

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: P400843

Luminaire Tested: **ENT-SA1-827-U-SLL-HSS-XXB**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P400843
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-8)
Test Lab: INNOVATION CENTER
Issue Date: 5/20/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENT-SA1-827-U-SLL-HSS-XXB
Description: ENTRI LED LUMINAIRE
(1) 80 CRI, 2700K LIGHTSQUARE IN BATTERY OPERATION WITH 16 LEDS AND SPILL LIGHT ELIMINATOR LEFT OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 427 lumens
Efficiency: N/A
Efficacy: 32.8 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Short - Semi-Cutoff
BUG Rating: B0 - U0 - G0

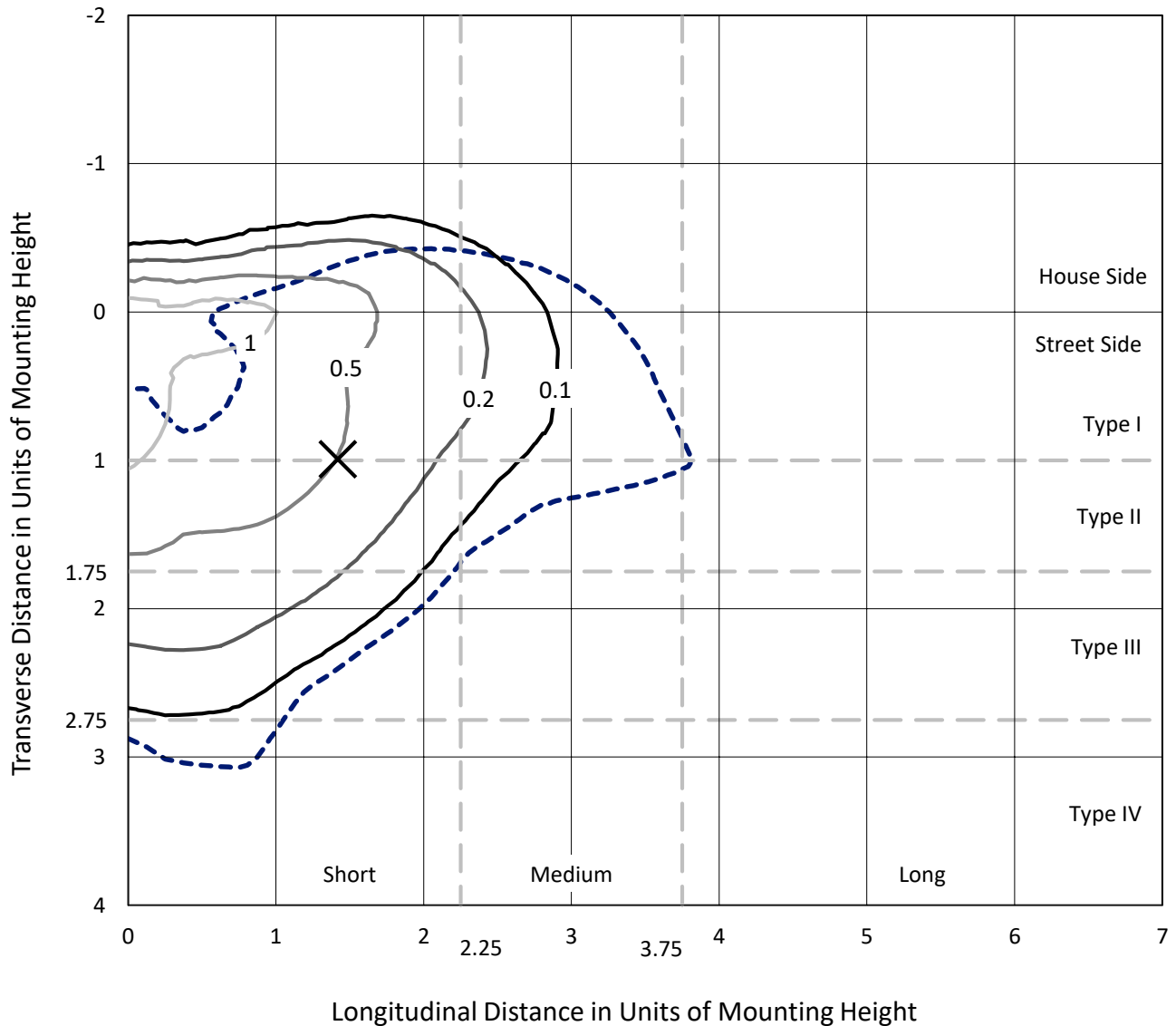
Input Watts (W): 13
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P400843
 CATALOG NUMBER: ENT-SA1-827-U-SLL-HSS-XXB

