

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: STREETWORKS

Report Number: P158445

Luminaire Tested: **VST-F04-LED-E-U-SL3**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P158445
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33713)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: VST-F04-LED-E-U-SL3
Description: VENTUS LED SITE/ROADWAY LUMINAIRE
(4) LIGHTBARS WITH AccuLED OPTICS - TYPE 3 W/ SPILL LIGHT CONTROL
Light Source: (28) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9962 lumens
Efficiency: N/A
Efficacy: 97.5 lumens/watt
Luminous Opening: Rectangular (W 0.67' x L: 1' x H: 0')
IES Classification: Type III - Short - Semi-Cutoff
BUG Rating: B2 - U0 - G2

Input Watts (W): 102.2
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: 28.75 FT



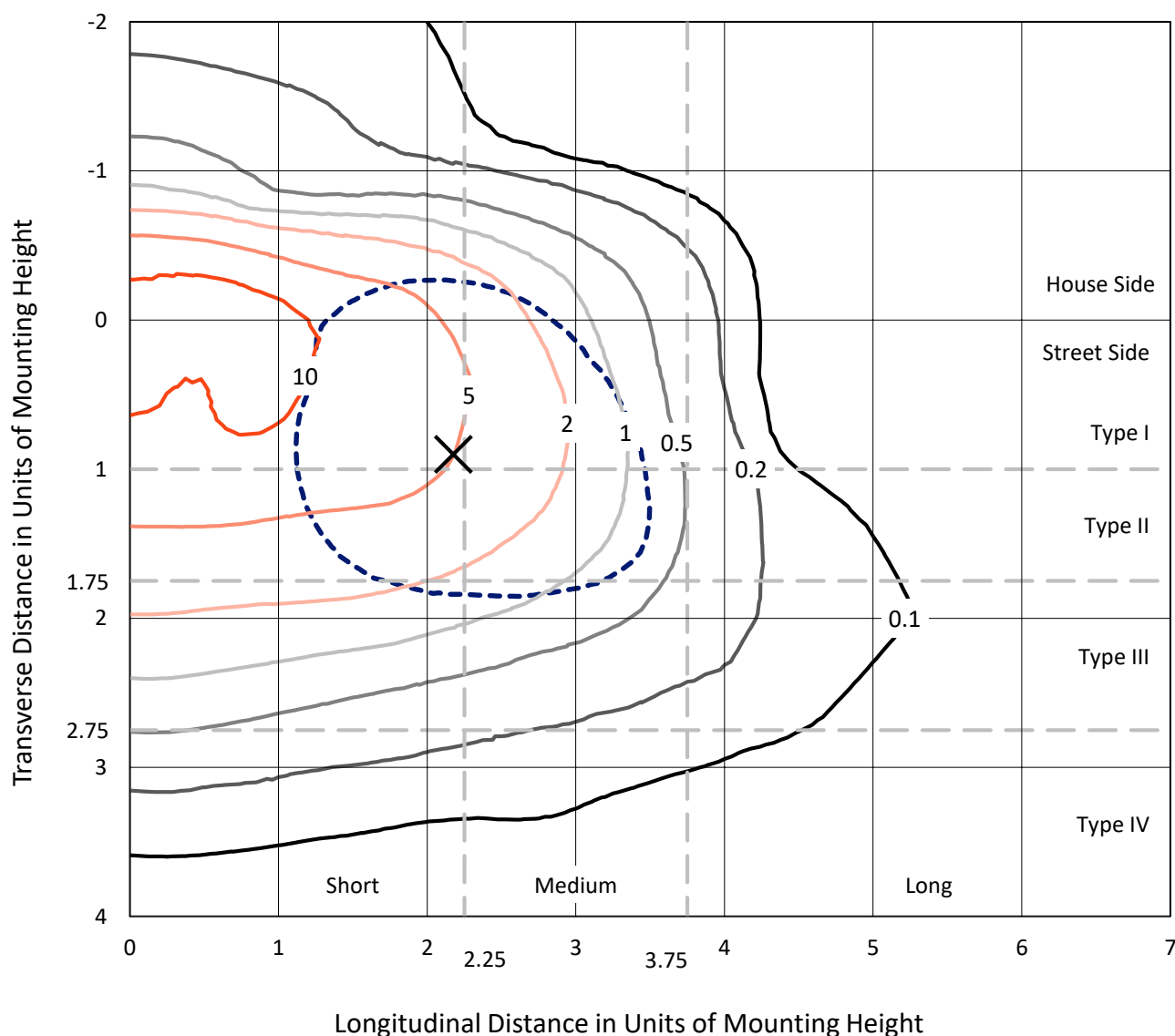
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Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

