

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: P400863

Luminaire Tested: **ENV-SA1-830-U-SLR-HSS-XXB**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P400863
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-SA1-830-U-SLR-HSS-XXB
Description: ENTRI LED LUMINAIRE
(1) 80 CRI, 3000K LIGHTSQUARE IN BATTERY OPERATION 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: 461 lumens
Efficiency: N/A
Efficacy: 35.5 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B0 - U0 - G0

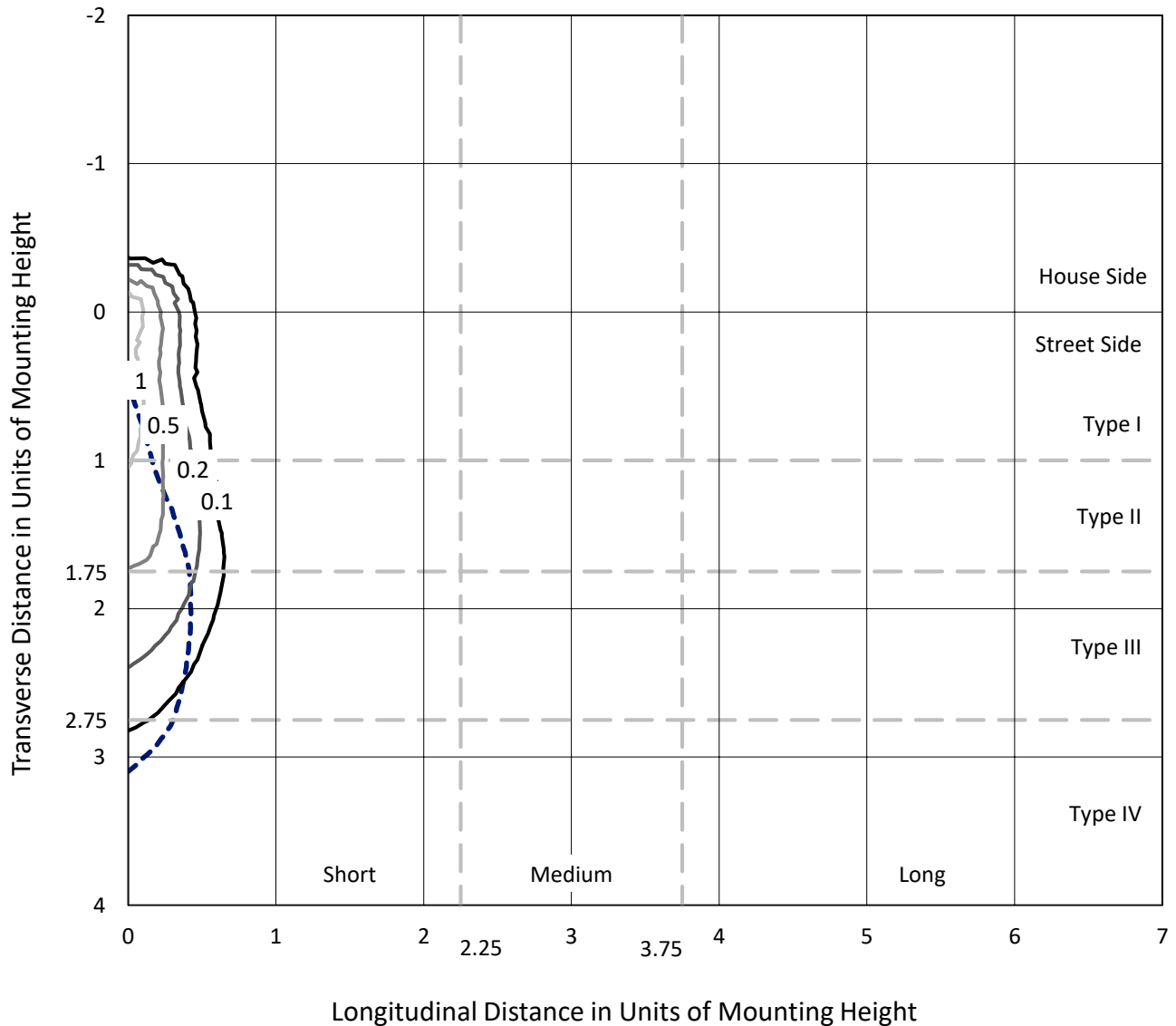
Input Watts (W): 13
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P400863
 CATALOG NUMBER: ENV-SA1-830-U-SLR-HSS-XXB