Iso-Footcandle Lines of Horizontal Illumination

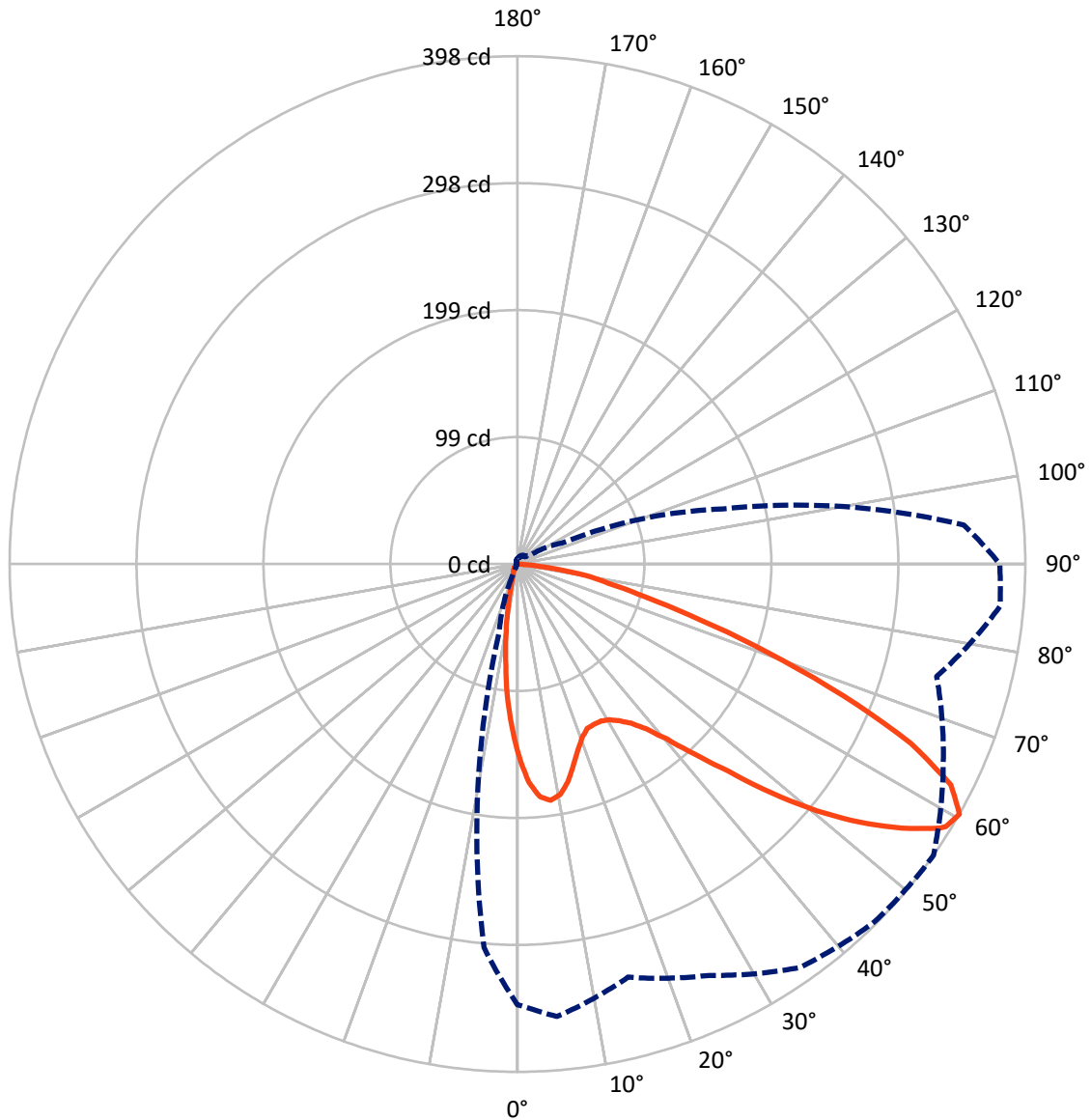
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 1.8 fc
 Type III - Short - Semi-Cutoff

