

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: P401186

Luminaire Tested: **ENT-SA1B-760-U-SLL**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401186
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-7)
Test Lab: INNOVATION CENTER
Issue Date: 5/20/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENT-SA1B-760-U-SLL
Description: ENTRI LED LUMINAIRE
(1) 70 CRI, 5700K, 450mA LIGHTSQUARE WITH 16 LEDS AND SPILL LIGHT ELIMINATOR LEFT OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3031 lumens
Efficiency: N/A
Efficacy: 119.3 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Medium - Non-Cutoff
BUG Rating: B1 - U0 - G1

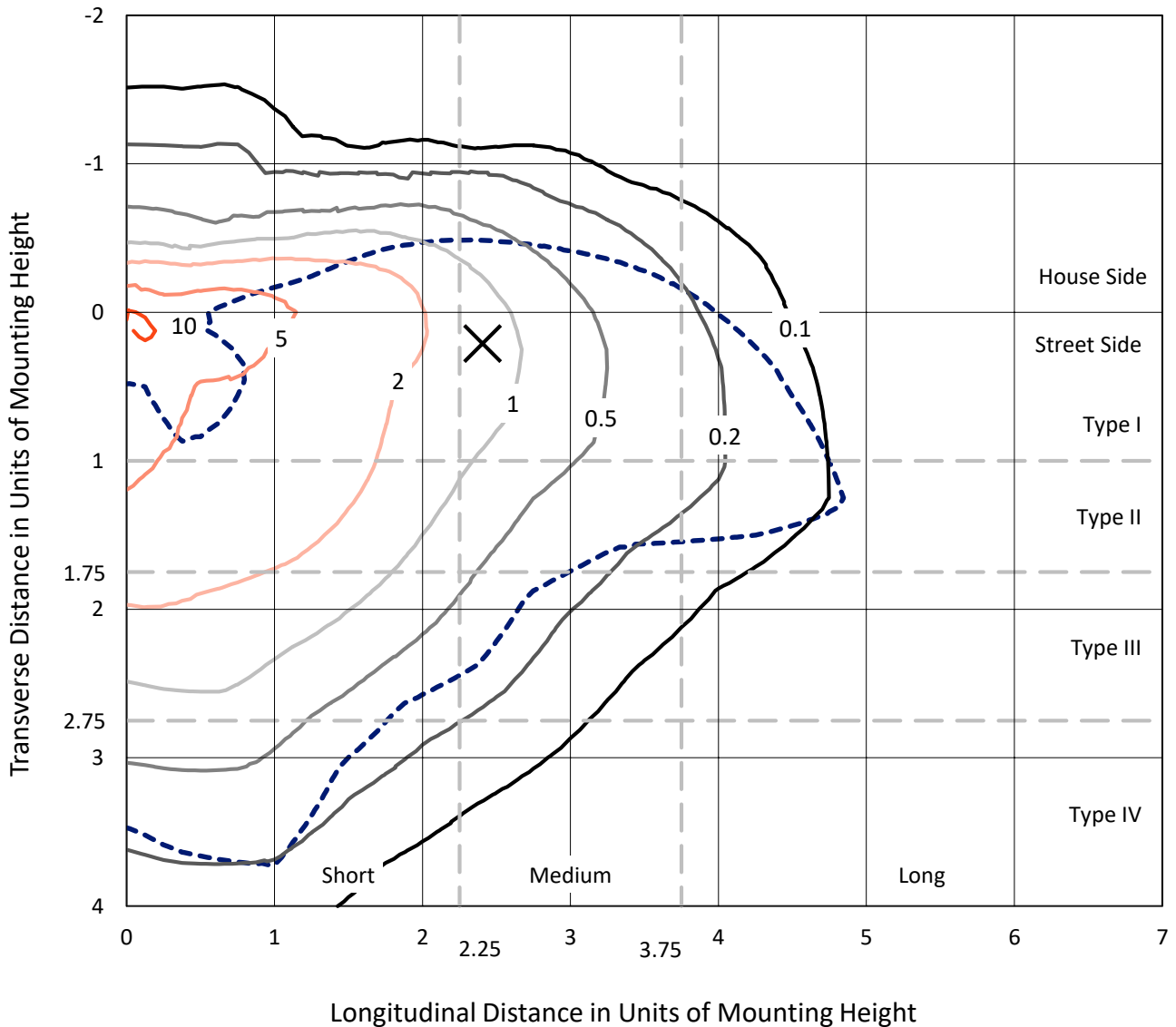
Input Watts (W): 25.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P401186
 CATALOG NUMBER: ENT-SA1B-760-U-SLL

