

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: P401223

Luminaire Tested: **ENT-SA1B-830-U-SLR-HSS**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401223
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: ENT-SA1B-830-U-SLR-HSS
Description: ENTRI LED LUMINAIRE
(1) 80 CRI, 3000K, 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: 2048 lumens
Efficiency: N/A
Efficacy: 80.6 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 - 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

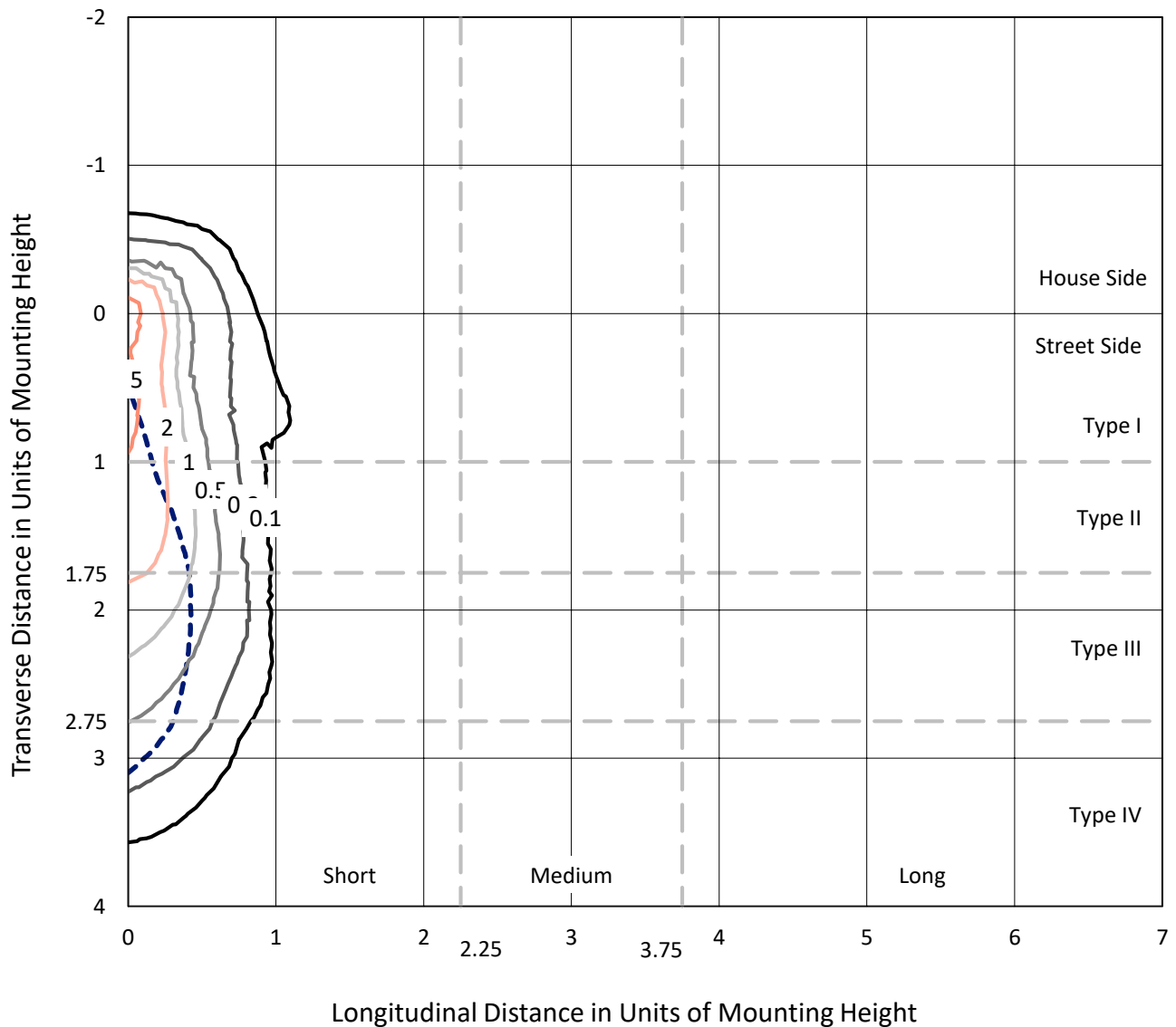


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

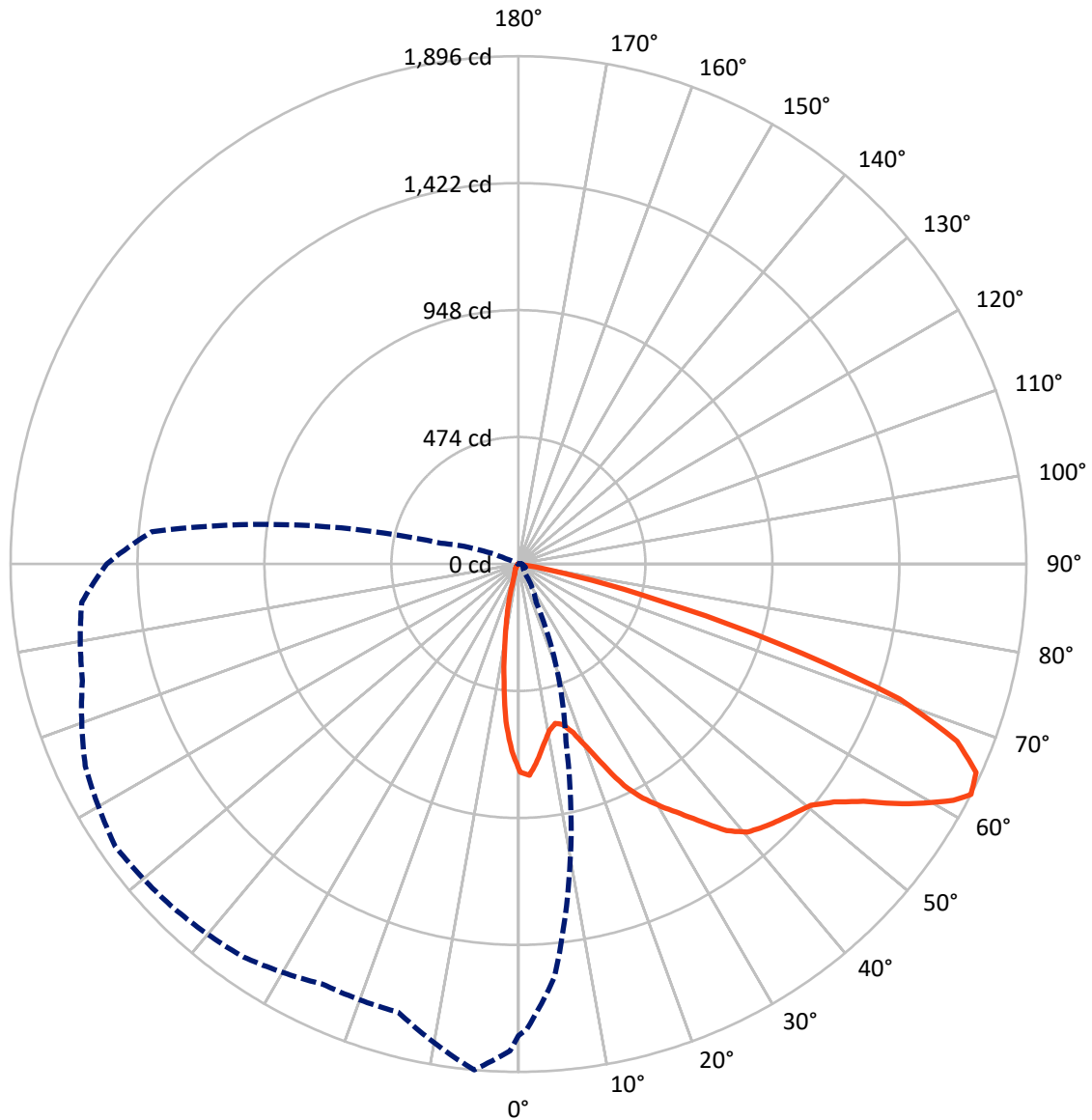


Based on 10 foot mounting height. Maximum calculated value = 7.8 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