REPORT NUMBER: P400843
CATALOG NUMBER: ENT-SA1-827-U-SLL-HSS-XXB

Luminous Intensity Polar Plot



— Vertical Plane Through 55-Deg Lateral - - - Horizontal Cone Through 60-Deg Vertical

REPORT NUMBER: P400843

CATALOG NUMBER: ENT-SA1-827-U-SLL-HSS-XXB

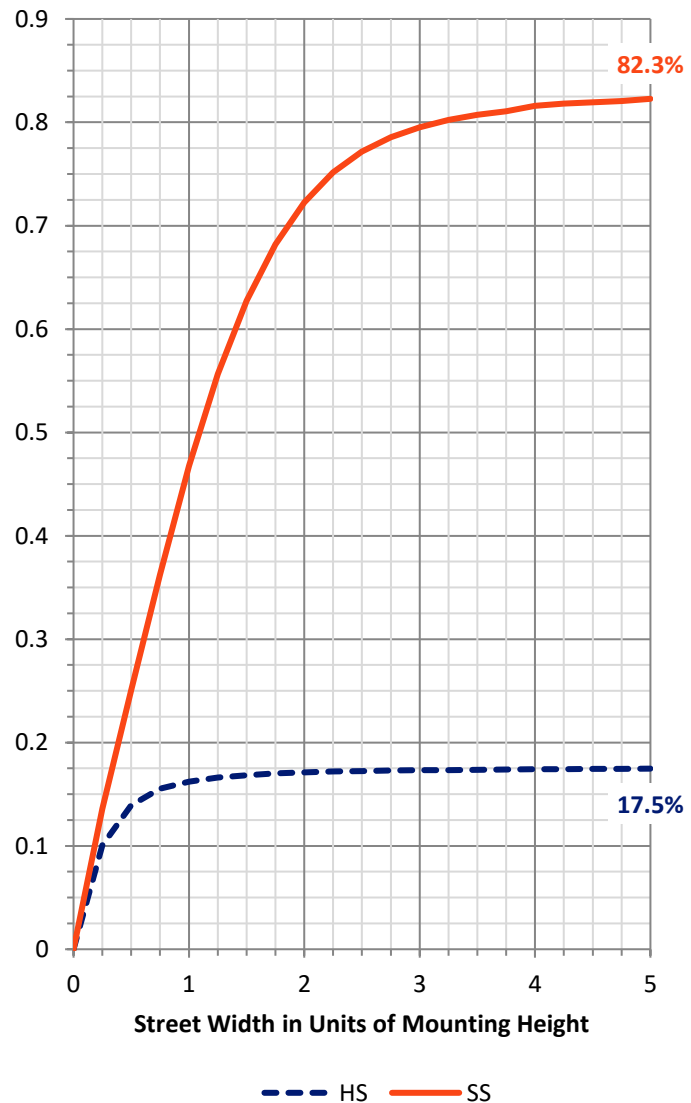
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	75.6	0.0	75.6
	% Fixture	17.7	0.0	17.7
Street Side	Lumens	351.4	0.0	351.4
	% Fixture	82.3	0.0	82.3
Total	Lumens	427.0	0.0	427.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	11.3	2.7
10°-20°	21.6	5.1
20°-30°	30.8	7.2
30°-40°	45.2	10.6
40°-50°	66.6	15.6
50°-60°	98.6	23.1
60°-70°	105.1	24.6
70°-80°	43.6	10.2
80°-90°	4.2	1.0
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°	427.0	100.0
0°-180°	427.0	100.0