Iso-Footcandle Lines of Horizontal Illumination

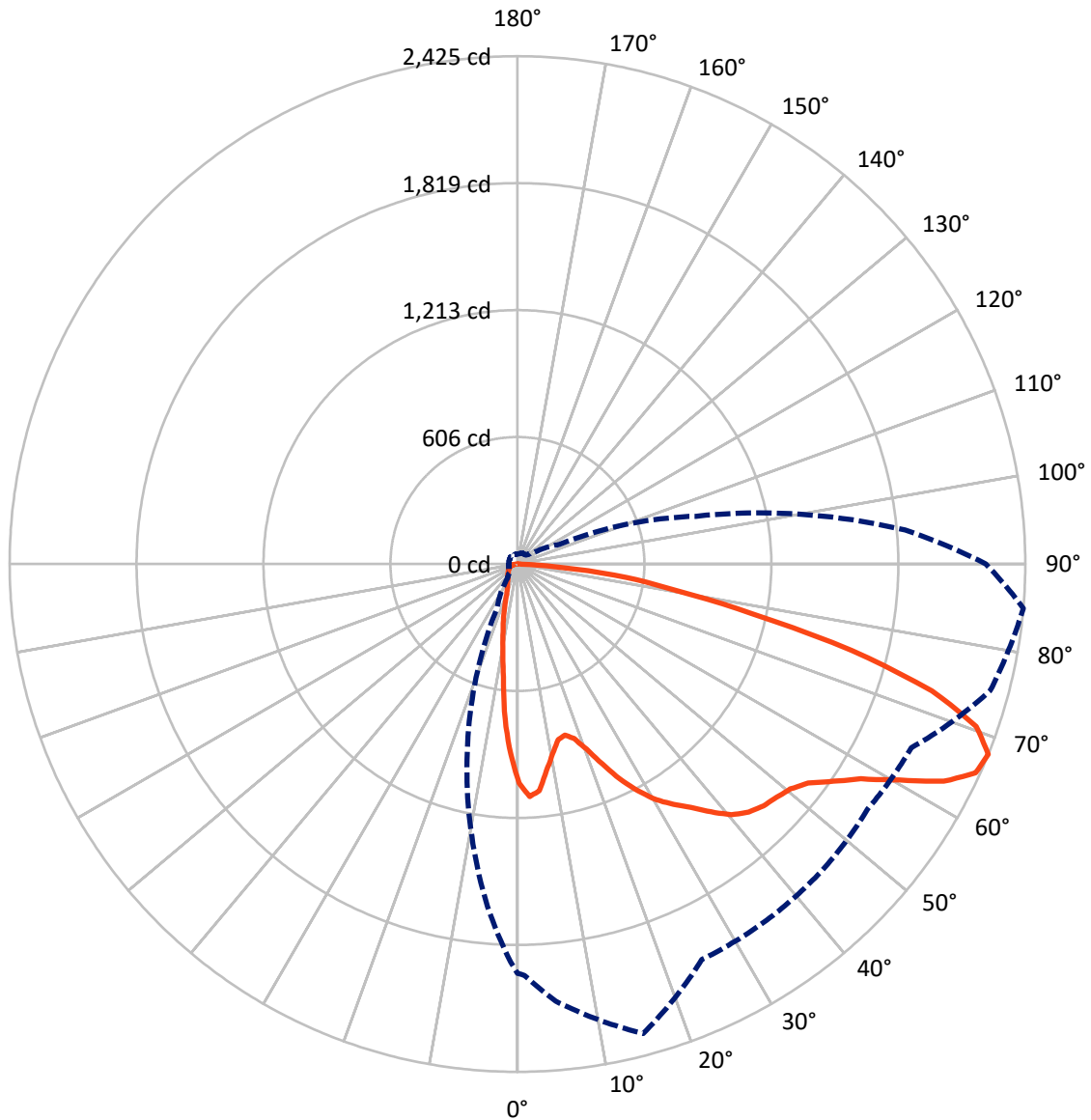
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 11.2 fc
 Type III - Medium - Non-Cutoff