Iso-Footcandle Lines of Horizontal Illumination

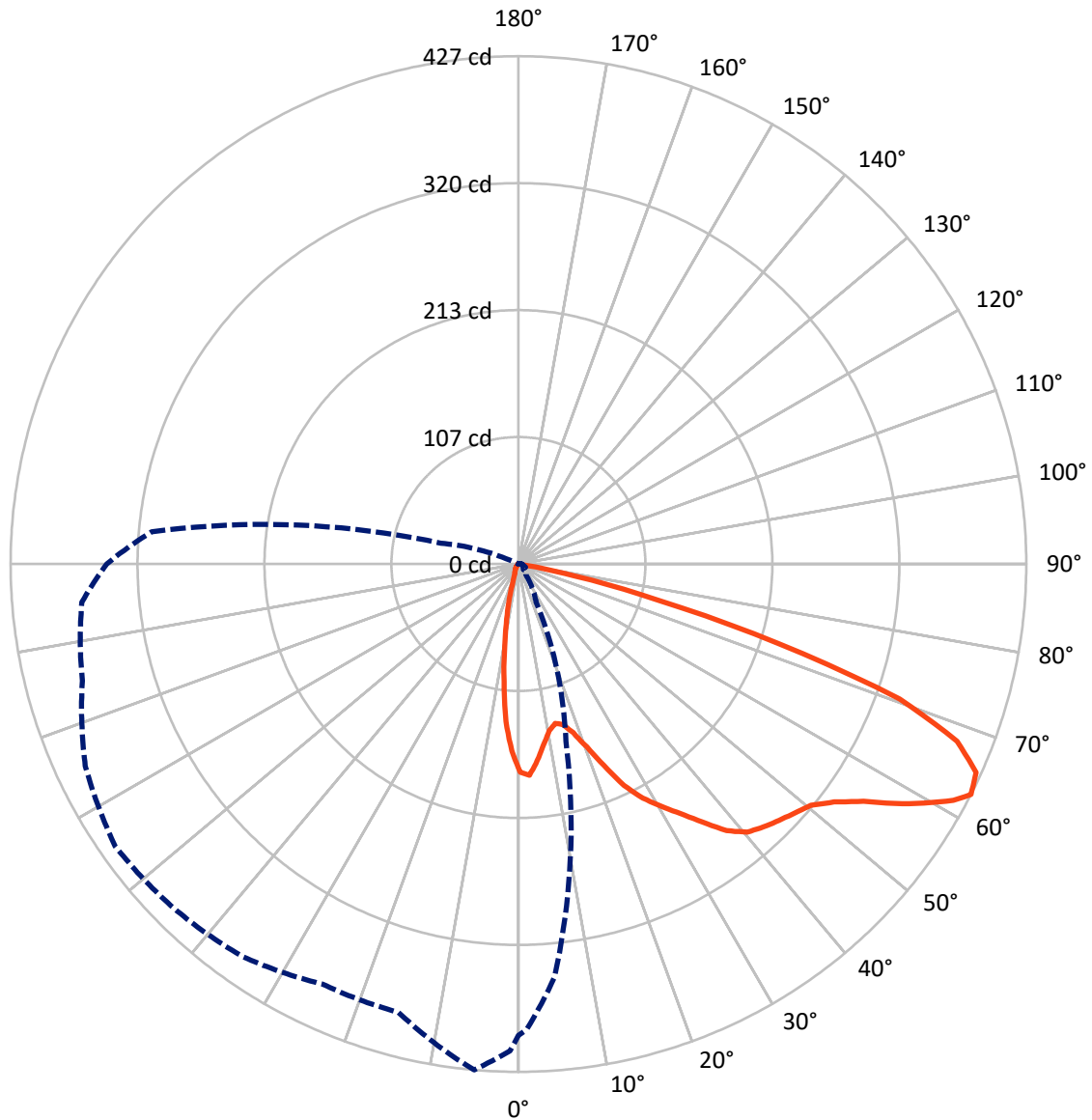
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 1.7 fc
 Type IV - Short - Semi-Cutoff