REPORT NUMBER: P400843

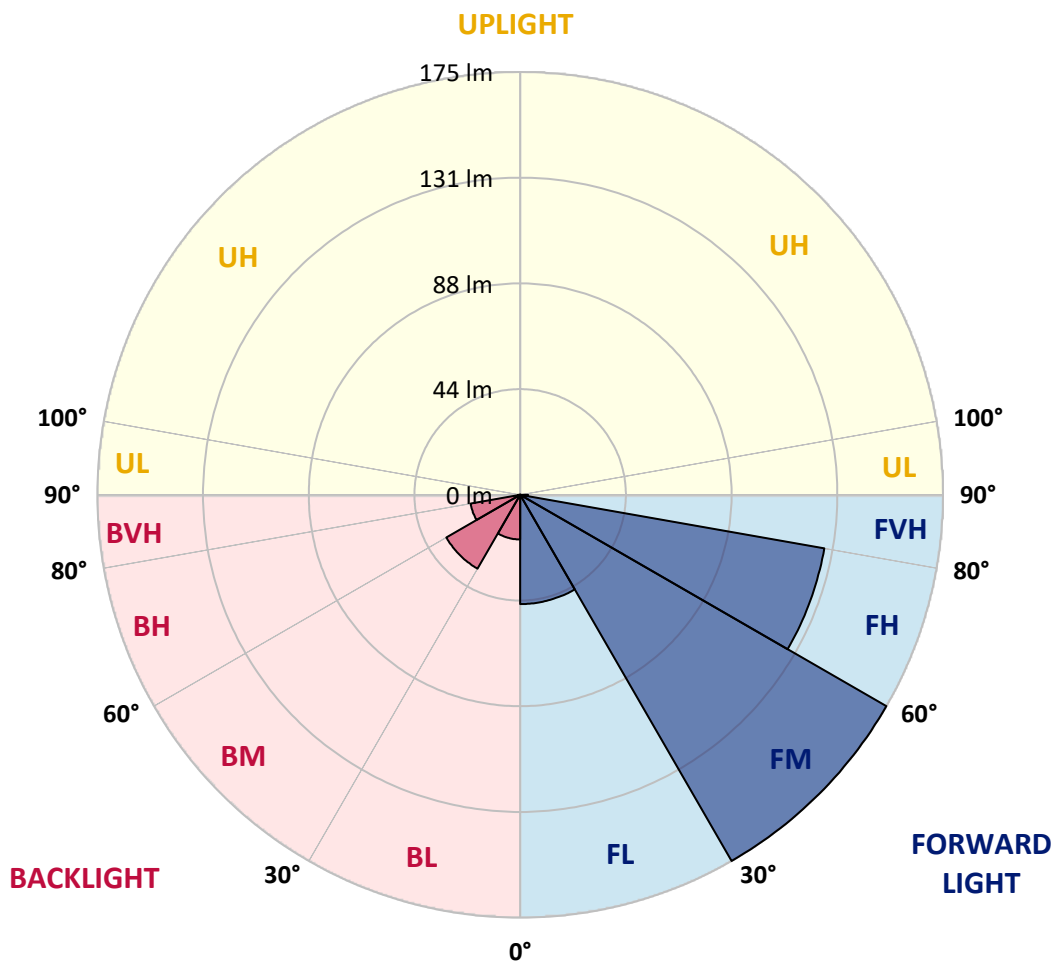
CATALOG NUMBER: ENT-SA1-827-U-SLL-HSS-XXB

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	45.2	10.6			
FM	(30°-60°)	175.1	41.0			
FH	(60°-80°)	127.9	29.9			G0/660
FVH	(80°-90°)	3.2	0.8			G0/10
BL	(0°-30°)	18.5	4.3	B0/110		
BM	(30°-60°)	35.3	8.3	B0/220		
BH	(60°-80°)	20.8	4.9	B0/110		G0/110
BVH	(80°-90°)	1.0	0.2			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B0-U0-G0

Type III Short





REPORT NUMBER: P400843

CATALOG NUMBER: ENT-SA1-827-U-SLL-HSS-XXB

CANDELA DISTRIBUTION (FULL):

