

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-SA1B-740-U-T2-ULG**

Issue Date: 3/30/2022

Test Information

Test Method: LM-79-08
Report Number: REPORT IS A COMBINATION OF REPORTS P401148 AND P226775
Test Lab: INNOVATION CENTER
Issue Date: 3/30/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENT-SA1B-740-U-T2-ULG
Description: ENTRI LED LUMINAIRE WITH UPLIGHT
(1) 70 CRI, 4000K, 450mA LIGHTSQUARE WITH 16 LEDS AND TYPE II OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5185.9 lumens
Efficiency: N/A
Efficacy: 123.2 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 0.5' x L: 0.5' x H: 0.1')
IES Classification: Type III - Medium
BUG Rating: B1 - U5 - G1

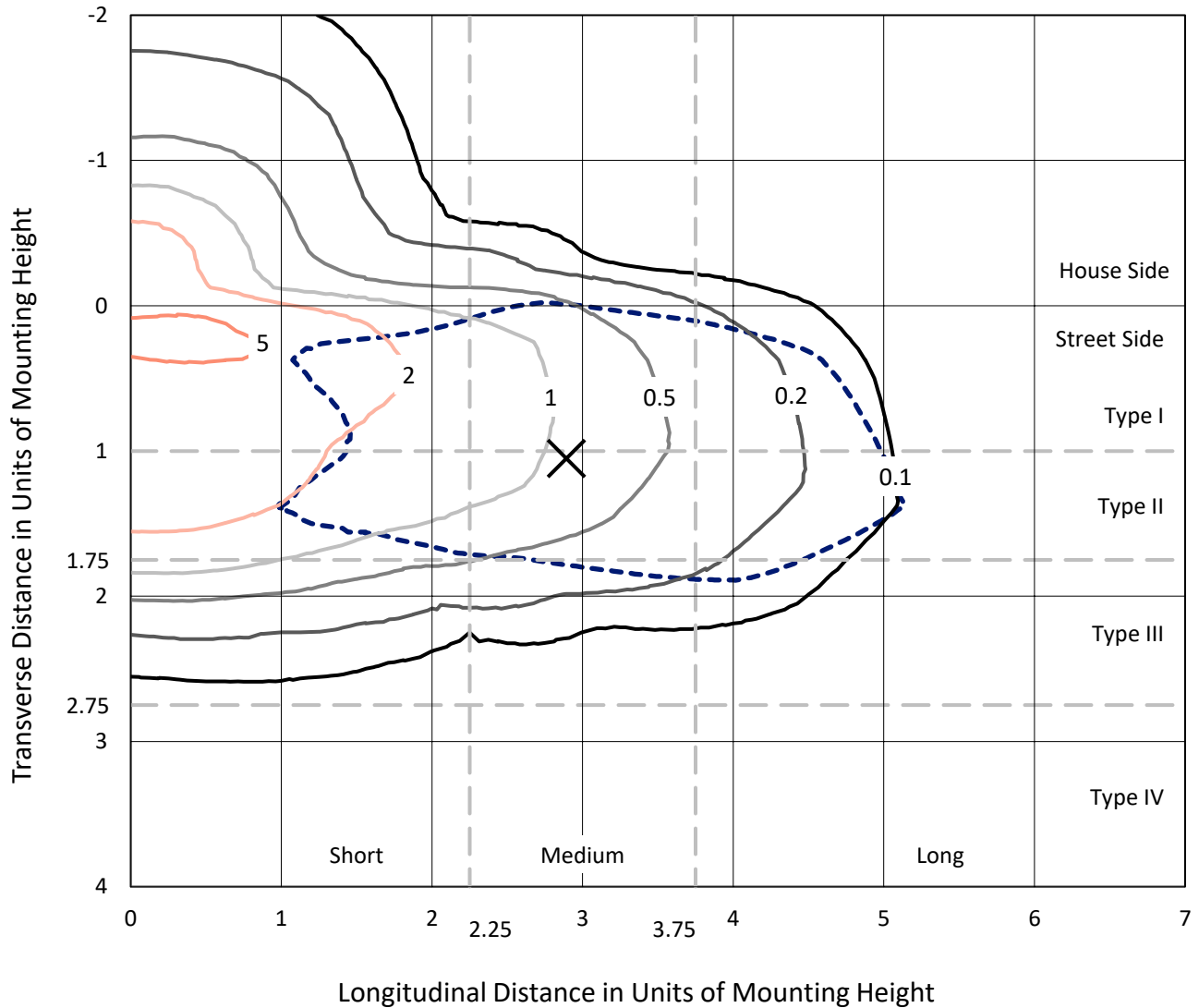
Input Watts (W): 42.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