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

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	288.1	0.0	288.1
	% Fixture	14.1	0.0	14.1
Street Side	Lumens	1759.9	0.0	1759.9
	% Fixture	85.9	0.0	85.9
Total	Lumens	2048.0	0.0	2048.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	58.3	2.8
10°-20°	110.7	5.4
20°-30°	154.1	7.5
30°-40°	222.8	10.9
40°-50°	319.5	15.6
50°-60°	463.5	22.6
60°-70°	501.5	24.5
70°-80°	202.5	9.9
80°-90°	15.0	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°	2048.0	100.0
0°-180°	2048.0	100.0



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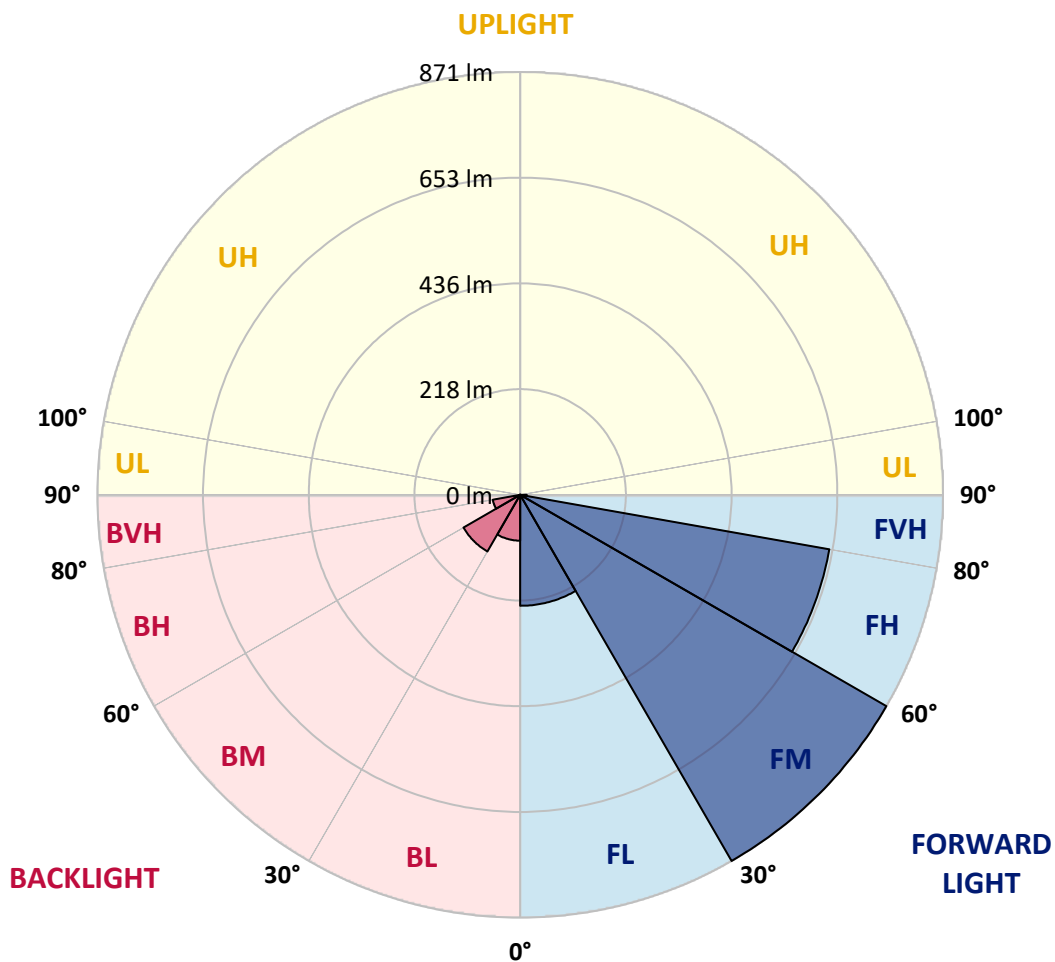
CATALOG NUMBER: ENT-SA1B-830-U-SLR-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	228.6	11.2			
FM	(30°-60°)	871.1	42.5			
FH	(60°-80°)	646.8	31.6			G0/660
FVH	(80°-90°)	13.5	0.7			G1/100
BL	(0°-30°)	94.5	4.6	B0/110		
BM	(30°-60°)	134.8	6.6	B0/220		
BH	(60°-80°)	57.3	2.8	B0/110		G0/110
BVH	(80°-90°)	1.5	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-G1