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	150.8	150.8	150.8	150.8	150.8	150.8	150.8	150.8	150.8	150.8	150.8
2.5°	157.5	157.3	159.5	164.2	167.1	168.9	169.2	171.1	169.2	168.2	164.8
5°	152.9	152.8	157.2	167.4	175.8	182.1	185.2	183.1	179.9	173.5	165.7
7.5°	140.1	140.1	148.4	162.1	176.1	187.0	190.8	186.9	179.2	166.4	152.5
10°	129.7	130.7	138.6	155.0	170.6	182.5	186.6	183.7	173.6	157.0	140.7
12.5°	123.5	124.1	132.9	149.3	163.9	173.6	176.1	175.2	167.9	149.8	132.6
15°	124.1	124.9	135.0	148.5	157.9	161.8	162.7	163.8	160.8	146.9	129.9
17.5°	133.0	133.5	143.7	152.4	152.0	150.8	151.1	153.0	156.5	149.3	135.3
20°	147.2	148.6	158.9	159.0	148.9	143.3	141.8	144.9	154.5	155.7	146.8
22.5°	165.4	166.0	176.4	170.2	149.3	138.1	136.4	139.9	155.2	166.1	162.8
25°	186.6	188.6	194.2	184.6	153.9	137.4	136.3	139.2	157.5	177.0	179.3
27.5°	200.8	202.5	207.9	194.5	158.1	137.8	135.7	139.3	160.3	187.4	196.9
30°	213.6	214.7	216.8	199.6	162.9	139.8	136.4	141.5	161.9	189.5	208.3
32.5°	225.6	227.0	225.8	205.9	168.2	143.6	137.8	146.3	165.2	193.9	218.2
35°	241.1	241.2	237.1	212.1	174.1	148.1	141.8	153.1	171.6	200.7	228.9
37.5°	259.5	259.7	249.3	218.4	180.9	155.7	151.4	163.6	181.0	208.5	244.1
40°	275.6	276.2	262.4	225.8	189.2	170.5	170.1	180.2	193.0	218.9	260.5
42.5°	289.6	291.4	274.6	231.9	201.0	193.2	194.1	203.3	207.6	227.6	270.7
45°	303.7	303.6	284.5	238.1	220.7	222.4	231.6	231.2	224.2	232.3	278.7
47.5°	312.5	312.1	290.5	248.1	247.3	263.5	273.3	267.9	242.5	237.3	288.7
50°	315.9	315.7	295.3	260.8	274.3	300.7	314.7	304.0	264.9	245.7	300.6
52.5°	325.5	324.7	306.3	275.4	298.8	336.5	348.1	336.2	287.3	260.8	314.5
55°	340.5	340.7	325.2	292.4	318.4	361.8	375.9	365.4	310.2	281.6	333.6
57.5°	350.6	351.3	346.1	311.4	339.4	379.5	393.2	390.2	340.6	306.4	355.9
58°	351.6	352.1	349.4	315.0	342.5	381.5	395.6	393.5	347.3	314.3	361.3
60°	345.3	347.0	355.8	335.0	355.5	385.8	396.0	397.8	368.0	339.9	379.5
62.5°	328.5	329.0	345.0	357.5	364.4	375.2	376.2	381.0	376.6	370.1	395.8
65°	307.8	307.8	325.1	358.5	341.4	339.6	334.0	338.8	351.6	388.9	394.7
67.5°	271.9	272.1	294.2	319.4	283.0	276.9	273.3	275.0	302.4	373.2	372.7
70°	219.7	219.6	242.3	258.6	210.1	204.8	209.2	208.6	245.7	331.6	325.4
72.5°	155.4	156.8	180.1	199.7	142.6	122.9	142.2	149.6	184.8	279.6	251.8
75°	87.5	89.4	108.4	138.8	90.0	83.1	93.0	103.6	133.6	222.6	169.1
77.5°	43.9	44.6	55.5	66.8	54.6	63.4	62.8	72.9	91.6	150.2	96.7
80°	25.3	26.8	30.5	34.5	30.5	40.2	46.7	54.9	56.4	77.7	53.9
82.5°	10.2	11.4	14.3	16.2	12.7	11.9	8.2	25.7	34.0	37.5	20.7
85°	0.0	0.0	0.1	0.2	0.2	0.2	0.4	4.5	8.3	1.9	3.4
87.5°	0.0	0.0	0.1	0.1	0.2	0.2	0.3	0.6	0.7	0.9	3.1
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: P400843