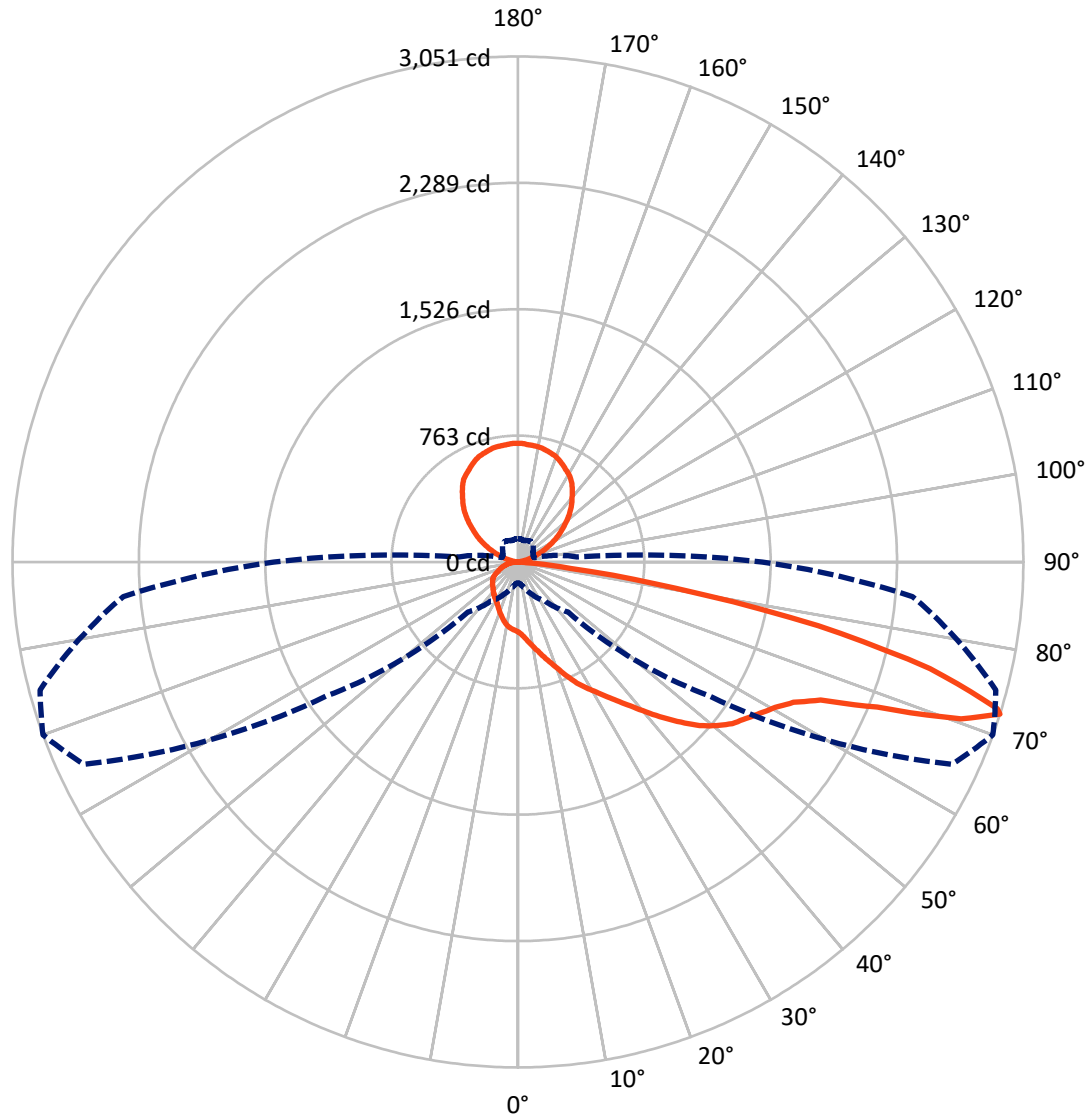
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 5.9 fc
 Type III - Medium - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 70-Deg Lateral - - - Horizontal Cone Through 72-Deg Vertical