REPORT NUMBER: P400863
CATALOG NUMBER: ENV-SA1-830-U-SLR-HSS-XXB

Luminous Intensity Polar Plot



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

REPORT NUMBER: P400863

CATALOG NUMBER: ENV-SA1-830-U-SLR-HSS-XXB

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	64.8	0.0	64.8
	% Fixture	14.1	0.0	14.1
Street Side	Lumens	396.2	0.0	396.2
	% Fixture	85.9	0.0	85.9
Total	Lumens	461.0	0.0	461.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	13.1	2.8
10°-20°	24.9	5.4
20°-30°	34.7	7.5
30°-40°	50.2	10.9
40°-50°	71.9	15.6
50°-60°	104.3	22.6
60°-70°	112.9	24.5
70°-80°	45.6	9.9
80°-90°	3.4	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°	461.0	100.0
0°-180°	461.0	100.0



REPORT NUMBER: P400863

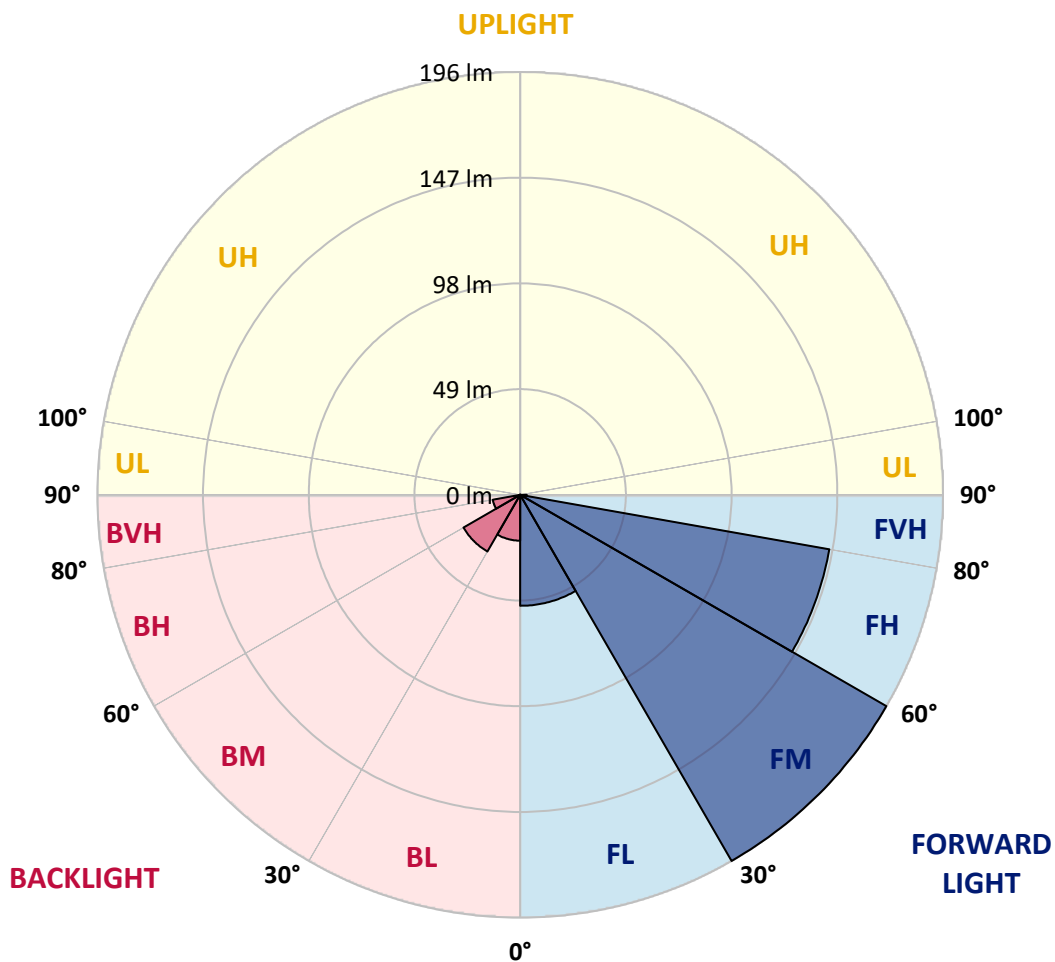
CATALOG NUMBER: ENV-SA1-830-U-SLR-HSS-XXB