REPORT NUMBER: P401186
CATALOG NUMBER: ENT-SA1B-760-U-SLL

Luminous Intensity Polar Plot



— Vertical Plane Through 85-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

REPORT NUMBER: P401186

CATALOG NUMBER: ENT-SA1B-760-U-SLL

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	610.7	0.0	610.7
	% Fixture	20.1	0.0	20.1
Street Side	Lumens	2420.3	0.0	2420.3
	% Fixture	79.9	0.0	79.9
Total	Lumens	3031.0	0.0	3031.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	79.6	2.6
10°-20°	157.0	5.2
20°-30°	219.4	7.2
30°-40°	309.3	10.2
40°-50°	428.5	14.1
50°-60°	602.2	19.9
60°-70°	736.1	24.3
70°-80°	432.6	14.3
80°-90°	66.2	2.2
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°	3031.0	100.0
0°-180°	3031.0	100.0



REPORT NUMBER: P401186

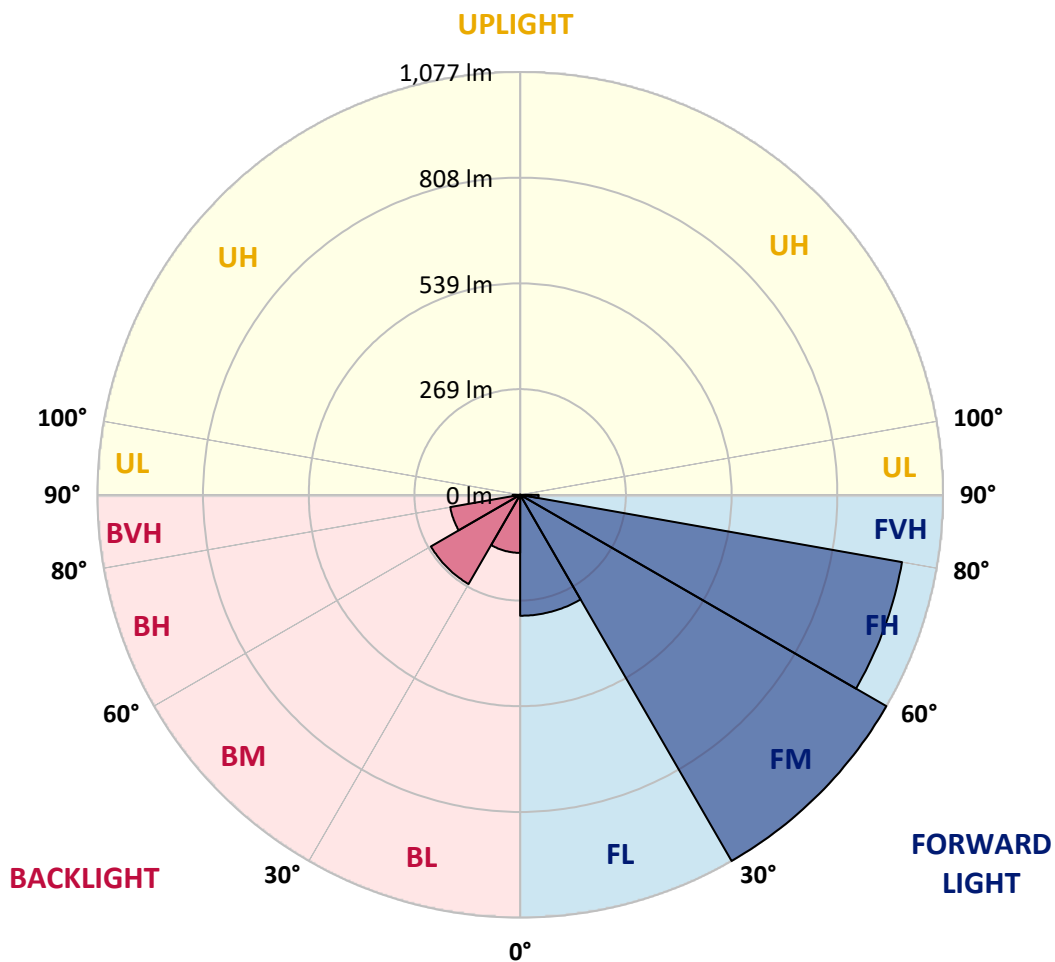
CATALOG NUMBER: ENT-SA1B-760-U-SLL

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	308.1	10.2			
FM	(30°-60°)	1077.4	35.5			
FH	(60°-80°)	987.9	32.6			G1/1800
FVH	(80°-90°)	46.9	1.5			G1/100
BL	(0°-30°)	147.9	4.9	B1/500		
BM	(30°-60°)	262.5	8.7	B1/1000		
BH	(60°-80°)	180.9	6.0	B1/500		G1/500
BVH	(80°-90°)	19.4	0.6			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G1

Type III Medium





REPORT NUMBER: P401186

CATALOG NUMBER: ENT-SA1B-760-U-SLL

CANDELA DISTRIBUTION (FULL):