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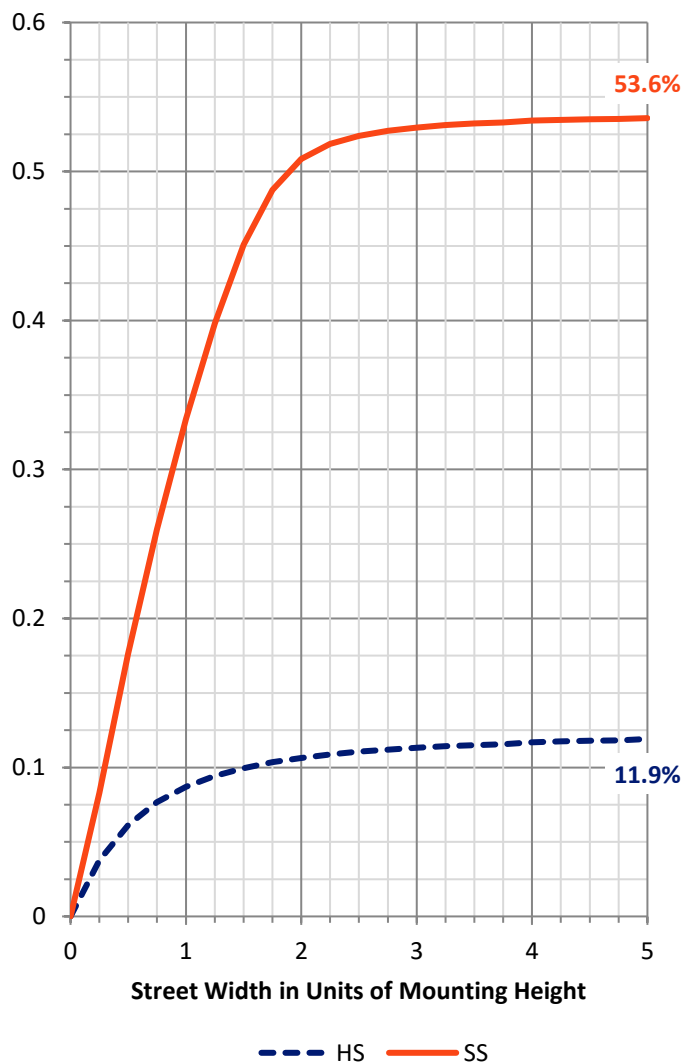
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	634.0	887.0	1520.9
	% Fixture	12.2	17.1	29.3
Street Side	Lumens	2778.0	887.0	3665.0
	% Fixture	53.6	17.1	70.7
Total	Lumens	3412.0	1773.9	5185.9
	% Fixture	65.8	34.2	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	42.5	0.8
10°-20°	136.3	2.6
20°-30°	241.3	4.7
30°-40°	358.7	6.9
40°-50°	520.5	10.0
50°-60°	711.0	13.7
60°-70°	778.5	15.0
70°-80°	553.7	10.7
80°-90°	69.5	1.3
90°-100°	8.4	0.2
100°-110°	58.7	1.1
110°-120°	169.9	3.3
120°-130°	279.4	5.4
130°-140°	344.6	6.6
140°-150°	352.5	6.8
150°-160°	297.0	5.7
160°-170°	195.5	3.8
170°-180°	67.8	1.3
0°-90°	3412.0	65.8
0°-180°	5185.9	100.0

Coefficient of Utilization



REPORT NUMBER:

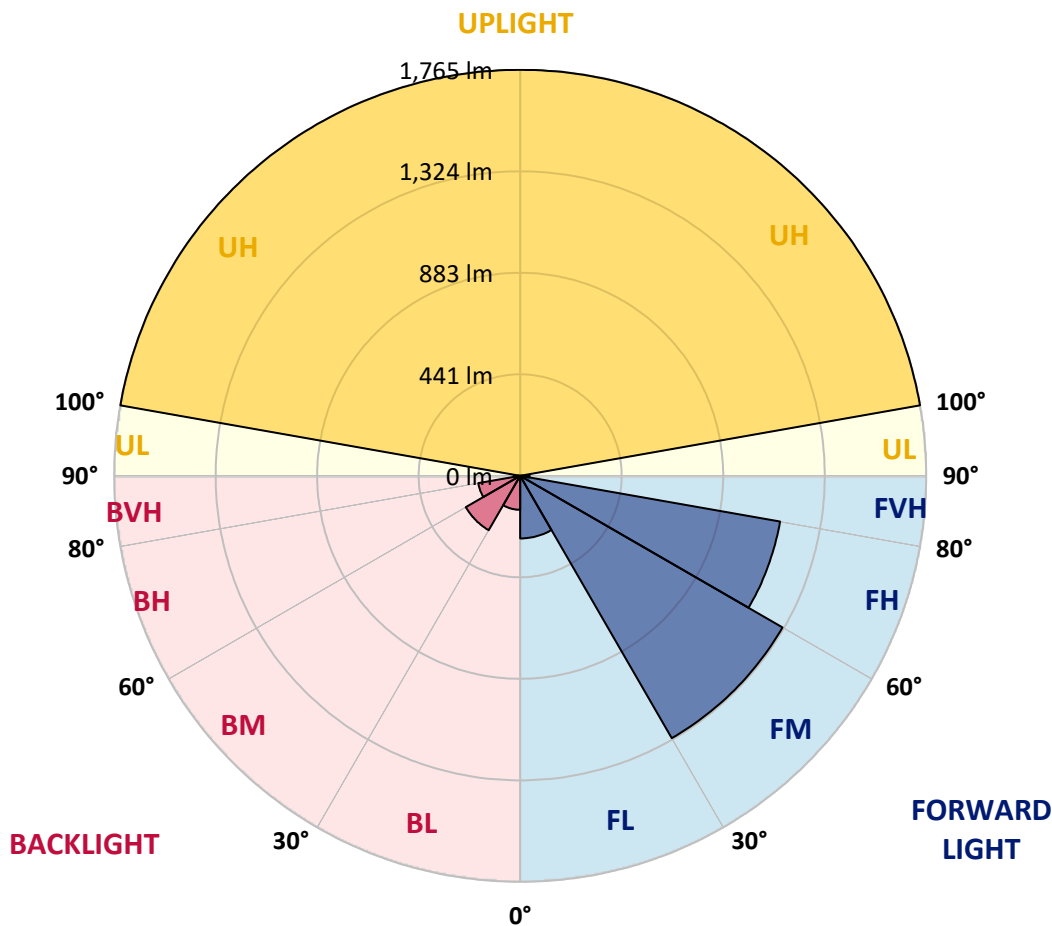
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	272.3	5.3			
FM (30°-60°)	1317.2	25.4			
FH (60°-80°)	1147.4	22.1			G1/1800
FVH (80°-90°)	41.1	0.8			G1/100
BL (0°-30°)	147.7	2.8	B1/500		
BM (30°-60°)	273.0	5.3	B1/1000		
BH (60°-80°)	184.8	3.6	B1/500		G1/500
BVH (80°-90°)	28.5	0.5			G1/100
UL (90°-100°)	8.4	0.2		U1/10	
UH (100°-180°)	1765.5	34.0		U5	

