Fixture	64.6	13.6	78.2
Total	Lumens	4731.0	1773.9	6504.9
	% Fixture	72.7	27.3	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	117.5	1.8
10°-20°	239.7	3.7
20°-30°	315.6	4.9
30°-40°	435.5	6.7
40°-50°	660.1	10.1
50°-60°	1065.2	16.4
60°-70°	1265.4	19.5
70°-80°	596.5	9.2
80°-90°	35.6	0.5
90°-100°	8.4	0.1
100°-110°	58.7	0.9
110°-120°	169.9	2.6
120°-130°	279.4	4.3
130°-140°	344.6	5.3
140°-150°	352.5	5.4
150°-160°	297.0	4.6
160°-170°	195.5	3.0
170°-180°	67.8	1.0
0°-90°	4731.0	72.7
0°-180°	6504.9	100.0

Coefficient of Utilization

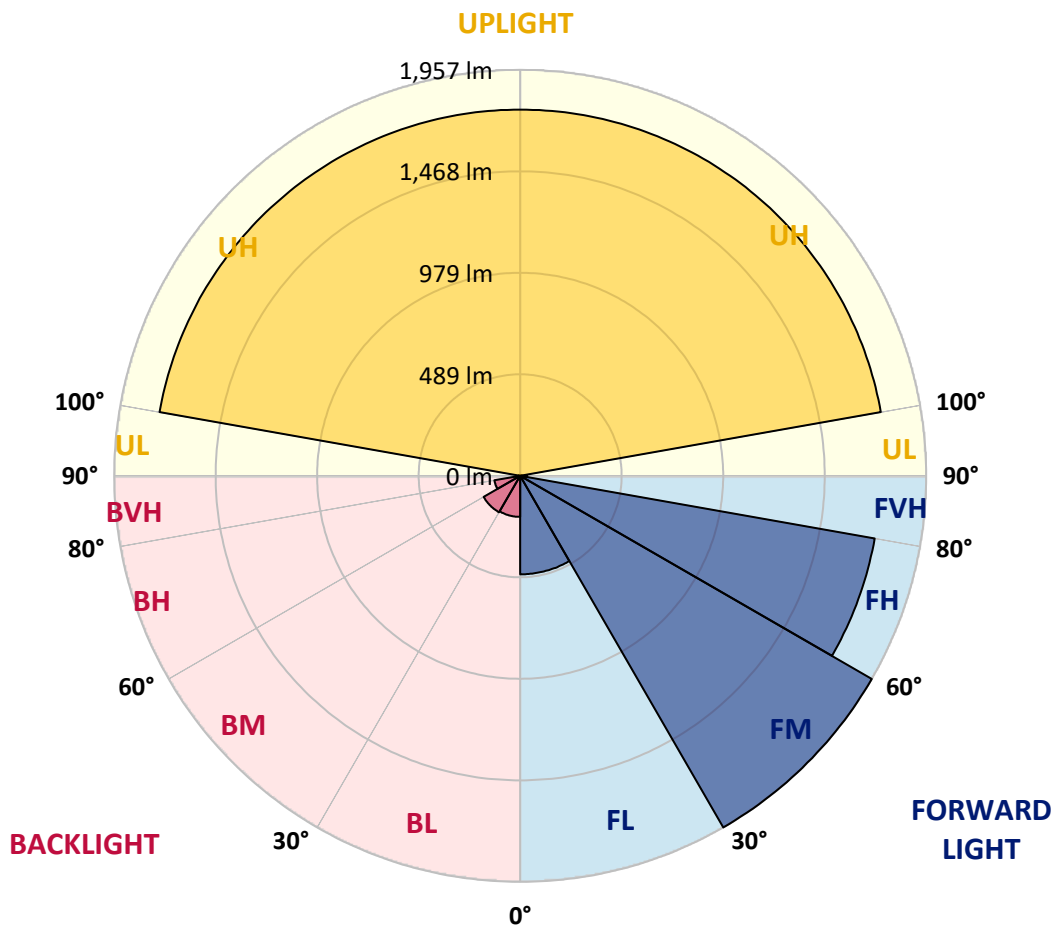


REPORT NUMBER:
 CATALOG NUMBER: ENT-SA1D-740-U-SL3-HSS-ULG

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	474.8	7.3			
FM (30°-60°)	1957.5	30.1			
FH (60°-80°)	1735.6	26.7			G1/1800
FVH (80°-90°)	34.1	0.5			G1/100
BL (0°-30°)	197.9	3.0	B1/500		
BM (30°-60°)	203.3	3.1	B0/220		
BH (60°-80°)	126.2	1.9	B1/500		G1/500
BVH (80°-90°)	1.5	0.0			G0/10
UL (90°-100°)	8.4	0.1		U1/10	
UH (100°-180°)	1765.5	27.1		U5	

BUG Rating: B1-U5-G1
 Type III Short





REPORT NUMBER:

CATALOG NUMBER: ENT-SA1D-740-U-SL3-HSS-ULG

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	60°	65°	75°	85°
0°	1448.1	1448.1	1448.1	1448.1	1448.1	1448.1	1448.1	1448.1	1448.1	1448.1	1448.1
2.5°	1435.3	1432.1	1440.9	1443.3	1445.7	1450.5	1449.7	1450.5	1451.3	1449.7	1440.1
5°	1337.3	1342.9	1351.0	1361.4	1371.8	1395.9	1405.6	1415.2	1421.6	1426.4	1417.6
7.5°	1241.0	1252.2	1258.7	1277.9	1294.0	1318.9	1339.7	1356.6	1372.7	1390.3	1381.5
10°	1163.9	1168.0	1173.6	1191.2	1215.3	1253.0	1280.3	1301.2	1320.5	1350.2	1342.9
12.5°	1088.5	1090.9	1102.1	1121.4	1146.3	1192.8	1229.0	1253.0	1274.7	1311.6	1312.4
15°	1033.1	1033.9	1041.1	1058.8	1087.7	1137.5	1184.0	1210.5	1241.0	1286.0	1288.4
17.5°	997.0	996.2	997.8	1009.0	1036.3	1083.7	1139.9	1171.2	1207.3	1265.1	1267.5
20°	985.7	984.1	980.9	978.5	995.4	1036.3	1099.7	1134.2	1176.8	1249.8	1250.6
22.5°	995.4	992.2	984.9	971.3	976.1	1002.6	1055.6	1097.3	1149.5	1241.8	1236.2
25°	1018.7	1018.7	1009.0	987.3	976.1	981.7	1024.3	1064.4	1122.2	1237.8	1225.8
27.5°	1057.2	1055.6	1042.7	1020.3	999.4	984.1	1005.0	1042.7	1102.1	1242.6	1220.9
30°	1103.7	1098.9	1085.3	1069.2	1043.5	1010.6	1009.0	1037.1	1092.5	1257.9	1224.1
32.5°	1147.9	1147.9	1142.3	1127.0	1102.1	1058.8	1033.9	1056.4	1104.5	1282.7	1234.6
35°	1202.5	1201.7	1203.3	1197.7	1176.0	1130.2	1090.1	1101.3	1141.5	1324.5	1259.5
37.5°	1245.8	1246.6	1260.3	1269.9	1260.3	1212.1	1170.4	1170.4	1204.1	1387.1	1302.0
40°	1288.4	1290.0	1315.7	1343.8	1346.2	1307.6	1267.5	1266.7	1286.0	1464.2	1367.8
42.5°	1326.9	1333.3	1370.2	1418.4	1446.5	1420.8	1391.1	1381.5	1391.1	1580.6	1474.6
45°	1367.8	1380.7	1432.1	1501.9	1547.6	1548.4	1537.2	1526.0	1530.8	1711.4	1617.5
47.5°	1420.8	1435.3	1499.5	1585.4	1672.1	1694.5	1705.0	1701.0	1688.1	1876.8	1802.1