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	1047.2	1047.2	1047.2	1047.2	1047.2	1047.2	1047.2	1047.2	1047.2	1047.2	1047.2
2.5°	1075.9	1071.0	1087.6	1112.0	1128.5	1140.2	1144.1	1143.6	1140.2	1131.0	1111.5
5°	1028.1	1023.8	1057.4	1111.5	1158.7	1192.8	1202.6	1189.0	1171.9	1135.8	1088.1
7.5°	937.5	944.3	987.2	1063.2	1139.2	1193.3	1206.5	1185.1	1150.0	1076.4	996.0
10°	868.8	872.2	920.5	1012.1	1093.0	1148.5	1171.4	1152.4	1106.6	1013.5	920.5
12.5°	826.4	829.8	876.6	961.4	1047.6	1091.0	1097.8	1097.3	1059.3	969.2	861.5
15°	832.3	836.7	883.4	953.6	1002.3	1021.3	1021.8	1027.2	1016.0	947.3	847.4
17.5°	888.8	888.8	933.6	976.0	964.8	951.2	961.4	971.1	990.6	960.4	876.1
20°	978.0	981.9	1023.3	1016.0	947.7	913.6	901.5	918.5	978.9	999.9	943.9
22.5°	1074.4	1084.7	1128.0	1074.4	944.8	878.6	864.9	883.4	980.4	1062.3	1036.9
25°	1181.2	1193.8	1223.1	1142.7	953.6	859.1	849.8	867.3	984.3	1119.8	1137.3
27.5°	1278.6	1279.6	1308.3	1200.2	976.5	861.0	845.4	868.3	995.0	1165.1	1226.0
30°	1347.8	1347.8	1360.5	1229.4	1004.8	873.2	849.3	882.9	1010.1	1189.9	1306.4
32.5°	1411.1	1414.6	1408.2	1260.1	1031.6	890.7	858.6	912.2	1034.0	1210.4	1368.3
35°	1491.5	1491.1	1462.8	1284.5	1056.4	909.7	881.5	949.2	1068.6	1240.6	1427.2
37.5°	1591.0	1586.1	1526.1	1306.4	1086.6	942.4	924.8	999.9	1114.9	1276.2	1501.8
40°	1681.1	1673.3	1584.1	1326.8	1110.5	1005.7	995.5	1062.7	1173.4	1320.5	1574.4
42.5°	1751.3	1739.6	1633.3	1341.5	1146.6	1105.1	1113.9	1175.8	1232.3	1360.0	1619.7