BUG Rating: B1-U5-G1

Type III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	70°	75°	85°
0°	422.6	422.6	422.6	422.6	422.6	422.6	422.6	422.6	422.6	422.6	422.6
2.5°	469.8	467.4	467.9	463.5	461.1	455.2	448.9	442.0	438.6	436.2	427.9
5°	515.6	515.6	517.6	514.2	504.9	495.2	484.0	468.9	462.5	453.7	437.2
7.5°	553.7	554.6	554.6	553.7	545.4	534.6	520.0	501.5	491.3	478.6	452.8
10°	573.1	575.6	577.5	579.0	578.0	571.7	555.1	536.1	522.0	505.4	470.8
12.5°	582.9	583.9	587.3	594.6	600.4	605.3	593.1	570.7	556.6	536.6	490.3
15°	593.6	593.6	597.0	606.3	617.5	630.7	629.2	611.7	596.5	571.7	515.2
17.5°	600.4	602.4	608.7	618.5	634.1	656.0	667.2	657.5	638.0	611.7	542.0
20°	596.5	598.0	610.7	629.7	649.7	677.9	706.2	706.2	687.7	657.5	571.7
22.5°	603.9	606.3	615.1	633.1	660.4	696.9	743.2	759.3	743.2	710.1	606.3
25°	632.1	631.1	638.5	645.8	669.2	714.5	774.9	816.3	801.7	765.2	639.9
27.5°	673.1	673.1	677.0	676.5	684.8	729.1	802.7	866.5	854.4	810.5	667.7
30°	720.3	721.3	720.3	719.8	718.4	749.1	827.6	911.4	905.1	861.7	693.0
32.5°	777.8	780.3	776.4	766.6	760.8	777.8	848.5	961.6	963.5	912.4	717.9
35°	850.0	853.9	839.3	825.1	810.5	818.3	872.9	1008.9	1028.4	969.9	748.1
37.5°	922.1	928.4	926.0	888.0	867.5	867.0	908.9	1067.8	1100.5	1044.9	791.0
40°	983.0	988.4	991.3	956.7	928.4	927.5	962.1	1129.2	1189.2	1131.2	841.7
42.5°	1023.5	1028.4	1037.1	1016.7	990.3	1002.5	1020.6	1190.2	1284.7	1236.5	904.1
45°	1067.3	1071.2	1076.6	1064.9	1051.3	1086.4	1094.6	1257.9	1380.2	1349.5	977.2
47.5°	1114.1	1118.0	1121.0	1112.2	1107.3	1156.5	1167.3	1327.1	1476.7	1466.5	1048.3
50°	1165.8	1167.3	1170.2	1165.8	1167.3	1220.4	1227.2	1388.0	1553.3	1588.3	1122.4
52.5°	1254.5	1256.4	1257.4	1236.5	1229.2	1260.8	1275.5	1452.9	1620.5	1689.7	1187.7
55°	1324.7	1331.5	1362.2	1348.6	1331.0	1289.6	1315.4	1505.0	1668.3	1784.3	1256.0
57.5°	1267.2	1282.8	1359.3	1423.6	1472.8	1373.9	1362.7	1558.6	1723.3	1865.7	1335.4
60°	1100.0	1122.9	1234.0	1368.1	1527.4	1567.4	1459.7	1625.4	1783.3	1950.5	1420.7
62.5°	762.7	786.1	939.7	1153.6	1435.3	1678.0	1725.3	1743.8	1866.6	2037.2	1531.8
65°	365.5	389.4	516.1	741.8	1133.6	1606.9	2034.8	1989.5	2007.0	2147.4	1695.6
67.5°	232.5	245.1	294.9	404.0	659.4	1251.6	2145.9	2478.8	2339.4	2401.3	2021.6
70°	170.1	173.0	215.9	279.8	391.4	731.1	1894.9	2947.1	2838.0	2831.1	2414.9
72°	125.7	130.6	163.8	223.2	289.5	427.4	1410.0	2890.1	3051.4	2986.6	2391.5
72.5°	118.4	122.3	151.1	211.0	273.4	375.3	1263.3	2823.8	3025.1	2991.0	2346.7
75°	86.3	89.2	103.3	150.1	211.5	217.4	674.5	2167.3	2568.9	2855.5	2127.4
77.5°	59.5	61.4	68.7	92.1	144.7	147.2	286.1	1479.7	1854.0	2283.3	1636.1
80°	36.1	37.0	41.4	50.2	92.1	87.2	117.9	773.5	967.4	1241.3	758.8
82.5°	15.1	15.6	18.0	20.0	39.0	41.4	47.8	252.5	320.2	387.9	218.8
85°	0.0	0.0	0.5	0.5	1.0	4.4	6.8	31.2	47.3	56.5	39.5
87.5°	0.0	0.0	0.5	0.5	0.5	1.0	1.0	1.5	1.9	1.9	2.9
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	6.6	6.1	6.1
95°	5.1	5.1	6.1	7.2	7.2	7.2	7.2	8.2	7.7	7.2	7.2
97.5°	7.2	7.2	8.2	8.2	9.2	9.2	12.3	10.2	9.7	9.2	8.2
100°	8.2	8.2	9.2	10.2	12.3	21.5	29.7	26.6	25.1	23.5	19.4
102.5°	11.3	11.3	13.3	18.4	27.6	40.9	51.1	48.1	45.5	43.0	39.9
105°	21.5	22.5	27.6	36.8	49.1	64.4	73.7	71.6	69.0	66.5	62.4
107.5°	41.9	43.0	50.1	59.3	74.7	90.0	97.2	96.2	94.1	92.1	89.0