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	51.5	11.2			
FM	(30°-60°)	196.1	42.5			
FH	(60°-80°)	145.6	31.6			G0/660
FVH	(80°-90°)	3.0	0.7			G0/10
BL	(0°-30°)	21.3	4.6	B0/110		
BM	(30°-60°)	30.3	6.6	B0/220		
BH	(60°-80°)	12.9	2.8	B0/110		G0/110
BVH	(80°-90°)	0.3	0.1			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 IV Short





REPORT NUMBER: P400863

CATALOG NUMBER: ENV-SA1-830-U-SLR-HSS-XXB

CANDELA DISTRIBUTION (FULL):

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	174.9	174.9	174.9	174.9	174.9	174.9	174.9	174.9	174.9	174.9	174.9
2.5°	175.6	174.9	173.2	169.7	164.6	161.3	159.2	156.4	153.6	152.7	150.9
5°	160.3	159.1	156.8	147.9	139.8	131.8	126.1	120.6	118.8	115.1	117.3
7.5°	145.5	144.9	139.7	128.1	115.3	105.0	98.4	90.4	88.0	84.3	81.3
10°	133.9	133.5	127.1	111.9	98.2	89.6	84.4	79.2	74.0	68.7	64.5
12.5°	128.1	127.1	119.7	103.4	90.6	83.5	78.0	71.1	65.5	58.4	53.3
15°	129.0	128.1	119.6	102.0	86.9	77.1	69.0	60.8	52.9	45.9	40.9
17.5°	136.3	135.9	125.6	103.2	82.6	69.5	58.7	47.6	38.3	30.7	26.5
20°	150.5	149.4	134.5	105.7	78.0	60.8	45.9	32.3	24.5	19.3	17.5
22.5°	168.1	165.7	148.4	109.5	73.6	51.4	33.2	21.7	17.5	15.5	14.2
25°	188.8	188.9	165.7	114.5	69.2	42.6	23.3	17.2	14.8	13.3	12.2
27.5°	205.6	204.3	181.3	119.5	64.5	34.9	19.5	15.1	13.0	11.4	10.8
30°	218.0	216.1	191.7	123.0	58.4	29.6	17.5	14.3	12.2	10.5	9.7
32.5°	230.8	228.4	201.0	124.9	54.7	27.0	15.5	12.5	10.9	10.2	9.1
35°	245.7	243.6	211.3	124.7	52.8	25.5	14.0	11.3	9.3	8.1	7.4
37.5°	262.4	258.1	221.9	123.9	51.4	24.8	12.8	10.5	8.7	7.4	6.5
40°	276.8	272.5	231.8	122.8	50.5	24.1	12.0	9.9	8.2	6.8	5.9
42.5°	288.0	283.9	241.0	121.4	50.1	22.5	12.4	9.6	7.8	6.5	5.5
45°	297.6	293.5	251.9	121.2	49.9	21.4	12.2	9.5	7.7	6.0	5.1
47.5°	308.9	306.7	266.4	124.2	49.2	20.6	11.2	10.2	7.6	5.8	4.8
50°	325.5	323.6	285.2	133.2	48.1	19.8	10.2	11.2	7.6	5.7	4.6
52.5°	348.7	346.5	315.0	144.9	47.1	18.9	9.2	10.9	7.7	5.4	4.4
55°	372.8	372.4	343.1	157.3	46.2	16.9	8.1	9.8	7.5	5.0	4.1
57.5°	391.7	391.4	364.1	165.7	44.4	13.6	7.4	8.1	6.9	4.6	3.7
60°	399.4	397.2	366.4	165.7	40.4	11.2	6.8	6.4	7.0	4.1	3.3
61°	399.4	396.5	362.3	163.2	38.4	10.7	6.4	5.9	7.2	3.9	3.1
62.5°	396.3	391.5	348.3	154.3	35.2	10.7	5.8	5.3	6.6	3.7	2.8
65°	382.6	374.6	315.3	134.2	31.9	10.9	5.0	4.5	4.7	3.2	2.5
67.5°	348.5	339.6	272.7	106.2	29.3	11.6	4.2	3.9	3.6	2.8	2.2
70°	287.2	279.6	222.5	79.5	27.2	11.8	3.6	3.3	3.1	2.5	1.9
72.5°	183.5	171.0	138.9	53.9	21.8	10.2	3.0	3.1	2.8	2.0	1.6
75°	88.7	92.1	80.8	27.2	14.7	6.7	2.4	2.6	2.3	1.8	1.4
77.5°	39.7	39.0	38.6	6.9	3.7	2.3	1.5	1.7	1.8	1.6	1.2
80°	4.1	5.6	3.3	2.1	1.4	1.0	0.8	0.9	1.1	1.2	0.6
82.5°	0.2	0.1	0.1	0.3	0.3	0.2	0.0	0.0	0.2	0.2	0.1
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: P400863