45°	1810.2	1798.0	1670.4	1348.8	1233.8	1246.9	1264.0	1315.6	1295.2	1370.7	1647.5
47.5°	1852.6	1832.6	1686.5	1370.2	1351.7	1412.6	1465.2	1468.6	1383.9	1370.2	1664.5
50°	1877.5	1855.5	1701.6	1423.3	1488.6	1600.7	1656.7	1630.4	1476.0	1379.0	1688.9
52.5°	1927.7	1904.8	1764.4	1509.6	1629.0	1791.2	1821.4	1779.0	1571.5	1424.3	1737.6
55°	2053.9	2043.6	1886.2	1625.5	1766.9	1945.2	1958.8	1916.5	1671.4	1502.8	1830.7
57.5°	2196.6	2174.2	2050.9	1771.2	1898.9	2065.6	2087.5	2029.0	1776.1	1612.9	1934.5
60°	2236.6	2232.2	2190.3	1941.3	2035.3	2194.2	2195.7	2121.1	1898.4	1744.0	2092.8
62.5°	2178.1	2192.2	2248.3	2098.7	2149.9	2280.4	2268.3	2190.8	2026.6	1952.5	2285.3
65°	2076.3	2096.3	2208.8	2247.3	2176.2	2263.4	2237.6	2188.4	2107.5	2177.1	2404.7
67.5°	1954.0	1964.7	2095.8	2321.4	2084.1	2075.8	2063.6	2041.2	2075.3	2337.0	2425.2
70°	1826.8	1836.1	1956.9	2219.5	1807.8	1712.8	1702.5	1683.0	1816.1	2335.0	2324.8
72.5°	1539.8	1533.9	1645.5	1852.6	1380.4	1251.3	1338.1	1295.7	1469.1	2097.7	2070.9
75°	956.5	988.7	1128.5	1299.1	945.8	857.1	977.0	966.3	1192.8	1806.3	1648.9
77.5°	582.8	589.1	668.1	809.9	569.6	594.0	628.1	694.4	884.4	1464.3	1149.5
80°	305.0	283.6	341.6	444.4	338.2	398.6	460.5	533.6	561.3	954.6	768.4
82.5°	88.2	87.7	115.5	186.1	160.3	195.9	232.4	335.2	367.9	567.7	526.3
85°	0.5	0.5	0.5	1.0	1.5	2.4	10.2	86.2	114.0	263.1	216.3
87.5°	0.0	0.0	0.5	1.0	1.0	1.9	2.9	3.9	4.9	5.8	21.4
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: P401186