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 CATALOG NUMBER: ENT-SA1B-740-U-T2-ULG

CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	70°	75°	85°
110°	67.5	69.6	75.7	89.0	104.3	116.6	122.8	123.8	122.8	121.7	118.7
112.5°	101.3	101.3	108.4	123.8	137.1	146.3	151.4	153.4	152.9	152.4	150.4
115°	143.2	142.2	150.4	162.6	171.9	178.0	183.1	186.2	184.6	183.1	181.1
117.5°	188.2	188.2	193.3	201.5	206.6	209.7	215.8	219.9	217.4	214.8	212.8
120°	230.2	228.1	231.2	238.3	242.4	248.6	251.6	255.7	253.2	250.6	248.6
122.5°	269.0	266.0	267.0	273.1	277.2	283.4	285.4	289.5	286.9	284.4	282.3
125°	304.8	300.7	302.8	305.9	312.0	317.1	320.2	322.2	319.7	317.1	317.1
127.5°	337.6	336.6	336.6	340.6	346.8	347.8	352.9	353.9	353.9	353.9	352.9
130°	371.3	369.3	370.3	374.4	378.5	380.5	385.7	389.7	389.7	389.7	387.7
132.5°	405.1	403.0	402.0	410.2	413.3	414.3	420.4	425.5	424.5	423.5	423.5
135°	438.8	435.8	435.8	441.9	445.0	447.0	453.2	458.3	457.8	457.3	460.3
137.5°	470.6	467.5	469.5	470.6	474.6	478.7	483.9	485.9	486.4	486.9	492.0
140°	499.2	496.1	498.2	500.2	502.3	508.4	511.5	513.5	514.5	515.6	520.7
142.5°	529.9	526.8	528.9	529.9	533.0	537.0	539.1	545.2	545.2	545.2	546.3
145°	562.6	558.5	556.5	559.6	562.6	563.6	568.8	574.9	574.4	573.9	570.8
147.5°	588.2	585.1	584.1	587.2	587.2	588.2	593.3	598.4	598.9	599.4	596.4
150°	608.7	605.6	606.6	606.6	606.6	606.6	610.7	613.8	615.3	616.8	619.9
152.5°	625.0	622.0	622.0	623.0	624.0	624.0	625.0	628.1	630.1	632.2	637.3
155°	643.4	639.3	639.3	641.4	644.5	642.4	640.4	645.5	648.0	650.6	652.6
157.5°	660.8	657.8	657.8	658.8	660.8	659.8	658.8	662.9	663.9	664.9	664.9
160°	678.2	675.1	674.1	671.1	670.0	670.0	673.1	679.2	677.7	676.2	675.1
162.5°	688.4	684.4	684.4	680.3	676.2	678.2	682.3	686.4	685.9	685.4	683.3
165°	696.6	693.6	691.5	691.5	688.4	688.4	687.4	692.5	694.1	695.6	693.6
167.5°	705.8	702.8	699.7	701.7	703.8	700.7	693.6	699.7	701.7	703.8	703.8
170°	714.0	711.0	707.9	707.9	708.9	706.9	701.7	704.8	707.4	709.9	712.0
172.5°	715.0	713.0	711.0	708.9	705.8	705.8	704.8	707.9	708.9	709.9	712.0
175°	716.1	714.0	713.0	711.0	706.9	705.8	705.8	711.0	711.5	712.0	709.9
177.5°	723.2	721.2	716.1	715.0	713.0	711.0	709.9	715.0	716.1	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