CATALOG NUMBER: ENV-SA1-830-U-SLR-HSS-XXB

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	174.9	174.9	174.9	174.9	174.9	174.9	174.9	174.9	174.9	174.9	174.9
2.5°	149.2	151.7	150.6	150.3	151.8	151.1	153.2	153.3	155.0	157.2	158.5
5°	117.3	115.4	119.2	121.8	125.0	124.0	127.8	127.3	129.4	132.9	131.5
7.5°	81.5	81.7	83.7	86.0	94.6	96.3	97.6	98.6	98.5	99.3	100.8
10°	62.3	60.8	59.4	62.6	66.0	69.7	70.2	71.6	67.9	69.4	70.1
12.5°	51.0	49.2	46.2	44.5	45.3	47.5	48.4	49.3	47.1	47.2	48.8
15°	38.7	36.2	35.0	32.8	32.0	31.8	32.3	31.1	30.8	29.8	30.5
17.5°	25.2	24.4	23.8	23.4	22.7	22.5	20.9	18.1	16.4	16.1	16.1
20°	16.8	16.2	16.2	17.1	16.9	16.1	14.0	11.6	10.4	10.0	10.2
22.5°	13.8	13.4	12.9	12.9	13.2	12.7	10.7	8.9	8.1	8.1	8.1
25°	11.9	11.8	11.2	10.7	10.9	10.4	8.7	7.6	7.0	6.9	7.0
27.5°	10.5	10.4	9.8	9.2	9.2	8.8	7.5	6.5	6.1	5.9	6.0
30°	9.5	9.3	8.6	8.1	8.0	7.7	6.4	5.7	5.3	5.2	5.2
32.5°	8.8	8.4	7.8	7.3	7.0	6.5	5.6	4.8	4.5	4.4	4.4
35°	7.0	7.0	6.8	6.5	6.1	5.3	4.7	4.0	3.6	3.6	3.6
37.5°	6.1	5.7	5.3	5.4	5.2	4.5	3.8	3.2	2.9	2.8	2.8
40°	5.6	5.1	4.5	4.2	4.3	3.9	3.2	2.5	2.1	2.2	2.1
42.5°	5.0	4.7	3.9	3.3	3.2	3.3	2.5	1.7	1.5	1.5	1.5
45°	4.7	4.3	3.5	2.7	2.3	2.6	1.9	1.2	0.9	0.9	0.9
47.5°	4.4	4.0	3.1	2.3	1.6	1.7	1.4	0.7	0.5	0.4	0.5
50°	4.2	3.7	2.8	1.8	1.2	1.0	0.9	0.4	0.1	0.1	0.0
52.5°	3.9	3.6	2.6	1.6	0.9	0.6	0.5	0.1	0.0	0.0	0.0
55°	3.7	3.3	2.3	1.4	0.7	0.4	0.1	0.0	0.0	0.0	0.0
57.5°	3.4	3.0	2.0	1.1	0.5	0.2	0.0	0.0	0.0	0.0	0.0
60°	3.0	2.7	1.7	0.8	0.4	0.0	0.0	0.0	0.0	0.0	0.0
61°	2.8	2.6	1.6	0.7	0.3	0.0	0.0	0.0	0.0	0.0	0.0
62.5°	2.6	2.4	1.5	0.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0
65°	2.3	2.0	1.3	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
67.5°	2.0	1.8	1.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70°	1.7	1.6	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
72.5°	1.5	1.4	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	1.3	1.1	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	1.0	0.9	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.1	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: P400863