CATALOG NUMBER: ENT-SA1B-760-U-SLL

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1047.2	1047.2	1047.2	1047.2	1047.2	1047.2	1047.2	1047.2	1047.2	1047.2	1047.2
2.5°	1105.1	1097.8	1082.2	1061.3	1046.7	1021.3	1016.0	999.9	983.8	970.7	971.1
5°	1065.2	1040.3	1002.3	958.5	916.6	879.0	871.7	849.8	843.5	837.1	819.6
7.5°	960.4	931.2	878.1	813.3	760.6	725.1	687.1	664.2	643.7	620.3	626.1
10°	880.0	838.1	765.0	689.0	623.2	575.5	533.6	512.1	482.4	461.0	458.0
12.5°	818.1	772.8	685.1	595.9	534.1	506.3	479.5	445.9	412.7	384.5	369.8
15°	797.7	746.5	644.7	556.0	507.3	473.6	436.1	397.6	357.2	327.0	315.3
17.5°	821.5	761.1	644.2	538.9	478.0	428.8	382.0	338.7	290.9	260.7	251.4
20°	887.3	811.8	657.8	522.8	442.4	375.7	309.9	263.1	214.4	193.0	183.2
22.5°	978.9	880.5	678.8	503.4	403.0	310.9	236.8	177.9	154.0	143.3	140.8
25°	1073.0	967.7	708.5	486.8	359.6	247.5	170.1	142.3	131.1	126.2	126.2
27.5°	1176.3	1054.9	740.7	466.8	314.8	184.2	138.4	125.2	119.4	116.5	116.0
30°	1260.1	1126.1	777.2	443.4	274.3	151.1	122.8	114.0	108.7	107.2	107.2
32.5°	1320.5	1179.2	815.7	420.0	237.3	136.4	114.0	106.2	100.4	99.4	99.4
35°	1391.2	1229.9	833.2	406.9	214.9	127.2	107.7	99.9	94.5	92.1	92.1
37.5°	1476.0	1290.3	843.0	394.2	205.1	118.4	103.3	94.5	89.2	86.2	86.2
40°	1583.6	1359.0	853.2	381.5	199.3	111.1	98.4	89.7	85.3	81.9	81.9
42.5°	1660.6	1422.4	861.0	370.8	189.1	107.7	94.5	86.2	80.9	78.0	77.5
45°	1701.1	1481.3	864.4	364.5	177.4	110.6	91.6	83.3	77.0	74.1	73.6
47.5°	1728.4	1530.0	868.8	359.6	168.1	105.3	91.1	80.4	74.1	70.2	70.2
50°	1771.7	1594.4	880.0	350.4	162.7	98.4	98.4	78.9	70.7	67.2	66.8
52.5°	1849.2	1686.5	910.2	340.1	156.9	91.6	101.4	79.4	68.2	64.3	63.3
55°	1966.2	1833.1	960.4	325.5	148.6	83.3	94.5	79.9	65.8	62.4	60.9
57.5°	2118.2	2010.5	1018.9	313.8	134.5	76.5	86.2	77.5	62.9	59.9	59.0
60°	2220.5	2128.9	1055.9	298.7	114.5	72.1	74.1	75.0	59.9	56.5	56.0
62.5°	2275.6	2130.9	1056.4	277.7	96.0	68.2	66.3	76.5	57.5	53.1	52.6
65°	2279.5	2027.1	1003.3	250.9	89.7	63.8	60.9	67.7	55.1	50.7	50.2
67.5°	2237.1	1858.0	882.0	220.2	92.1	60.4	56.5	57.0	52.1	48.2	47.8
70°	2085.0	1639.2	707.5	195.9	92.6	56.0	53.1	51.7	49.2	45.8	44.8
72.5°	1799.0	1369.7	536.0	188.1	94.0	52.6	49.2	47.8	45.8	42.9	41.9
75°	1357.5	1068.6	402.5	175.4	95.0	48.7	44.8	43.9	41.9	39.0	38.5
77.5°	938.0	792.3	279.7	148.1	84.8	44.3	40.4	39.5	38.0	35.1	34.6
80°	633.5	543.3	171.5	111.1	64.3	39.0	35.1	35.1	33.6	30.7	30.7
82.5°	441.0	405.9	98.9	72.6	46.8	32.2	30.7	30.7	29.2	26.3	25.8
85°	184.2	245.6	44.3	39.5	32.6	25.3	25.3	25.8	24.4	21.9	21.4
87.5°	6.3	26.3	17.5	18.5	19.5	17.5	19.5	19.5	19.0	17.1	16.6
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: P401186

CATALOG NUMBER: ENT-SA1B-760-U-SLL

CANDELA DISTRIBUTION (continued):