50°	1506.7	1520.4	1580.6	1676.9	1795.7	1876.8	1904.9	1909.7	1892.8	2059.8	2011.6
52.5°	1652.8	1660.8	1717.0	1793.3	1926.5	2078.2	2152.1	2152.9	2115.2	2274.1	2238.0
55°	1809.3	1830.2	1896.0	1984.3	2121.6	2291.8	2476.4	2496.5	2380.1	2461.9	2403.3
57.5°	1811.7	1831.8	1941.0	2110.3	2397.7	2623.3	2787.8	2802.3	2673.1	2612.9	2559.1
60°	1620.7	1631.1	1782.8	2030.9	2496.5	3070.4	3142.6	3121.0	2878.6	2768.6	2754.1
62.5°	1143.9	1148.7	1328.5	1655.2	2278.1	3283.9	3682.9	3566.5	3170.7	2998.2	3046.3
65°	720.0	717.6	792.3	1053.2	1694.5	3073.6	4350.7	4265.7	3707.8	3285.5	3274.3
67.5°	531.4	518.6	538.6	619.7	968.1	2413.0	4473.6	4857.3	4219.1	3405.1	3076.8
68°	509.7	498.5	519.4	582.0	837.2	2184.2	4414.2	4899.8	4300.2	3385.9	3009.4
70°	432.7	422.2	439.9	487.3	582.8	1417.6	3894.8	4711.2	4374.0	3222.1	2652.2
72.5°	307.4	313.1	359.6	418.2	493.7	727.3	2868.1	3869.1	3762.3	2865.7	2018.0
75°	182.2	192.7	253.7	337.1	453.5	480.0	1850.3	2812.7	2760.6	1984.3	1093.3
77.5°	64.2	68.2	126.0	224.8	374.1	380.5	1030.7	1768.4	1644.8	810.7	322.7
80°	23.3	23.3	46.6	125.2	241.6	290.6	547.5	944.0	649.4	210.3	89.1
82.5°	4.0	4.0	10.4	42.5	106.8	154.9	254.5	335.5	192.7	46.6	44.1
85°	0.0	0.0	0.0	0.0	1.6	1.6	74.7	75.5	35.3	6.4	19.3
87.5°	0.0	0.0	0.0	0.0	0.0	0.8	1.6	1.6	1.6	1.6	2.4
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°	4.1	4.1	5.1	6.1	6.1	6.1	7.2	7.2	7.2	6.1	6.1
95°	5.1	5.1	6.1	7.2	7.2	7.2	7.2	7.7	8.2	7.2	7.2
97.5°	7.2	7.2	8.2	8.2	9.2	9.2	12.3	11.3	10.2	9.2	8.2
100°	8.2	8.2	9.2	10.2	12.3	21.5	29.7	28.1	26.6	23.5	19.4
102.5°	11.3	11.3	13.3	18.4	27.6	40.9	51.1	49.6	48.1	43.0	39.9
105°	21.5	22.5	27.6	36.8	49.1	64.4	73.7	72.6	71.6	66.5	62.4
107.5°	41.9	43.0	50.1	59.3	74.7	90.0	97.2	96.7	96.2	92.1	89.0



REPORT NUMBER:

CATALOG NUMBER: ENT-SA1D-740-U-SL3-HSS-ULG

CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	60°	65°	75°	85°
110°	67.5	69.6	75.7	89.0	104.3	116.6	122.8	123.3	123.8	121.7	118.7
112.5°	101.3	101.3	108.4	123.8	137.1	146.3	151.4	152.4	153.4	152.4	150.4
115°	143.2	142.2	150.4	162.6	171.9	178.0	183.1	184.6	186.2	183.1	181.1
117.5°	188.2	188.2	193.3	201.5	206.6	209.7	215.8	217.9	219.9	214.8	212.8
120°	230.2	228.1	231.2	238.3	242.4	248.6	251.6	253.7	255.7	250.6	248.6
122.5°	269.0	266.0	267.0	273.1	277.2	283.4	285.4	287.4	289.5	284.4	282.3
125°	304.8	300.7	302.8	305.9	312.0	317.1	320.2	321.2	322.2	317.1	317.1
127.5°	337.6	336.6	336.6	340.6	346.8	347.8	352.9	353.4	353.9	353.9	352.9
130°	371.3	369.3	370.3	374.4	378.5	380.5	385.7	387.7	389.7	389.7	387.7
132.5°	405.1	403.0	402.0	410.2	413.3	414.3	420.4	423.0	425.5	423.5	423.5
135°	438.8	435.8	435.8	441.9	445.0	447.0	453.2	455.7	458.3	457.3	460.3
137.5°	470.6	467.5	469.5	470.6	474.6	478.7	483.9	484.9	485.9	486.9	492.0
140°	499.2	496.1	498.2	500.2	502.3	508.4	511.5	512.5	513.5	515.6	520.7
142.5°	529.9	526.8	528.9	529.9	533.0	537.0	539.1	542.2	545.2	545.2	546.3
145°	562.6	558.5	556.5	559.6	562.6	563.6	568.8	571.8	574.9	573.9	570.8
147.5°	588.2	585.1	584.1	587.2	587.2	588.2	593.3	595.9	598.4	599.4	596.4
150°	608.7	605.6	606.6	606.6	606.6	606.6	610.7	612.2	613.8	616.8	619.9
152.5°	625.0	622.0	622.0	623.0	624.0	624.0	625.0	626.6	628.1	632.2	637.3
155°	643.4	639.3	639.3	641.4	644.5	642.4	640.4	642.9	645.5	650.6	652.6
157.5°	660.8	657.8	657.8	658.8	660.8	659.8	658.8	660.8	662.9	664.9	664.9
160°	678.2	675.1	674.1	671.1	670.0	670.0	673.1	676.2	679.2	676.2	675.1
162.5°	688.4	684.4	684.4	680.3	676.2	678.2	682.3	684.4	686.4	685.4	683.3
165°	696.6	693.6	691.5	691.5	688.4	688.4	687.4	690.0	692.5	695.6	693.6
167.5°	705.8	702.8	699.7	701.7	703.8	700.7	693.6	696.6	699.7	703.8	703.8
170°	714.0	711.0	707.9	707.9	708.9	706.9	701.7	703.3	704.8	709.9	712.0
172.5°	715.0	713.0	711.0	708.9	705.8	705.8	704.8	706.3	707.9	709.9	712.0
175°	716.1	714.0	713.0	711.0	706.9	705.8	705.8	708.4	711.0	712.0	709.9
177.5°	723.2	721.2	716.1	715.0	713.0	711.0	709.9	712.5	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: ENT-SA1D-740-U-SL3-HSS-ULG