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	776.8	776.8	776.8	776.8	776.8	776.8	776.8	776.8	776.8	776.8	776.8
2.5°	780.1	776.8	769.6	753.8	731.1	716.5	707.1	695.0	682.4	678.4	670.3
5°	712.0	706.7	696.6	656.9	621.2	585.6	560.0	535.7	527.6	511.4	521.1
7.5°	646.4	643.9	620.4	569.0	512.2	466.4	437.3	401.6	391.1	374.4	361.1
10°	594.9	592.9	564.5	497.2	436.0	397.9	374.8	351.8	328.7	305.1	286.5
12.5°	569.0	564.5	531.7	459.1	402.4	370.8	346.5	315.7	291.0	259.4	236.7
15°	573.0	569.0	531.3	453.1	386.2	342.4	306.4	269.9	235.0	203.8	181.5
17.5°	605.4	603.8	558.0	458.3	366.7	308.8	260.6	211.5	170.2	136.6	117.5
20°	668.6	663.8	597.3	469.7	346.5	269.9	203.8	143.5	109.0	85.9	77.8
22.5°	746.9	735.9	659.3	486.3	327.0	228.2	147.5	96.4	77.8	68.9	63.2
25°	838.9	839.3	736.3	508.6	307.6	189.2	103.3	76.6	65.6	59.2	54.3
27.5°	913.4	907.7	805.6	530.9	286.5	155.2	86.7	66.9	57.5	50.7	47.8
30°	968.5	960.0	851.4	546.3	259.4	131.3	77.8	63.6	54.3	46.6	43.0
32.5°	1025.3	1014.7	892.7	554.8	243.1	120.0	68.9	55.5	48.6	45.4	40.5
35°	1091.7	1082.4	938.5	554.0	234.6	113.5	62.4	50.3	41.3	36.1	32.8
37.5°	1165.9	1146.8	986.0	550.3	228.6	110.2	56.7	46.6	38.5	32.8	28.8
40°	1229.5	1210.5	1029.7	545.5	224.5	107.0	53.5	44.2	36.5	30.4	26.3
42.5°	1279.3	1261.1	1070.6	539.4	222.5	100.1	55.1	42.6	34.9	28.8	24.3
45°	1322.3	1303.7	1119.3	538.6	221.7	95.2	54.3	42.1	34.0	26.7	22.7
47.5°	1372.1	1362.4	1183.3	551.9	218.4	91.6	49.8	45.4	33.6	25.9	21.5
50°	1445.9	1437.4	1267.2	591.7	213.6	87.9	45.4	49.8	33.6	25.1	20.3
52.5°	1549.2	1539.5	1399.3	643.5	209.1	83.9	40.9	48.2	34.0	23.9	19.5
55°	1656.2	1654.6	1524.1	698.6	205.1	75.0	36.1	43.4	33.2	22.3	18.2
57.5°	1740.1	1738.9	1617.7	735.9	197.4	60.4	32.8	36.1	30.8	20.3	16.6
60°	1774.6	1764.4	1627.9	735.9	179.5	49.8	30.0	28.4	31.2	18.2	14.6
61°	1774.6	1761.6	1609.6	725.0	170.6	47.4	28.4	26.3	32.0	17.4	13.8
62.5°	1760.8	1739.3	1547.2	685.7	156.4	47.4	25.9	23.5	29.2	16.6	12.6
65°	1699.6	1664.3	1400.9	596.1	141.8	48.6	22.3	19.9	21.1	14.2	10.9
67.5°	1548.4	1508.7	1211.3	471.7	130.1	51.5	18.6	17.4	16.2	12.6	9.7
70°	1275.7	1242.1	988.4	353.4	120.8	52.3	16.2	14.6	13.8	10.9	8.5
72.5°	815.3	759.8	617.2	239.5	96.9	45.4	13.4	13.8	12.6	8.9	6.9
75°	393.9	409.3	359.0	120.8	65.2	29.6	10.5	11.3	10.1	8.1	6.1
77.5°	176.3	173.0	171.4	30.8	16.6	10.1	6.5	7.7	8.1	7.3	5.3
80°	18.2	24.7	14.6	9.3	6.1	4.5	3.6	4.1	4.9	5.3	2.8
82.5°	0.8	0.4	0.4	1.2	1.2	0.8	0.0	0.0	0.8	0.8	0.4
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