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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	422.6	422.6	422.6	422.6	422.6	422.6	422.6	422.6	422.6	422.6	422.6
2.5°	424.0	422.1	416.2	411.3	407.4	401.1	400.6	395.7	395.7	394.3	393.3
5°	430.8	424.5	412.8	402.1	394.3	385.0	380.6	375.3	371.9	369.9	370.4
7.5°	439.6	428.9	408.9	390.9	376.3	364.6	357.7	353.3	350.9	349.9	349.9
10°	451.8	435.2	402.6	375.3	356.8	348.0	344.6	344.1	344.6	345.1	345.5
12.5°	465.4	439.6	390.9	356.8	342.1	338.7	340.7	345.1	349.0	350.4	350.4
15°	479.6	442.5	374.8	339.7	330.9	334.3	341.2	349.4	355.8	359.7	360.7
17.5°	494.2	443.0	357.7	324.1	321.2	330.0	342.1	355.3	365.5	371.9	372.8
20°	509.8	442.0	337.7	310.0	311.4	326.1	343.1	361.1	374.8	383.1	384.0
22.5°	526.8	438.1	318.3	296.3	303.1	322.2	342.1	363.1	377.7	387.5	389.4
25°	543.4	430.3	298.8	284.1	297.3	318.3	337.3	355.3	369.4	378.7	381.1
27.5°	552.2	413.8	280.2	274.9	292.9	312.4	326.1	338.2	346.0	351.9	354.3
30°	553.7	390.4	265.1	268.5	288.0	304.1	311.9	313.9	312.4	314.4	311.9
32.5°	550.7	365.0	252.9	263.7	280.2	292.4	294.4	288.5	279.8	267.6	268.1
35°	548.8	337.3	243.2	256.8	270.0	277.8	274.4	265.1	248.6	233.9	233.0
37.5°	552.2	311.9	234.9	248.1	256.8	260.3	255.4	243.2	228.6	215.9	214.4
40°	561.9	293.4	227.1	238.3	242.7	245.1	239.3	228.6	222.7	213.5	212.0
42.5°	580.9	280.7	219.8	227.6	229.6	232.0	226.1	218.8	224.2	222.2	222.2
45°	607.3	274.9	213.5	217.4	219.3	223.2	219.8	213.5	219.3	208.1	206.2
47.5°	641.4	276.8	209.1	207.1	213.0	219.8	215.9	208.1	206.2	186.2	182.8
50°	677.4	287.1	204.7	198.8	206.2	215.4	210.5	198.4	186.7	176.4	174.5
52.5°	719.8	304.1	200.8	189.6	198.4	210.5	207.1	194.0	181.8	174.5	173.0
55°	766.6	320.7	195.9	178.9	188.1	209.1	208.1	191.0	175.0	171.6	170.6
57.5°	819.3	334.3	190.1	166.7	177.9	204.7	203.7	184.2	173.0	170.1	169.6
60°	885.1	350.4	179.8	152.5	167.7	196.4	195.4	180.8	168.6	166.2	165.2
62.5°	974.7	380.2	162.3	139.4	156.9	181.8	187.6	174.0	162.3	161.8	161.8
65°	1122.4	437.7	144.3	128.2	144.7	167.7	177.4	166.2	156.4	158.9	158.9
67.5°	1401.7	515.2	125.7	117.5	133.1	154.0	168.6	158.4	150.1	155.0	155.0
70°	1617.1	486.4	111.1	107.2	121.4	141.8	157.4	150.1	142.3	150.6	149.6
72°	1475.3	356.3	101.4	98.9	111.6	131.6	147.7	142.3	134.0	140.9	138.9
72.5°	1416.3	323.6	98.4	96.5	108.7	129.6	145.7	140.4	131.6	138.4	135.5
75°	1235.5	272.9	85.8	84.8	96.5	116.5	133.1	130.1	121.4	125.3	122.3
77.5°	1022.5	230.0	72.1	74.1	82.4	103.8	119.9	117.0	108.7	108.2	107.7
80°	479.6	128.2	59.5	60.9	69.2	88.7	103.3	101.4	93.6	92.6	91.1
82.5°	138.9	61.4	45.8	46.8	55.6	72.6	88.7	87.7	81.9	80.4	77.0
85°	25.8	20.0	24.9	29.2	40.5	60.4	80.9	79.0	70.2	63.8	59.0
87.5°	1.5	3.9	8.3	14.1	25.8	45.3	65.3	63.8	56.0	48.2	48.7
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-SA1B-740-U-T2-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)