

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: P400962

Luminaire Tested: **ENT-SA1A-740-U-SLR-HSS**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P400962
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-SA1A-740-U-SLR-HSS
Description: ENTRI LED LUMINAIRE
(1) 70 CRI, 4000K, 350mA 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: 2055 lumens
Efficiency: N/A
Efficacy: 102.2 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): 20.1
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: 25 FT

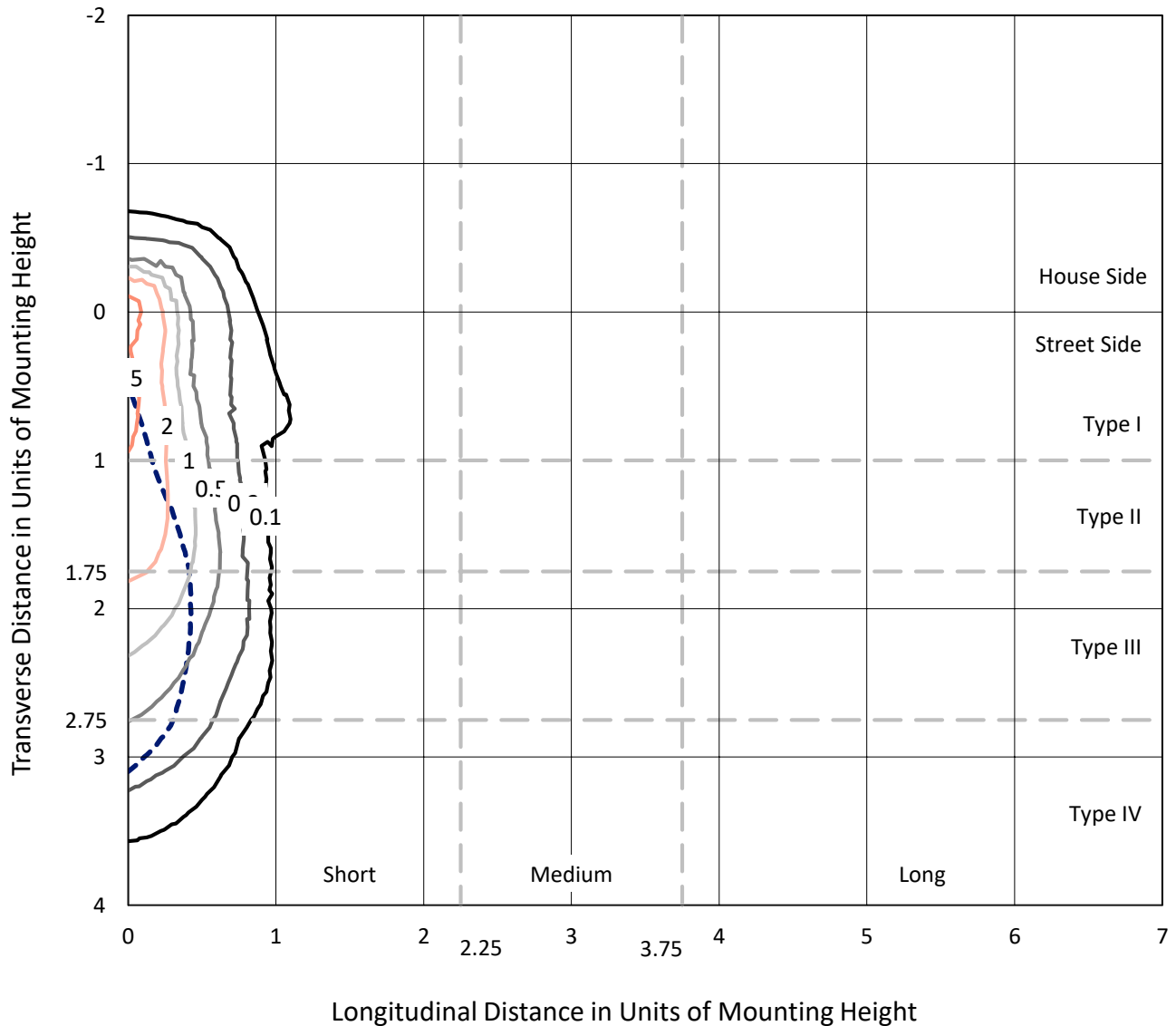


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

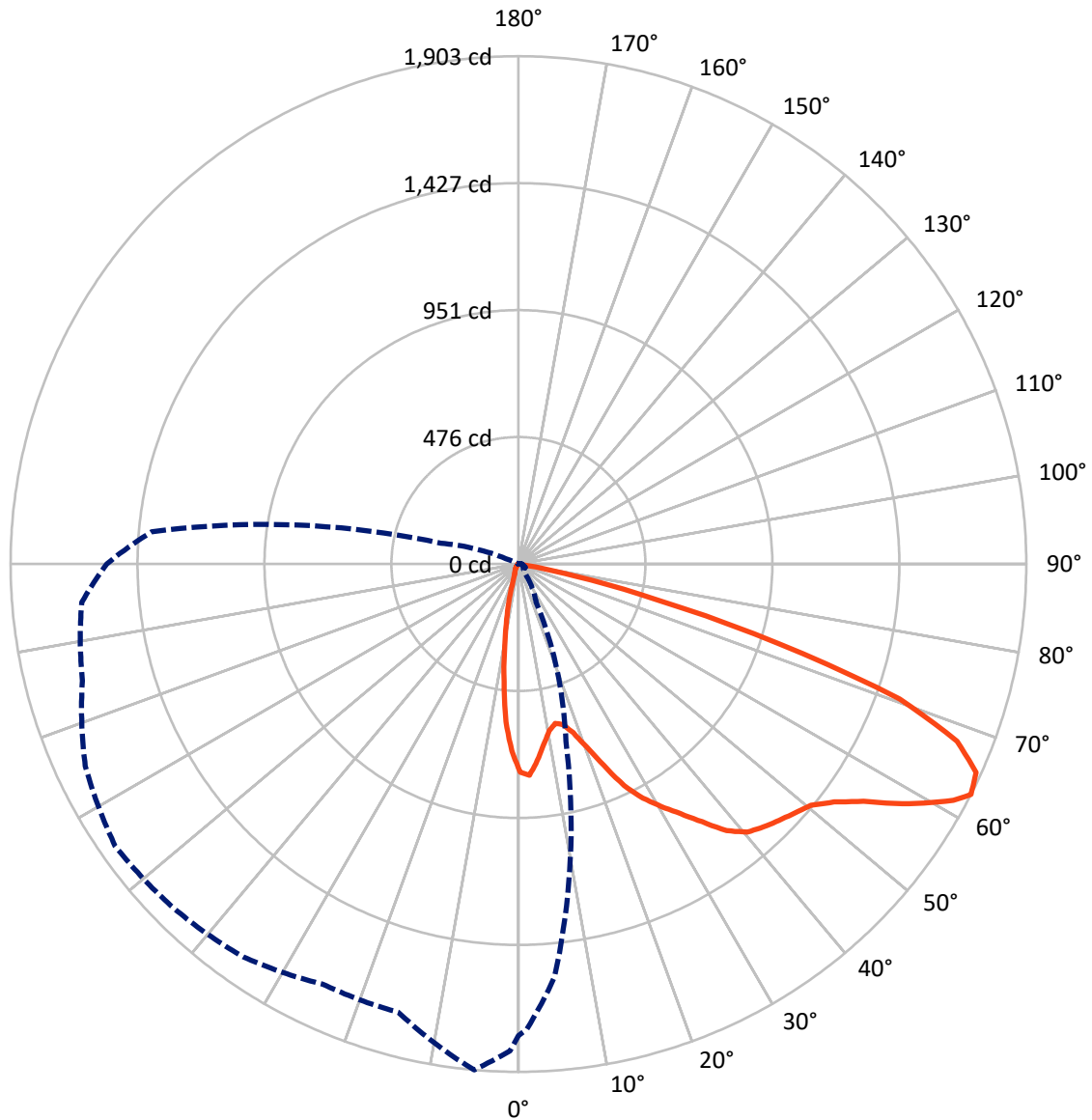


Based on 10 foot mounting height. Maximum calculated value = 7.8 fc
 Type IV - Short - Semi-Cutoff

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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	289.1	0.0	289.1
	% Fixture	14.1	0.0	14.1
Street Side	Lumens	1765.9	0.0	1765.9
	% Fixture	85.9	0.0	85.9
Total	Lumens	2055.0	0.0	2055.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	58.5	2.8
10°-20°	111.1	5.4
20°-30°	154.6	7.5
30°-40°	223.6	10.9
40°-50°	320.6	15.6
50°-60°	465.1	22.6
60°-70°	503.2	24.5
70°-80°	203.2	9.9
80°-90°	15.1	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°	2055.0	100.0
0°-180°	2055.0	100.0



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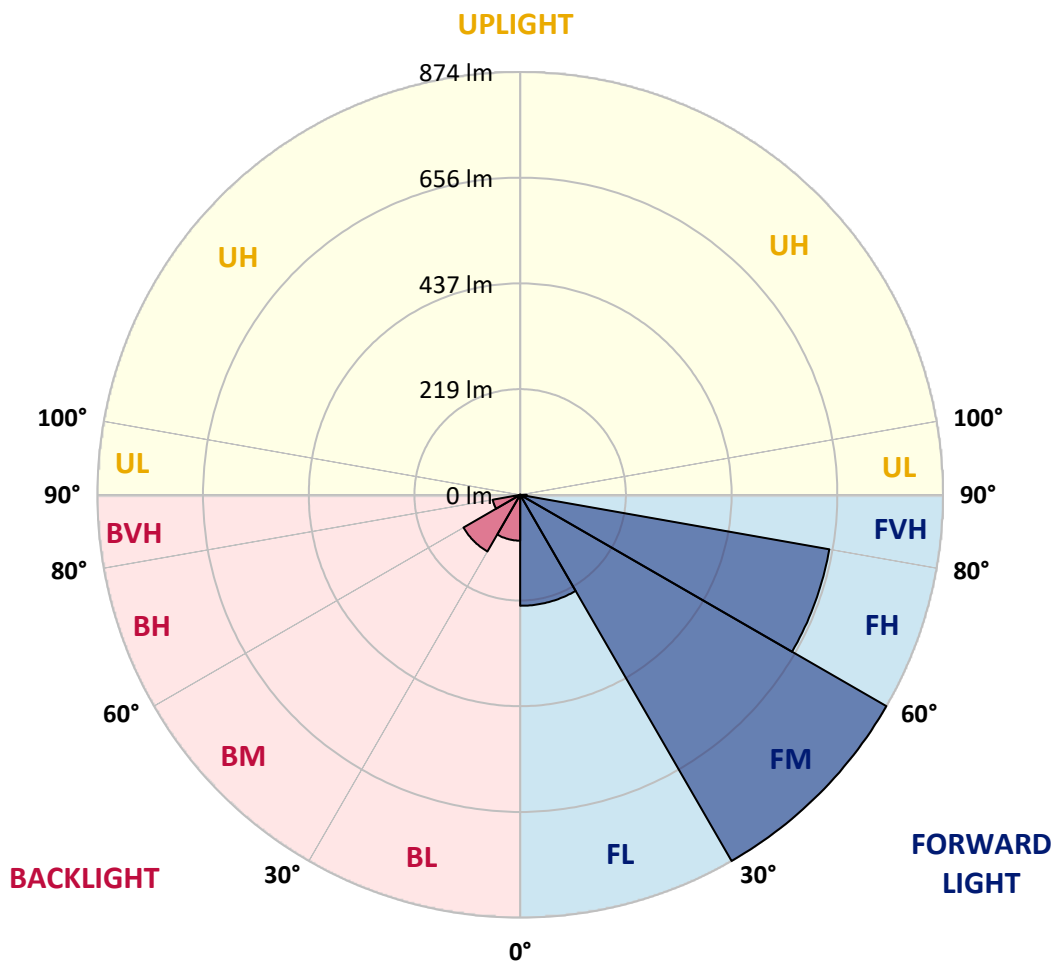
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	229.4	11.2			
FM	(30°-60°)	874.0	42.5			
FH	(60°-80°)	649.0	31.6			G0/660