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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	776.8	776.8	776.8	776.8	776.8	776.8	776.8	776.8	776.8	776.8	776.8
2.5°	663.0	673.9	669.1	667.8	674.3	671.1	680.8	681.2	688.5	698.2	704.3
5°	521.1	512.6	529.7	541.0	555.2	550.7	567.7	565.7	575.0	590.4	584.4
7.5°	361.9	363.1	372.0	382.1	420.2	427.9	433.6	438.1	437.7	441.3	447.8
10°	276.8	269.9	263.8	278.0	293.0	309.6	312.0	318.1	301.5	308.4	311.6
12.5°	226.5	218.4	205.1	197.8	201.4	211.1	215.2	218.8	209.1	209.5	216.8
15°	171.8	160.9	155.6	145.9	142.2	141.4	143.5	138.2	137.0	132.5	135.4
17.5°	111.8	108.6	105.8	103.7	100.9	100.1	92.8	80.2	72.9	71.3	71.3
20°	74.6	72.1	72.1	76.2	75.0	71.7	62.0	51.5	46.2	44.6	45.4
22.5°	61.2	59.6	57.1	57.1	58.8	56.3	47.4	39.7	36.1	36.1	36.1
25°	53.1	52.3	49.8	47.4	48.2	46.2	38.5	33.6	31.2	30.8	31.2
27.5°	46.6	46.2	43.4	40.9	40.9	39.3	33.2	28.8	27.2	26.3	26.7
30°	42.1	41.3	38.1	36.1	35.7	34.0	28.4	25.1	23.5	23.1	23.1
32.5°	38.9	37.3	34.4	32.4	31.2	28.8	24.7	21.5	19.9	19.5	19.5
35°	31.2	31.2	30.0	28.8	27.2	23.5	20.7	17.8	16.2	15.8	15.8
37.5°	27.2	25.5	23.5	23.9	23.1	19.9	17.0	14.2	13.0	12.6	12.6
40°	24.7	22.7	19.9	18.6	19.0	17.4	14.2	10.9	9.3	9.7	9.3
42.5°	22.3	20.7	17.4	14.6	14.2	14.6	10.9	7.7	6.5	6.5	6.5
45°	20.7	19.0	15.4	12.2	10.1	11.3	8.5	5.3	4.1	4.1	4.1
47.5°	19.5	17.8	13.8	10.1	7.3	7.7	6.1	3.2	2.4	1.6	2.0
50°	18.6	16.6	12.6	8.1	5.3	4.5	4.1	1.6	0.4	0.4	0.0
52.5°	17.4	15.8	11.3	6.9	4.1	2.8	2.0	0.4	0.0	0.0	0.0
55°	16.6	14.6	10.1	6.1	3.2	1.6	0.4	0.0	0.0	0.0	0.0
57.5°	15.0	13.4	8.9	4.9	2.4	0.8	0.0	0.0	0.0	0.0	0.0
60°	13.4	12.2	7.7	3.6	1.6	0.0	0.0	0.0	0.0	0.0	0.0
61°	12.6	11.3	7.3	3.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0
62.5°	11.8	10.5	6.5	2.4	0.8	0.0	0.0	0.0	0.0	0.0	0.0
65°	10.1	8.9	5.7	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
67.5°	8.9	8.1	4.9	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70°	7.7	6.9	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
72.5°	6.5	6.1	2.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	5.7	4.9	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	4.5	4.1	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	2.4	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.4	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



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CANDELA DISTRIBUTION (continued):