CATALOG NUMBER: ENT-SA1-827-U-SLL-HSS-XXB

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	150.8	150.8	150.8	150.8	150.8	150.8	150.8	150.8	150.8	150.8	150.8
2.5°	163.5	162.6	159.6	155.1	152.3	147.9	146.1	142.0	139.9	136.4	136.4
5°	161.9	158.2	150.7	140.9	134.0	126.7	124.4	119.6	116.1	112.0	110.3
7.5°	147.2	142.1	130.4	119.0	107.9	100.6	93.3	88.4	83.7	80.3	80.8
10°	133.7	126.4	113.6	99.1	87.7	80.0	73.5	67.7	62.9	58.1	57.4
12.5°	124.9	116.6	101.2	85.7	77.2	71.5	65.5	59.2	53.2	48.0	45.9
15°	121.2	112.1	95.0	80.4	72.6	65.3	58.3	50.5	43.7	37.4	35.7
17.5°	125.2	114.4	94.4	76.9	66.0	56.8	47.1	38.6	30.5	26.0	24.6
20°	136.2	122.1	96.3	73.3	58.6	46.8	34.9	25.3	20.7	18.0	17.1
22.5°	152.1	135.0	99.5	69.8	51.2	34.9	24.1	18.2	15.6	14.1	13.7
25°	169.4	151.5	105.3	66.9	43.8	25.9	17.8	14.9	13.3	12.3	11.9
27.5°	188.8	167.9	112.4	64.7	36.9	20.7	15.3	13.2	11.9	11.1	10.8
30°	201.0	179.7	117.8	60.9	32.2	18.9	14.6	12.4	11.1	10.5	10.3
32.5°	212.2	189.0	122.9	56.4	28.7	16.7	14.2	13.1	11.5	10.3	9.8
35°	224.6	198.5	125.4	53.8	26.3	14.5	11.7	10.2	9.3	9.1	8.9
37.5°	243.0	209.8	127.1	52.3	24.9	13.2	10.9	9.2	8.2	7.2	6.8
40°	260.4	221.5	127.9	50.9	24.1	12.4	10.4	8.7	7.6	6.7	6.3
42.5°	274.1	232.2	128.4	50.0	22.8	11.9	10.0	8.4	7.2	6.3	5.9
45°	285.2	244.5	128.0	49.6	21.8	12.3	9.8	8.2	6.9	6.0	5.6
47.5°	296.1	257.9	129.5	49.2	20.7	11.8	9.9	8.1	6.6	5.7	5.3
50°	310.4	274.1	135.1	48.1	20.0	11.1	10.7	8.2	6.5	5.6	5.2
52.5°	328.9	296.6	145.1	46.9	19.1	10.4	11.2	8.2	6.4	5.4	5.0
55°	351.3	321.8	156.3	45.1	17.6	9.6	10.7	8.2	6.2	5.3	4.8
57.5°	369.6	344.2	165.1	43.0	14.8	8.6	9.8	7.8	5.8	5.0	4.6
58°	371.3	346.8	166.3	42.5	14.5	8.5	9.6	7.7	5.7	4.9	4.5
60°	377.8	351.0	166.8	39.4	12.0	8.1	8.3	7.5	5.3	4.6	4.3
62.5°	375.5	337.1	156.5	34.0	10.7	7.3	6.9	7.7	4.9	4.2	3.9
65°	364.3	309.8	137.2	30.4	10.8	6.5	6.0	6.7	4.5	3.8	3.5
67.5°	337.6	268.4	111.4	28.5	11.3	5.8	5.2	5.0	4.0	3.4	3.1
70°	288.0	220.0	84.4	26.8	11.9	5.2	4.8	4.4	3.7	3.1	2.8
72.5°	212.1	162.9	61.4	25.1	11.6	4.6	4.4	4.0	3.4	2.8	2.7
75°	132.3	94.6	42.1	20.5	10.4	4.0	4.1	3.8	3.1	2.7	2.4
77.5°	77.3	66.4	20.7	15.3	7.2	3.6	3.6	3.5	3.1	2.5	2.3
80°	46.3	41.3	8.9	6.5	4.0	3.1	3.1	3.2	3.0	2.3	2.2
82.5°	20.0	17.9	4.3	3.6	3.2	2.7	2.7	2.7	2.6	1.9	1.9
85°	1.1	3.0	2.0	2.7	2.4	2.0	2.0	2.1	1.9	1.5	1.5
87.5°	1.0	2.3	1.3	1.6	1.8	1.5	1.6	1.6	1.5	1.4	1.3
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: P400843