FVH	(80°-90°)	13.5	0.7			G1/100
BL	(0°-30°)	94.8	4.6	B0/110		
BM	(30°-60°)	135.3	6.6	B0/220		
BH	(60°-80°)	57.5	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°	779.5	779.5	779.5	779.5	779.5	779.5	779.5	779.5	779.5	779.5	779.5
2.5°	782.8	779.5	772.2	756.3	733.6	718.9	709.6	697.4	684.8	680.7	672.6
5°	714.4	709.2	699.0	659.1	623.4	587.6	562.0	537.6	529.4	513.2	522.9
7.5°	648.6	646.1	622.5	570.9	514.0	468.0	438.8	403.0	392.4	375.7	362.3
10°	596.9	594.9	566.4	498.9	437.5	399.3	376.1	353.0	329.8	306.2	287.5
12.5°	570.9	566.4	533.5	460.7	403.8	372.1	347.7	316.8	292.0	260.2	237.5
15°	575.0	570.9	533.1	454.6	387.5	343.6	307.4	270.8	235.8	204.5	182.2
17.5°	607.5	605.9	559.9	459.9	368.0	309.8	261.5	212.3	170.8	137.0	117.9
20°	670.9	666.1	599.4	471.3	347.7	270.8	204.5	143.9	109.4	86.2	78.1
22.5°	749.4	738.4	661.6	488.0	328.1	228.9	148.0	96.8	78.1	69.1	63.4
25°	841.7	842.1	738.8	510.3	308.6	189.9	103.7	76.9	65.9	59.4	54.5
27.5°	916.5	910.8	808.4	532.7	287.5	155.7	87.0	67.1	57.7	50.8	48.0
30°	971.8	963.3	854.3	548.1	260.2	131.7	78.1	63.8	54.5	46.8	43.1
32.5°	1028.8	1018.2	895.8	556.7	244.0	120.4	69.1	55.7	48.8	45.5	40.7
35°	1095.5	1086.1	941.7	555.9	235.4	113.9	62.6	50.4	41.5	36.2	32.9
37.5°	1169.9	1150.8	989.3	552.2	229.3	110.6	56.9	46.8	38.6	32.9	28.9
40°	1233.7	1214.6	1033.2	547.3	225.3	107.3	53.7	44.3	36.6	30.5	26.4
42.5°	1283.7	1265.4	1074.3	541.2	223.2	100.4	55.3	42.7	35.0	28.9	24.4
45°	1326.8	1308.1	1123.1	540.4	222.4	95.6	54.5	42.3	34.2	26.8	22.8
47.5°	1376.8	1367.1	1187.4	553.8	219.2	91.9	50.0	45.5	33.8	26.0	21.6