	185°	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°
0°	776.8	776.8	776.8	776.8	776.8	776.8	776.8	776.8	776.8	776.8	776.8
2.5°	710.0	724.2	737.5	754.6	763.9	789.4	807.6	823.0	835.2	837.6	847.4
5°	600.6	620.4	633.4	669.1	688.9	731.5	764.3	803.2	838.0	857.1	874.5
7.5°	452.3	462.0	484.3	519.9	566.9	603.8	659.3	708.4	771.2	805.6	838.0
10°	319.3	328.2	361.1	398.4	441.3	503.3	570.6	635.0	698.6	742.8	780.9
12.5°	224.5	253.7	286.1	333.5	375.7	421.0	492.8	568.1	647.6	689.7	731.1
15°	147.5	173.4	218.4	278.0	330.7	374.8	441.7	530.1	631.0	678.0	717.3
17.5°	72.9	92.0	131.7	195.7	265.8	335.5	416.2	523.2	652.4	705.5	742.4
20°	45.8	51.5	66.1	110.6	191.3	294.2	397.1	536.9	710.8	769.6	793.5
22.5°	36.9	38.5	44.2	58.8	116.7	243.1	380.5	555.6	774.8	846.6	871.3
25°	31.6	32.8	36.1	43.4	67.7	182.4	360.3	588.4	849.4	936.1	942.2
27.5°	27.2	28.4	31.2	36.9	48.2	122.8	331.1	626.9	938.5	1014.7	1010.7
30°	23.1	24.7	27.6	31.6	38.1	83.1	276.8	665.8	1004.2	1065.4	1058.9
32.5°	19.9	21.1	23.5	27.2	31.6	57.1	207.9	691.3	1058.9	1113.2	1099.0
35°	16.2	17.4	19.5	22.7	25.5	40.5	157.2	692.2	1115.2	1172.4	1136.7
37.5°	13.0	13.8	15.8	18.6	21.1	31.6	115.5	678.8	1184.9	1249.4	1179.7
40°	9.7	10.9	13.0	15.4	17.8	26.7	86.3	646.4	1253.0	1326.4	1231.5
42.5°	6.5	8.1	10.1	12.6	17.0	21.5	60.8	592.5	1308.1	1394.8	1282.2
45°	4.1	5.3	7.7	10.5	17.4	17.0	40.5	528.0	1347.4	1447.1	1316.6
47.5°	2.0	3.2	5.7	10.1	15.4	12.6	25.1	466.4	1383.1	1477.5	1332.4
50°	0.4	1.2	4.1	12.6	13.0	9.3	16.6	427.9	1401.7	1469.8	1330.8
52.5°	0.0	0.0	2.8	12.2	9.3	7.3	13.0	422.3	1430.9	1479.9	1358.8
55°	0.0	0.0	1.2	5.3	5.3	6.1	11.3	414.6	1482.8	1540.3	1443.1
57.5°	0.0	0.0	0.0	2.4	3.2	4.9	10.5	394.3	1537.5	1604.4	1545.6
60°	0.0	0.0	0.0	1.2	2.0	4.1	9.3	348.1	1487.2	1604.8	1630.7
61°	0.0	0.0	0.0	1.2	1.6	3.6	8.5	331.9	1442.3	1578.8	1641.2
62.5°	0.0	0.0	0.0	0.4	1.2	2.8	7.3	299.9	1375.0	1537.1	1636.4
65°	0.0	0.0	0.0	0.0	0.4	1.6	5.7	242.3	1262.7	1432.1	1580.4
67.5°	0.0	0.0	0.0	0.0	0.0	0.4	3.6	170.6	1101.4	1313.4	1460.9
70°	0.0	0.0	0.0	0.0	0.0	0.0	1.6	98.9	887.5	1112.0	1251.4
72.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.8	45.0	575.8	858.7	987.2
75°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.0	354.6	620.4	737.5
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.5	240.3	412.9	496.4
80°	0.0	0.8	0.4	0.0	0.0	0.0	0.0	3.2	147.9	257.7	280.0
82.5°	0.0	0.4	0.4	0.0	0.0	0.0	0.0	0.0	76.6	182.0	185.6
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	32.0	38.5
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



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CATALOG NUMBER: ENT-SA1B-830-U-SLR-HSS

CANDELA DISTRIBUTION (continued):