	185°	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°
0°	1047.2	1047.2	1047.2	1047.2	1047.2	1047.2	1047.2	1047.2	1047.2	1047.2	1047.2
2.5°	957.0	950.7	931.2	928.7	914.1	913.2	919.5	908.8	909.7	922.9	920.9
5°	823.5	808.9	808.4	792.3	774.3	769.9	754.3	748.5	746.0	740.7	760.1
7.5°	644.2	637.4	643.2	641.3	624.7	615.4	582.3	557.0	544.3	549.6	551.1
10°	458.0	468.3	483.9	499.0	487.3	456.6	442.4	422.0	419.5	418.1	427.8
12.5°	363.0	351.3	358.6	364.0	352.8	339.6	333.8	325.0	329.9	341.1	347.4
15°	301.6	281.2	271.9	265.6	268.5	260.7	263.6	260.7	264.1	267.5	279.2
17.5°	238.3	231.0	213.4	205.1	205.6	202.2	203.2	202.7	200.8	208.6	217.8
20°	179.3	177.4	173.5	167.6	168.6	166.2	164.7	156.4	153.0	155.4	163.2
22.5°	139.8	142.3	144.7	144.2	146.7	140.3	134.5	127.2	126.2	126.7	128.6
25°	125.2	126.2	128.2	130.6	132.1	126.2	117.9	113.5	113.0	114.0	114.0
27.5°	116.5	115.5	117.9	120.8	122.8	115.5	108.7	104.8	103.8	102.8	102.3
30°	107.2	107.2	109.1	112.1	113.5	107.2	101.4	97.5	95.0	93.6	93.1
32.5°	100.4	100.9	101.8	103.8	106.2	99.9	95.0	91.6	87.2	85.8	84.8
35°	92.6	94.5	96.0	96.5	98.4	94.0	89.2	83.8	79.9	78.5	78.5
37.5°	86.2	87.7	90.1	89.7	91.1	88.2	82.8	77.0	75.0	74.6	74.1
40°	81.4	81.4	83.3	85.3	87.2	81.9	75.5	72.6	71.1	70.2	70.7
42.5°	77.0	76.5	76.5	79.9	83.3	75.5	70.2	68.2	67.7	66.8	67.2
45°	73.1	72.6	71.1	72.6	77.5	69.2	65.8	64.3	63.8	63.8	63.8
47.5°	69.7	68.7	66.8	67.2	70.7	64.3	61.4	60.9	60.4	60.4	60.9
50°	65.8	64.8	63.3	62.9	63.8	60.9	58.5	57.5	57.5	57.5	58.5
52.5°	62.4	61.9	59.9	59.4	59.9	58.0	55.5	55.1	55.1	55.1	56.5
55°	59.9	59.0	58.0	57.0	58.0	55.5	53.6	52.6	52.6	53.6	54.6
57.5°	57.5	56.5	56.0	55.1	56.0	53.6	51.7	50.7	51.2	51.7	51.7
60°	55.1	54.1	53.6	52.6	54.1	51.7	49.7	49.2	49.2	48.7	48.7
62.5°	52.6	52.1	51.2	50.2	52.1	49.2	47.8	46.8	46.3	46.3	46.3
65°	49.7	49.2	48.7	48.2	49.2	46.8	45.3	44.8	43.9	43.4	43.9
67.5°	47.3	47.3	46.3	45.3	46.8	43.9	42.9	42.4	40.9	40.4	40.9
70°	44.3	44.3	43.4	42.9	44.8	40.9	40.0	39.5	38.5	38.0	38.0
72.5°	41.4	41.4	40.4	40.0	42.4	38.0	37.0	36.5	35.1	34.6	34.6
75°	38.5	38.0	37.5	37.0	40.0	35.1	33.6	32.6	31.2	30.7	30.2
77.5°	35.1	34.6	33.6	34.1	36.1	31.2	29.2	28.7	27.3	26.8	26.3
80°	30.7	30.2	29.7	30.7	30.7	27.3	24.9	23.9	22.4	21.4	21.0
82.5°	26.3	25.8	25.8	26.8	25.3	23.9	21.0	19.0	16.6	15.1	14.6
85°	21.4	22.4	21.4	22.4	19.0	19.0	14.6	11.2	7.8	6.3	5.8
87.5°	16.6	17.1	16.6	17.1	13.2	12.7	6.8	3.9	0.5	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: P401186

CATALOG NUMBER: ENT-SA1B-760-U-SLL

CANDELA DISTRIBUTION (continued):