50°	1450.8	1442.3	1271.5	593.7	214.3	88.2	45.5	50.0	33.8	25.2	20.3
52.5°	1554.5	1544.8	1404.1	645.7	209.8	84.2	41.1	48.4	34.2	24.0	19.5
55°	1661.9	1660.3	1529.3	701.0	205.8	75.2	36.2	43.5	33.3	22.4	18.3
57.5°	1746.1	1744.8	1623.3	738.4	198.0	60.6	32.9	36.2	30.9	20.3	16.7
60°	1780.6	1770.5	1633.4	738.4	180.1	50.0	30.1	28.5	31.3	18.3	14.6
61°	1780.6	1767.6	1615.1	727.5	171.2	47.6	28.5	26.4	32.1	17.5	13.8
62.5°	1766.8	1745.2	1552.5	688.0	157.0	47.6	26.0	23.6	29.3	16.7	12.6
65°	1705.4	1670.0	1405.7	598.1	142.3	48.8	22.4	19.9	21.1	14.2	11.0
67.5°	1553.7	1513.9	1215.4	473.3	130.5	51.6	18.7	17.5	16.3	12.6	9.8
70°	1280.1	1246.3	991.8	354.6	121.2	52.5	16.3	14.6	13.8	11.0	8.5
72.5°	818.1	762.4	619.3	240.3	97.2	45.5	13.4	13.8	12.6	8.9	6.9
75°	395.2	410.7	360.3	121.2	65.5	29.7	10.6	11.4	10.2	8.1	6.1
77.5°	176.9	173.6	172.0	30.9	16.7	10.2	6.5	7.7	8.1	7.3	5.3
80°	18.3	24.8	14.6	9.4	6.1	4.5	3.7	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°	779.5	779.5	779.5	779.5	779.5	779.5	779.5	779.5	779.5	779.5	779.5
2.5°	665.2	676.2	671.3	670.1	676.6	673.4	683.1	683.5	690.9	700.6	706.7
5°	522.9	514.4	531.5	542.8	557.1	552.6	569.7	567.7	577.0	592.5	586.4
7.5°	363.1	364.3	373.3	383.4	421.7	429.4	435.1	439.6	439.2	442.8	449.3
10°	277.7	270.8	264.7	278.9	294.0	310.7	313.1	319.2	302.5	309.4	312.7
12.5°	227.3	219.2	205.8	198.4	202.1	211.9	215.9	219.6	209.8	210.2	217.5
15°	172.4	161.4	156.1	146.4	142.7	141.9	143.9	138.7	137.4	133.0	135.8
17.5°	112.2	109.0	106.1	104.1	101.3	100.4	93.1	80.5	73.2	71.6	71.6
20°	74.8	72.4	72.4	76.4	75.2	72.0	62.2	51.6	46.4	44.7	45.5