CATALOG NUMBER: ENV-SA1-830-U-SLR-HSS-XXB

CANDELA DISTRIBUTION (continued):

	185°	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°
0°	174.9	174.9	174.9	174.9	174.9	174.9	174.9	174.9	174.9	174.9	174.9
2.5°	159.8	163.0	166.0	169.8	171.9	177.7	181.8	185.3	188.0	188.5	190.7
5°	135.2	139.7	142.6	150.6	155.1	164.7	172.0	180.8	188.6	192.9	196.9
7.5°	101.8	104.0	109.0	117.0	127.6	135.9	148.4	159.5	173.6	181.3	188.6
10°	71.9	73.9	81.3	89.7	99.3	113.3	128.4	142.9	157.3	167.2	175.8
12.5°	50.5	57.1	64.4	75.1	84.6	94.8	110.9	127.9	145.8	155.3	164.6
15°	33.2	39.0	49.2	62.6	74.4	84.4	99.4	119.3	142.0	152.6	161.5
17.5°	16.4	20.7	29.6	44.1	59.8	75.5	93.7	117.8	146.9	158.8	167.1
20°	10.3	11.6	14.9	24.9	43.1	66.2	89.4	120.9	160.0	173.2	178.6
22.5°	8.3	8.7	9.9	13.2	26.3	54.7	85.7	125.1	174.4	190.6	196.1
25°	7.1	7.4	8.1	9.8	15.2	41.0	81.1	132.5	191.2	210.7	212.1
27.5°	6.1	6.4	7.0	8.3	10.9	27.6	74.5	141.1	211.3	228.4	227.5
30°	5.2	5.6	6.2	7.1	8.6	18.7	62.3	149.9	226.0	239.8	238.4
32.5°	4.5	4.7	5.3	6.1	7.1	12.9	46.8	155.6	238.4	250.6	247.4
35°	3.6	3.9	4.4	5.1	5.7	9.1	35.4	155.8	251.0	263.9	255.9
37.5°	2.9	3.1	3.6	4.2	4.7	7.1	26.0	152.8	266.7	281.2	265.5
40°	2.2	2.5	2.9	3.5	4.0	6.0	19.4	145.5	282.0	298.6	277.2
42.5°	1.5	1.8	2.3	2.8	3.8	4.8	13.7	133.4	294.5	314.0	288.6
45°	0.9	1.2	1.7	2.4	3.9	3.8	9.1	118.9	303.3	325.7	296.4
47.5°	0.5	0.7	1.3	2.3	3.5	2.8	5.7	105.0	311.3	332.6	299.9
50°	0.1	0.3	0.9	2.8	2.9	2.1	3.7	96.3	315.5	330.9	299.6
52.5°	0.0	0.0	0.6	2.7	2.1	1.6	2.9	95.1	322.1	333.1	305.9
55°	0.0	0.0	0.3	1.2	1.2	1.4	2.6	93.3	333.8	346.7	324.8
57.5°	0.0	0.0	0.0	0.5	0.7	1.1	2.4	88.8	346.1	361.1	347.9
60°	0.0	0.0	0.0	0.3	0.5	0.9	2.1	78.4	334.8	361.2	367.1
61°	0.0	0.0	0.0	0.3	0.4	0.8	1.9	74.7	324.6	355.4	369.4
62.5°	0.0	0.0	0.0	0.1	0.3	0.6	1.6	67.5	309.5	346.0	368.3
65°	0.0	0.0	0.0	0.0	0.1	0.4	1.3	54.5	284.2	322.4	355.8
67.5°	0.0	0.0	0.0	0.0	0.0	0.1	0.8	38.4	247.9	295.6	328.8
70°	0.0	0.0	0.0	0.0	0.0	0.0	0.4	22.3	199.8	250.3	281.7
72.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.2	10.1	129.6	193.3	222.2
75°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.3	79.8	139.7	166.0
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	54.1	93.0	111.7
80°	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.7	33.3	58.0	63.0
82.5°	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	17.2	41.0	41.8
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.2	8.7
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: P400863