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	1047.2	1047.2	1047.2	1047.2	1047.2	1047.2	1047.2	1047.2	1047.2	1047.2
2.5°	935.6	936.5	957.5	978.4	991.1	1022.8	1038.4	1055.9	1065.2	1075.9
5°	750.9	769.4	786.5	828.4	849.8	900.0	936.5	995.0	1013.5	1028.1
7.5°	567.2	595.0	615.9	668.1	708.5	770.9	834.7	904.4	924.4	937.5
10°	450.7	476.1	515.5	556.5	601.8	677.3	746.5	818.6	853.7	868.8
12.5°	378.6	419.1	465.3	503.4	539.4	595.0	682.7	773.8	810.3	826.4
15°	312.3	357.7	404.9	451.7	496.5	559.4	651.5	769.9	816.2	832.3
17.5°	248.0	285.1	332.8	389.3	454.6	534.5	657.3	811.3	867.8	888.8
20°	176.4	212.5	261.2	330.9	408.3	508.7	671.0	873.7	954.1	978.0
22.5°	133.0	153.0	197.8	266.5	366.9	488.2	692.4	959.0	1053.0	1074.4
25°	116.9	123.8	146.7	212.9	325.5	469.7	720.7	1043.7	1157.8	1181.2
27.5°	103.8	107.7	119.4	171.0	294.8	450.7	754.3	1135.4	1247.9	1278.6
30°	93.6	98.4	108.2	143.3	265.1	423.4	785.0	1217.7	1324.4	1347.8
32.5°	85.8	91.1	99.9	129.6	239.7	403.0	802.5	1279.1	1389.7	1411.1
35°	80.4	85.3	94.0	117.4	217.3	388.8	807.9	1340.0	1469.6	1491.5
37.5°	75.5	80.4	88.2	105.3	201.7	370.3	816.2	1412.6	1562.2	1591.0
40°	72.1	76.0	83.3	97.0	180.3	350.4	825.9	1497.4	1652.3	1681.1
42.5°	68.7	73.1	79.4	97.5	158.9	333.3	832.3	1562.7	1724.0	1751.3
45°	65.8	70.7	78.0	95.5	142.8	317.7	829.3	1617.3	1789.3	1810.2
47.5°	62.9	68.7	81.9	91.6	137.9	303.6	831.8	1669.9	1836.1	1852.6
50°	60.9	68.2	87.7	85.8	138.9	297.2	855.2	1732.7	1871.1	1877.5
52.5°	59.4	69.7	82.8	77.5	138.9	294.3	900.0	1834.1	1932.0	1927.7
55°	57.0	69.2	77.5	70.2	133.0	295.8	942.4	1968.1	2078.2	2053.9
57.5°	55.1	66.3	69.7	64.8	119.4	296.3	1005.2	2081.2	2193.2	2196.6
60°	52.6	71.1	60.4	60.4	102.3	293.8	1060.8	2079.2	2214.2	2236.6
62.5°	50.2	69.7	54.1	56.0	90.6	284.6	1094.4	1957.9	2136.7	2178.1
65°	47.3	55.1	49.7	52.1	85.8	261.7	1046.7	1807.3	2031.9	2076.3
67.5°	43.9	45.3	45.3	48.2	83.8	227.1	926.3	1641.1	1900.4	1954.0
70°	40.0	40.4	41.4	45.8	78.0	195.4	754.3	1464.3	1759.1	1826.8
72.5°	36.1	36.5	36.5	41.4	73.1	168.6	534.1	1160.2	1468.6	1539.8
75°	31.7	32.2	31.7	36.1	63.8	126.2	317.2	733.8	876.1	956.5
77.5°	26.8	26.8	25.8	28.3	43.9	79.9	173.5	445.9	533.1	582.8
80°	21.9	20.0	16.6	17.1	23.9	45.8	77.5	255.8	292.4	305.0
82.5°	14.6	11.2	6.8	6.3	7.8	12.7	18.0	101.4	93.1	88.2
85°	2.9	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5
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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