22.5°	61.4	59.8	57.3	57.3	59.0	56.5	47.6	39.8	36.2	36.2	36.2
25°	53.3	52.5	50.0	47.6	48.4	46.4	38.6	33.8	31.3	30.9	31.3
27.5°	46.8	46.4	43.5	41.1	41.1	39.4	33.3	28.9	27.2	26.4	26.8
30°	42.3	41.5	38.2	36.2	35.8	34.2	28.5	25.2	23.6	23.2	23.2
32.5°	39.0	37.4	34.6	32.5	31.3	28.9	24.8	21.6	19.9	19.5	19.5
35°	31.3	31.3	30.1	28.9	27.2	23.6	20.7	17.9	16.3	15.9	15.9
37.5°	27.2	25.6	23.6	24.0	23.2	19.9	17.1	14.2	13.0	12.6	12.6
40°	24.8	22.8	19.9	18.7	19.1	17.5	14.2	11.0	9.4	9.8	9.4
42.5°	22.4	20.7	17.5	14.6	14.2	14.6	11.0	7.7	6.5	6.5	6.5
45°	20.7	19.1	15.5	12.2	10.2	11.4	8.5	5.3	4.1	4.1	4.1
47.5°	19.5	17.9	13.8	10.2	7.3	7.7	6.1	3.3	2.4	1.6	2.0
50°	18.7	16.7	12.6	8.1	5.3	4.5	4.1	1.6	0.4	0.4	0.0
52.5°	17.5	15.9	11.4	6.9	4.1	2.8	2.0	0.4	0.0	0.0	0.0
55°	16.7	14.6	10.2	6.1	3.3	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	3.7	1.6	0.0	0.0	0.0	0.0	0.0	0.0
61°	12.6	11.4	7.3	3.3	1.2	0.0	0.0	0.0	0.0	0.0	0.0
62.5°	11.8	10.6	6.5	2.4	0.8	0.0	0.0	0.0	0.0	0.0	0.0
65°	10.2	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	3.7	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°	779.5	779.5	779.5	779.5	779.5	779.5	779.5	779.5	779.5	779.5	779.5
2.5°	712.4	726.6	740.1	757.1	766.5	792.1	810.4	825.9	838.1	840.5	850.3
5°	602.6	622.5	635.6	671.3	691.3	734.0	766.9	805.9	840.9	860.0	877.5
7.5°	453.8	463.6	485.9	521.7	568.9	605.9	661.6	710.8	773.8	808.4	840.9
10°	320.4	329.4	362.3	399.7	442.8	505.0	572.5	637.2	701.0	745.3	783.6
12.5°	225.3	254.5	287.1	334.7	376.9	422.5	494.5	570.1	649.8	692.1	733.6