CATALOG NUMBER: ENT-SA1-827-U-SLL-HSS-XXB

CANDELA DISTRIBUTION (continued):

	185°	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°
0°	150.8	150.8	150.8	150.8	150.8	150.8	150.8	150.8	150.8	150.8	150.8
2.5°	134.6	133.7	131.0	130.1	125.9	126.9	127.2	126.8	127.0	127.3	128.5
5°	111.5	110.0	106.6	104.3	103.1	102.3	98.5	98.6	99.1	97.0	99.8
7.5°	79.2	80.8	81.1	79.0	77.7	75.0	71.5	69.6	66.3	68.1	68.5
10°	56.7	55.9	57.4	56.7	54.7	53.6	49.9	49.6	49.2	49.0	51.3
12.5°	43.2	40.8	39.0	39.4	37.9	35.3	34.6	34.7	35.0	35.0	35.7
15°	34.2	30.5	27.7	26.0	26.2	23.7	22.9	20.5	20.2	19.5	19.6
17.5°	24.0	22.4	20.7	18.8	18.0	15.7	12.8	11.5	10.6	10.7	11.2
20°	16.5	15.9	15.4	14.5	13.6	10.9	9.1	8.6	8.5	8.6	8.8
22.5°	13.3	12.7	12.2	11.9	10.8	8.8	7.8	7.4	7.4	7.4	7.5
25°	11.5	10.8	10.2	10.2	9.2	7.7	6.9	6.6	6.5	6.5	6.6
27.5°	10.7	9.8	9.1	8.7	8.0	6.8	6.1	5.8	5.7	5.7	5.8
30°	9.8	9.0	8.3	7.7	6.9	6.1	5.4	5.2	5.0	5.0	5.1
32.5°	9.4	8.5	7.7	6.9	6.1	5.3	4.8	4.4	4.3	4.4	4.4
35°	8.3	7.6	6.9	6.1	5.3	4.7	4.1	3.8	3.7	3.7	3.8
37.5°	6.5	6.0	5.8	5.4	4.7	4.0	3.5	3.1	3.1	3.1	3.1
40°	5.9	5.2	4.8	4.7	4.3	3.5	2.8	2.5	2.5	2.4	2.6
42.5°	5.4	4.7	4.1	4.0	3.7	3.0	2.3	2.0	1.9	1.9	2.0
45°	5.1	4.3	3.6	3.1	3.1	2.4	1.9	1.5	1.5	1.5	1.5
47.5°	4.9	4.0	3.1	2.6	2.5	2.0	1.5	1.1	1.0	1.0	1.0
50°	4.8	3.7	2.8	2.2	1.9	1.7	1.1	0.9	0.8	0.8	0.8
52.5°	4.5	3.6	2.6	1.9	1.5	1.3	0.9	0.6	0.6	0.5	0.6
55°	4.4	3.3	2.5	1.8	1.3	1.0	0.6	0.5	0.4	0.4	0.4
57.5°	4.1	3.1	2.3	1.7	1.2	0.7	0.5	0.3	0.2	0.2	0.3
58°	4.0	3.1	2.2	1.6	1.1	0.7	0.5	0.3	0.2	0.2	0.3
60°	3.8	2.8	2.1	1.5	1.0	0.6	0.4	0.2	0.2	0.2	0.2
62.5°	3.6	2.6	1.9	1.3	0.9	0.6	0.3	0.2	0.1	0.1	0.1
65°	3.1	2.3	1.6	1.2	0.7	0.4	0.2	0.1	0.0	0.0	0.0
67.5°	2.8	2.2	1.5	1.0	0.6	0.3	0.2	0.0	0.0	0.0	0.0
70°	2.6	2.0	1.3	0.9	0.6	0.2	0.1	0.0	0.0	0.0	0.0
72.5°	2.4	1.9	1.2	0.8	0.4	0.2	0.1	0.0	0.0	0.0	0.0
75°	2.3	1.8	1.2	0.7	0.4	0.2	0.2	0.1	0.0	0.0	0.1
77.5°	2.3	1.8	1.2	0.7	0.5	0.2	0.2	0.2	0.2	0.1	0.2
80°	2.1	1.6	1.0	0.6	0.4	0.3	0.2	0.2	0.0	0.0	0.0
82.5°	1.8	1.3	0.9	0.6	0.4	0.2	0.1	0.0	0.0	0.0	0.0
85°	1.5	1.0	0.7	0.4	0.2	0.1	0.0	0.0	0.0	0.0	0.0
87.5°	1.3	0.8	0.6	0.3	0.2	0.1	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: P400843