CATALOG NUMBER: ENV-SA1-830-U-SLR-HSS-XXB

CANDELA DISTRIBUTION (continued):

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	174.9	174.9	174.9	174.9	174.9	174.9	174.9	174.9	174.9	174.9
2.5°	192.7	193.3	193.7	193.0	189.1	186.9	182.5	177.7	176.1	175.6
5°	204.0	207.1	206.5	202.3	195.5	187.1	176.7	165.9	161.8	160.3
7.5°	201.8	209.9	211.4	207.1	195.5	180.8	165.7	153.0	147.0	145.5
10°	190.6	200.9	205.8	204.4	193.6	176.6	158.1	142.4	135.9	133.9
12.5°	179.9	189.7	192.8	193.9	188.0	173.3	154.3	137.4	130.6	128.1
15°	172.7	178.8	178.6	180.6	180.2	172.0	156.7	139.9	132.4	129.0
17.5°	170.3	168.5	166.1	167.8	170.9	172.4	164.7	149.1	140.2	136.3
20°	171.8	162.8	157.6	157.5	164.3	175.4	176.5	164.1	155.8	150.5
22.5°	179.2	160.0	152.0	152.2	160.5	179.9	190.1	183.8	174.7	168.1
25°	190.3	160.5	149.8	150.9	160.1	183.8	204.8	206.2	194.6	188.8
27.5°	201.5	165.3	149.9	151.1	161.6	185.9	213.2	222.8	212.7	205.6
30°	209.3	171.1	151.5	152.8	164.1	187.5	216.4	236.3	225.9	218.0
32.5°	216.7	177.1	154.2	155.4	169.0	190.9	222.4	250.0	238.6	230.8
35°	223.9	183.1	159.1	161.4	177.0	197.0	228.5	266.1	256.6	245.7
37.5°	230.1	189.6	167.6	172.4	187.7	206.4	236.8	284.3	274.6	262.4
40°	235.3	197.4	185.1	190.5	204.1	216.4	246.0	296.3	289.8	276.8
42.5°	239.5	211.1	210.2	217.7	227.3	227.8	248.7	302.0	299.6	288.0
45°	246.6	235.6	243.1	255.5	254.9	241.5	247.9	307.3	307.5	297.6
47.5°	258.1	266.4	288.0	296.4	292.1	260.2	248.7	312.5	316.6	308.9
50°	274.5	301.2	329.5	340.6	328.1	278.9	255.1	318.7	331.1	325.5
52.5°	288.5	327.6	367.8	377.7	360.7	299.0	270.3	332.1	350.6	348.7
55°	308.6	350.3	395.1	402.7	389.0	321.7	290.6	351.8	371.9	372.8
57.5°	329.1	370.8	412.9	420.6	410.2	350.0	319.5	380.1	392.0	391.7
60°	351.9	390.0	420.9	425.2	419.2	378.3	350.6	406.0	405.7	399.4
61°	365.0	396.1	420.3	421.6	415.9	386.6	366.7	416.0	407.7	399.4
62.5°	379.4	401.6	413.6	409.3	403.1	389.5	390.0	426.8	409.1	396.3
65°	394.0	387.7	382.5	362.0	356.1	362.7	409.6	422.7	400.8	382.6
67.5°	369.0	332.2	321.0	300.4	277.3	304.1	391.0	397.6	372.8	348.5
70°	301.6	244.1	230.8	230.1	213.5	242.9	344.8	340.0	309.4	287.2
72.5°	236.3	166.6	148.4	152.6	149.3	181.1	282.0	228.1	198.4	183.5
75°	185.3	118.4	102.2	101.4	97.9	123.3	206.5	120.2	99.2	88.7
77.5°	122.2	85.3	85.0	78.5	75.8	66.9	92.7	48.2	39.3	39.7
80°	70.4	52.3	61.3	48.6	48.7	39.2	37.5	7.0	5.7	4.1
82.5°	40.4	25.1	19.0	7.5	15.7	15.7	3.0	0.1	0.1	0.2
85°	3.9	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.1	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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