15°	148.0	174.0	219.2	278.9	331.8	376.1	443.2	531.9	633.1	680.3	719.7
17.5°	73.2	92.3	132.2	196.4	266.7	336.7	417.6	525.0	654.7	707.9	744.9
20°	45.9	51.6	66.3	111.0	191.9	295.2	398.5	538.8	713.2	772.2	796.2
22.5°	37.0	38.6	44.3	59.0	117.1	244.0	381.8	557.5	777.5	849.4	874.2
25°	31.7	32.9	36.2	43.5	67.9	183.0	361.5	590.4	852.3	939.3	945.4
27.5°	27.2	28.5	31.3	37.0	48.4	123.2	332.2	629.1	941.7	1018.2	1014.1
30°	23.2	24.8	27.7	31.7	38.2	83.4	277.7	668.1	1007.6	1069.0	1062.5
32.5°	19.9	21.1	23.6	27.2	31.7	57.3	208.6	693.7	1062.5	1117.0	1102.8
35°	16.3	17.5	19.5	22.8	25.6	40.7	157.8	694.5	1119.0	1176.4	1140.6
37.5°	13.0	13.8	15.9	18.7	21.1	31.7	115.9	681.1	1189.0	1253.6	1183.7
40°	9.8	11.0	13.0	15.5	17.9	26.8	86.6	648.6	1257.3	1330.9	1235.7
42.5°	6.5	8.1	10.2	12.6	17.1	21.6	61.0	594.5	1312.6	1399.6	1286.6
45°	4.1	5.3	7.7	10.6	17.5	17.1	40.7	529.8	1352.0	1452.1	1321.1
47.5°	2.0	3.3	5.7	10.2	15.5	12.6	25.2	468.0	1387.8	1482.6	1337.0
50°	0.4	1.2	4.1	12.6	13.0	9.4	16.7	429.4	1406.5	1474.8	1335.4
52.5°	0.0	0.0	2.8	12.2	9.4	7.3	13.0	423.7	1435.8	1485.0	1363.4
55°	0.0	0.0	1.2	5.3	5.3	6.1	11.4	416.0	1487.8	1545.6	1448.0
57.5°	0.0	0.0	0.0	2.4	3.3	4.9	10.6	395.6	1542.7	1609.8	1550.9
60°	0.0	0.0	0.0	1.2	2.0	4.1	9.4	349.3	1492.3	1610.2	1636.3
61°	0.0	0.0	0.0	1.2	1.6	3.7	8.5	333.0	1447.2	1584.2	1646.8
62.5°	0.0	0.0	0.0	0.4	1.2	2.8	7.3	300.9	1379.7	1542.3	1642.0
65°	0.0	0.0	0.0	0.0	0.4	1.6	5.7	243.2	1267.1	1437.0	1585.8
67.5°	0.0	0.0	0.0	0.0	0.0	0.4	3.7	171.2	1105.2	1317.9	1465.9
70°	0.0	0.0	0.0	0.0	0.0	0.0	1.6	99.2	890.5	1115.8	1255.7