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	776.8	776.8	776.8	776.8	776.8	776.8	776.8	776.8	776.8	776.8
2.5°	856.3	858.7	860.3	857.5	840.1	830.3	810.9	789.4	782.1	780.1
5°	906.1	919.9	917.5	898.8	868.4	831.2	785.0	737.1	718.9	712.0
7.5°	896.4	932.5	939.4	919.9	868.4	803.2	736.3	679.6	653.3	646.4
10°	847.0	892.3	914.2	908.1	859.9	784.5	702.3	632.6	603.8	594.9
12.5°	799.1	842.9	856.7	861.5	835.2	770.0	685.3	610.3	580.3	569.0
15°	767.1	794.3	793.5	802.4	800.4	764.3	696.2	621.6	588.0	573.0
17.5°	756.6	748.5	737.9	745.2	759.4	765.9	731.9	662.2	622.9	605.4
20°	763.1	723.4	700.3	699.9	729.8	779.3	784.1	729.0	692.2	668.6
22.5°	796.3	710.8	675.1	675.9	712.8	799.1	844.5	816.6	776.0	746.9
25°	845.3	713.2	665.4	670.3	711.2	816.6	909.8	916.3	864.4	838.9
27.5°	895.2	734.3	665.8	671.1	718.1	825.9	947.1	989.6	945.0	913.4
30°	930.0	760.2	673.1	678.8	729.0	833.2	961.2	1050.0	1003.8	968.5
32.5°	962.9	787.0	684.9	690.5	750.9	848.2	988.0	1110.8	1060.1	1025.3
35°	994.9	813.3	706.7	716.9	786.2	875.3	1015.1	1182.1	1139.9	1091.7
37.5°	1022.4	842.5	744.4	765.9	834.0	917.1	1052.0	1263.1	1219.8	1165.9
40°	1045.5	876.9	822.2	846.1	906.9	961.2	1092.9	1316.2	1287.5	1229.5
42.5°	1064.2	937.7	933.7	967.3	1009.9	1011.9	1104.7	1341.8	1330.8	1279.3
45°	1095.4	1046.7	1080.0	1135.1	1132.2	1072.7	1101.4	1365.3	1366.1	1322.3
47.5°	1146.4	1183.3	1279.3	1316.6	1297.6	1155.8	1104.7	1388.4	1406.6	1372.1
50°	1219.4	1338.1	1463.7	1513.2	1457.7	1239.2	1133.5	1415.9	1471.0	1445.9
52.5°	1281.8	1455.2	1633.9	1678.1	1602.3	1328.4	1200.7	1475.5	1557.3	1549.2
55°	1370.9	1556.1	1755.1	1789.1	1728.4	1429.3	1291.1	1563.0	1652.2	1656.2
57.5°	1462.1	1647.3	1834.1	1868.6	1822.4	1554.9	1419.6	1688.6	1741.3	1740.1
60°	1563.4	1732.4	1869.8	1888.8	1862.5	1680.5	1557.8	1803.7	1802.5	1774.6
61°	1621.4	1759.6	1867.4	1873.0	1847.5	1717.4	1629.1	1847.9	1811.4	1774.6
62.5°	1685.4	1784.3	1837.4	1818.3	1790.8	1730.4	1732.4	1896.1	1817.5	1760.8
65°	1750.2	1722.3	1699.2	1608.0	1582.1	1611.2	1819.5	1877.9	1780.6	1699.6
67.5°	1639.2	1475.9	1426.0	1334.5	1231.9	1351.1	1736.9	1766.5	1656.2	1548.4
70°	1339.7	1084.4	1025.3	1022.0	948.3	1079.2	1531.8	1510.3	1374.6	1275.7
72.5°	1050.0	740.0	659.3	678.0	663.4	804.4	1253.0	1013.5	881.4	815.3
75°	823.0	526.0	453.9	450.6	434.8	547.9	917.5	534.1	440.9	393.9
77.5°	543.0	378.9	377.7	348.9	336.8	297.0	411.7	214.0	174.7	176.3
80°	312.8	232.2	272.3	216.0	216.4	174.3	166.6	31.2	25.1	18.2
82.5°	179.5	111.4	84.3	33.2	69.7	69.7	13.4	0.4	0.4	0.8
85°	17.4	5.3	0.0	0.0	0.0	0.0	0.0	0.0	0.4	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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