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1448.1	1448.1	1448.1	1448.1	1448.1	1448.1	1448.1	1448.1	1448.1	1448.1	1448.1
2.5°	1436.1	1434.5	1425.6	1409.6	1395.9	1373.5	1369.4	1347.8	1339.7	1333.3	1339.7
5°	1411.2	1402.4	1372.7	1336.5	1287.6	1229.8	1196.1	1149.5	1139.9	1114.2	1129.4
7.5°	1370.2	1350.2	1294.8	1216.9	1127.0	1038.7	971.3	906.3	850.9	831.6	826.0
10°	1326.9	1298.8	1205.7	1085.3	955.2	819.6	719.2	625.3	573.1	524.2	522.6
12.5°	1286.0	1243.4	1108.6	940.8	759.4	598.0	468.0	369.3	307.4	273.7	282.6
15°	1253.0	1196.1	1010.6	796.3	566.7	385.3	264.9	201.5	179.8	169.4	171.0
17.5°	1220.9	1145.5	915.9	645.4	403.8	237.6	171.8	150.1	143.7	141.3	139.7
20°	1192.0	1096.5	816.4	508.9	266.5	164.6	141.3	134.1	131.6	130.0	130.0
22.5°	1163.1	1045.1	716.8	377.3	182.2	134.9	126.8	123.6	122.0	119.6	119.6
25°	1136.7	995.4	617.3	264.1	139.7	120.4	114.8	111.6	108.4	106.0	106.0
27.5°	1116.6	957.6	525.0	187.0	117.2	108.4	102.7	97.1	93.1	89.9	89.9
30°	1103.7	920.7	435.9	141.3	104.4	96.3	89.1	81.9	75.5	71.4	70.6
32.5°	1096.5	890.2	353.2	115.6	93.1	84.3	75.5	67.4	60.2	55.4	55.4
35°	1099.7	866.1	270.5	97.9	84.3	73.9	64.2	54.6	48.2	44.1	43.3
37.5°	1120.6	852.5	201.5	86.7	75.5	64.2	54.6	45.0	38.5	35.3	34.5
40°	1159.9	855.7	153.3	78.7	69.0	56.2	45.0	36.9	31.3	28.1	28.1
42.5°	1239.4	879.0	121.2	72.2	61.8	48.2	37.7	30.5	25.7	23.3	22.5
45°	1344.6	923.1	99.5	66.6	54.6	40.9	32.1	25.7	20.9	18.5	18.5
47.5°	1503.5	993.8	85.9	61.0	47.4	34.5	26.5	20.9	16.1	14.4	13.6
50°	1687.3	1092.5	75.5	54.6	41.7	28.9	22.5	16.1	12.8	10.4	10.4
52.5°	1875.2	1202.5	68.2	49.0	36.1	24.9	17.7	12.0	8.8	7.2	7.2
55°	2047.7	1294.8	61.0	44.1	30.5	20.9	14.4	9.6	6.4	4.8	4.8
57.5°	2214.7	1379.1	53.0	38.5	24.9	16.9	11.2	7.2	4.8	3.2	3.2
60°	2424.2	1488.2	45.8	32.9	20.1	13.6	8.8	5.6	3.2	2.4	1.6
62.5°	2677.1	1567.7	38.5	26.5	16.1	10.4	6.4	4.0	2.4	0.8	0.8
65°	2770.2	1462.6	32.1	21.7	12.8	8.0	4.8	3.2	1.6	0.8	0.8
67.5°	2510.1	1178.4	25.7	16.9	9.6	5.6	4.0	2.4	1.6	0.8	0.8
68°	2437.9	1120.6	24.9	16.1	8.8	5.6	3.2	2.4	0.8	0.8	0.0
70°	2058.2	899.8	20.1	12.0	7.2	4.8	3.2	1.6	0.8	0.8	0.0
72.5°	1526.0	620.5	14.4	8.0	4.8	3.2	2.4	1.6	0.8	0.8	0.0
75°	805.1	241.6	11.2	6.4	4.0	3.2	2.4	2.4	1.6	0.8	0.8
77.5°	231.2	76.3	8.8	4.8	4.0	4.0	4.0	3.2	3.2	2.4	1.6
80°	67.4	24.9	5.6	3.2	4.0	4.0	4.8	4.0	4.0	3.2	3.2
82.5°	36.1	9.6	3.2	2.4	2.4	3.2	4.0	3.2	2.4	1.6	0.8
85°	15.3	3.2	2.4	1.6	1.6	1.6	1.6	1.6	1.6	0.8	0.8
87.5°	0.8	1.6	1.6	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
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: ENT-SA1D-740-U-SL3-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)