CATALOG NUMBER: ENT-SA1-827-U-SLL-HSS-XXB

CANDELA DISTRIBUTION (continued):

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	150.8	150.8	150.8	150.8	150.8	150.8	150.8	150.8	150.8	150.8
2.5°	129.6	133.3	134.8	140.0	142.2	146.9	151.0	154.4	156.1	157.5
5°	100.5	104.1	107.9	115.5	122.1	129.2	138.1	147.3	150.0	152.9
7.5°	70.2	75.4	81.8	88.6	98.1	108.8	121.6	133.0	138.7	140.1
10°	54.5	60.7	67.5	74.3	82.1	93.6	106.4	121.1	127.2	129.7
12.5°	40.9	49.2	57.3	65.3	72.1	82.0	96.0	113.5	120.3	123.5
15°	24.6	34.0	43.9	54.7	64.1	75.7	91.5	111.9	120.4	124.1
17.5°	12.3	16.8	25.9	42.1	56.0	70.5	91.4	117.7	128.3	133.0
20°	9.1	10.3	13.8	26.2	46.6	66.1	92.4	127.6	143.2	147.2
22.5°	7.8	8.7	9.9	15.3	34.9	62.1	95.7	140.8	160.2	165.4
25°	6.9	7.6	8.6	10.6	23.9	57.3	102.1	159.4	179.4	186.6
27.5°	6.1	6.7	7.5	8.9	16.0	48.4	105.8	174.9	194.9	200.8
30°	5.3	5.8	6.6	7.6	11.8	37.4	109.1	188.7	208.9	213.6
32.5°	4.7	5.1	5.7	6.5	9.0	28.3	109.3	200.4	221.2	225.6
35°	4.0	4.4	4.9	5.6	7.1	22.1	106.0	212.1	235.7	241.1
37.5°	3.3	3.7	4.3	4.8	6.5	17.1	99.1	225.9	253.4	259.5
40°	2.8	3.2	3.7	4.4	5.7	12.4	88.2	238.3	269.9	275.6
42.5°	2.3	2.7	3.2	4.3	4.8	9.0	77.1	250.3	284.3	289.6
45°	1.8	2.3	3.0	4.1	4.0	6.3	67.6	260.8	296.7	303.7
47.5°	1.3	1.9	3.0	3.7	3.2	4.5	62.7	271.0	307.7	312.5
50°	1.0	1.5	3.2	3.1	2.7	3.9	63.5	282.3	312.8	315.9
52.5°	0.7	1.3	2.5	2.3	2.3	3.4	66.3	297.2	323.3	325.5
55°	0.6	1.0	1.5	1.7	2.1	3.2	65.5	311.4	336.7	340.5
57.5°	0.6	0.8	1.2	1.4	1.9	3.1	61.4	317.6	345.3	350.6
58°	0.5	0.8	1.1	1.4	1.9	3.0	60.4	315.9	344.9	351.6
60°	0.4	0.7	1.0	1.2	1.6	2.7	55.3	301.5	336.1	345.3
62.5°	0.3	0.5	0.8	0.9	1.3	2.2	45.5	278.3	317.0	328.5
65°	0.2	0.3	0.5	0.6	0.9	1.6	32.4	250.7	296.6	307.8
67.5°	0.0	0.2	0.3	0.4	0.6	1.2	18.6	212.8	263.0	271.9
70°	0.0	0.1	0.2	0.2	0.3	0.8	9.8	156.2	203.8	219.7
72.5°	0.1	0.1	0.1	0.0	0.2	0.6	4.4	92.7	138.9	155.4
75°	0.1	0.1	0.0	0.0	0.0	0.3	1.9	48.8	79.7	87.5
77.5°	0.3	0.2	0.0	0.0	0.0	0.1	0.9	26.3	41.3	43.9
80°	0.1	0.0	0.0	0.0	0.0	0.0	0.3	8.8	24.8	25.3
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	10.7	10.2
85°	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
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)