72.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.8	45.1	577.8	861.6	990.5
75°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.1	355.8	622.5	740.1
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.5	241.1	414.4	498.1
80°	0.0	0.8	0.4	0.0	0.0	0.0	0.0	3.3	148.4	258.6	281.0
82.5°	0.0	0.4	0.4	0.0	0.0	0.0	0.0	0.0	76.9	182.6	186.2
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	32.1	38.6
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-SA1A-740-U-SLR-HSS

CANDELA DISTRIBUTION (continued):

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	779.5	779.5	779.5	779.5	779.5	779.5	779.5	779.5	779.5	779.5
2.5°	859.2	861.6	863.3	860.4	842.9	833.2	813.7	792.1	784.8	782.8
5°	909.2	923.0	920.6	901.9	871.4	834.0	787.6	739.7	721.4	714.4
7.5°	899.5	935.6	942.6	923.0	871.4	805.9	738.8	681.9	655.5	648.6
10°	849.9	895.4	917.4	911.3	862.9	787.2	704.7	634.7	605.9	596.9
12.5°	801.9	845.8	859.6	864.5	838.1	772.6	687.6	612.4	582.3	570.9
15°	769.7	797.0	796.2	805.1	803.1	766.9	698.6	623.8	590.0	575.0
17.5°	759.2	751.0	740.5	747.8	762.0	768.5	734.4	664.4	625.0	607.5
20°	765.7	725.8	702.7	702.2	732.3	781.9	786.8	731.5	694.5	670.9
22.5°	799.0	713.2	677.4	678.3	715.3	801.9	847.4	819.4	778.7	749.4
25°	848.2	715.7	667.7	672.6	713.6	819.4	912.9	919.4	867.3	841.7
27.5°	898.2	736.8	668.1	673.4	720.5	828.7	950.3	993.0	948.3	916.5
30°	933.2	762.8	675.4	681.1	731.5	836.0	964.5	1053.6	1007.2	971.8
32.5°	966.1	789.7	687.2	692.9	753.5	851.1	991.4	1114.6	1063.7	1028.8
35°	998.3	816.1	709.2	719.3	788.9	878.3	1018.6	1186.1	1143.8	1095.5
37.5°	1025.9	845.4	747.0	768.5	836.8	920.2	1055.6	1267.5	1223.9	1169.9
40°	1049.1	879.9	825.0	849.0	910.0	964.5	1096.7	1320.7	1291.9	1233.7
42.5°	1067.8	940.9	936.9	970.6	1013.3	1015.3	1108.5	1346.3	1335.4	1283.7
45°	1099.1	1050.3	1083.7	1139.0	1136.1	1076.3	1105.2	1369.9	1370.7	1326.8
47.5°	1150.3	1187.4	1283.7	1321.1	1302.0	1159.7	1108.5	1393.1	1411.4	1376.8
50°	1223.5	1342.7	1468.7	1518.3	1462.6	1243.5	1137.3	1420.8	1476.1	1450.8
52.5°	1286.2	1460.2	1639.5	1683.8	1607.8	1332.9	1204.8	1480.5	1562.7	1554.5
55°	1375.6	1561.4	1761.1	1795.3	1734.3	1434.2	1295.5	1568.4	1657.8	1661.9
57.5°	1467.1	1652.9	1840.4	1875.0	1828.6	1560.2	1424.4	1694.4	1747.3	1746.1
60°	1568.8	1738.3	1876.2	1895.3	1868.9	1686.3	1563.1	1809.9	1808.7	1780.6
61°	1626.9	1765.6	1873.7	1879.4	1853.8	1723.3	1634.6	1854.2	1817.6	1780.6
62.5°	1691.2	1790.4	1843.6	1824.5	1796.9	1736.3	1738.3	1902.6	1823.7	1766.8
65°	1756.2	1728.2	1705.0	1613.5	1587.5	1616.7	1825.8	1884.3	1786.7	1705.4
67.5°	1644.8	1480.9	1430.9	1339.0	1236.1	1355.7	1742.8	1772.5	1661.9	1553.7
70°	1344.3	1088.1	1028.8	1025.5	951.5	1082.8	1537.1	1515.5	1379.3	1280.1
72.5°	1053.6	742.5	661.6	680.3	665.6	807.2	1257.3	1017.0	884.4	818.1
75°	825.9	527.8	455.4	452.2	436.3	549.8	920.6	535.9	442.4	395.2
77.5°	544.9	380.2	379.0	350.1	337.9	298.1	413.1	214.7	175.3	176.9
80°	313.9	233.0	273.3	216.7	217.1	174.8	167.1	31.3	25.2	18.3
82.5°	180.1	111.8	84.6	33.3	69.9	69.9	13.4	0.4	0.4	0.8
85°	17.5	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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