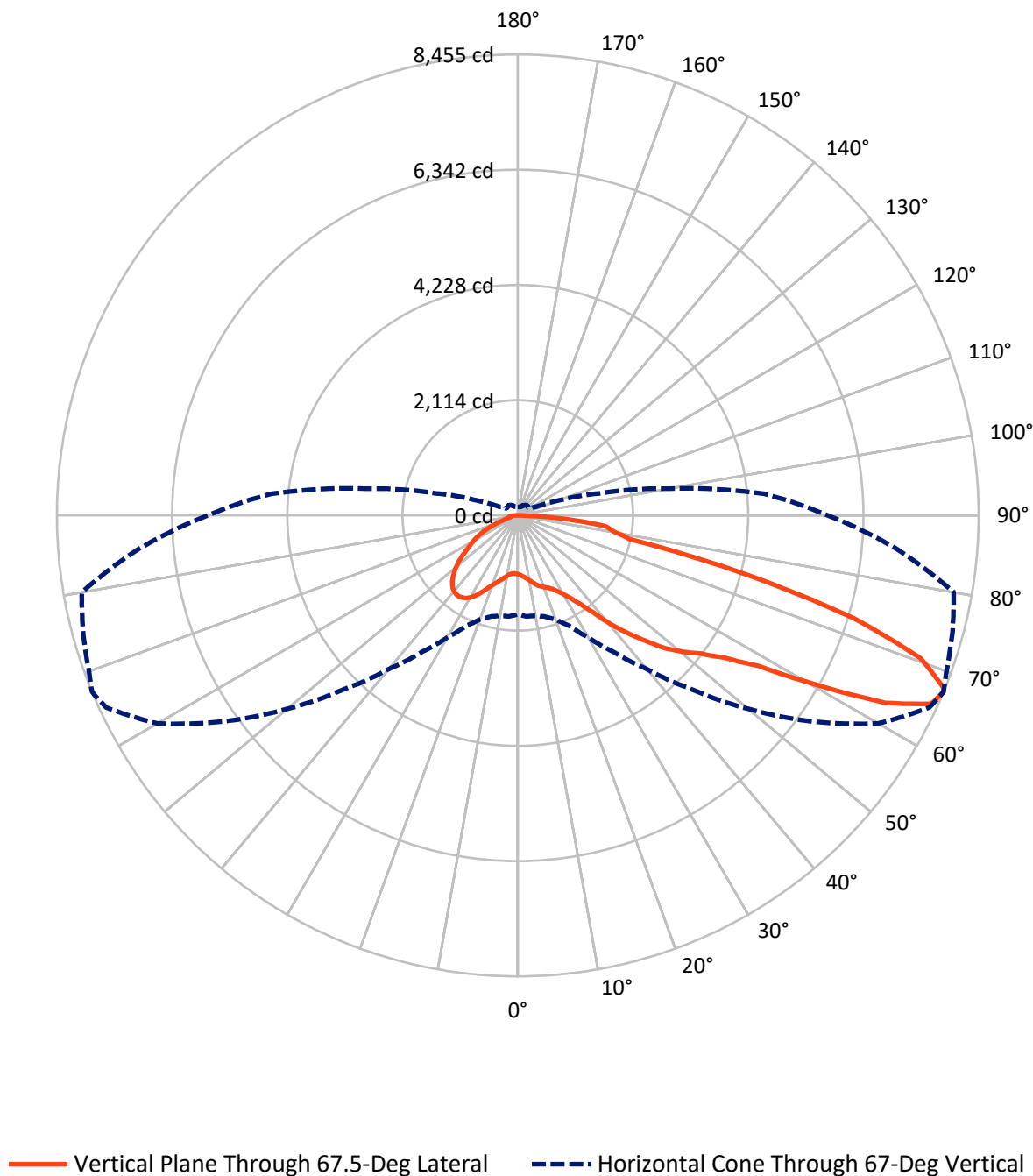


Based on 10 foot mounting height. Maximum calculated value = 13.6 fc
 Type III - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



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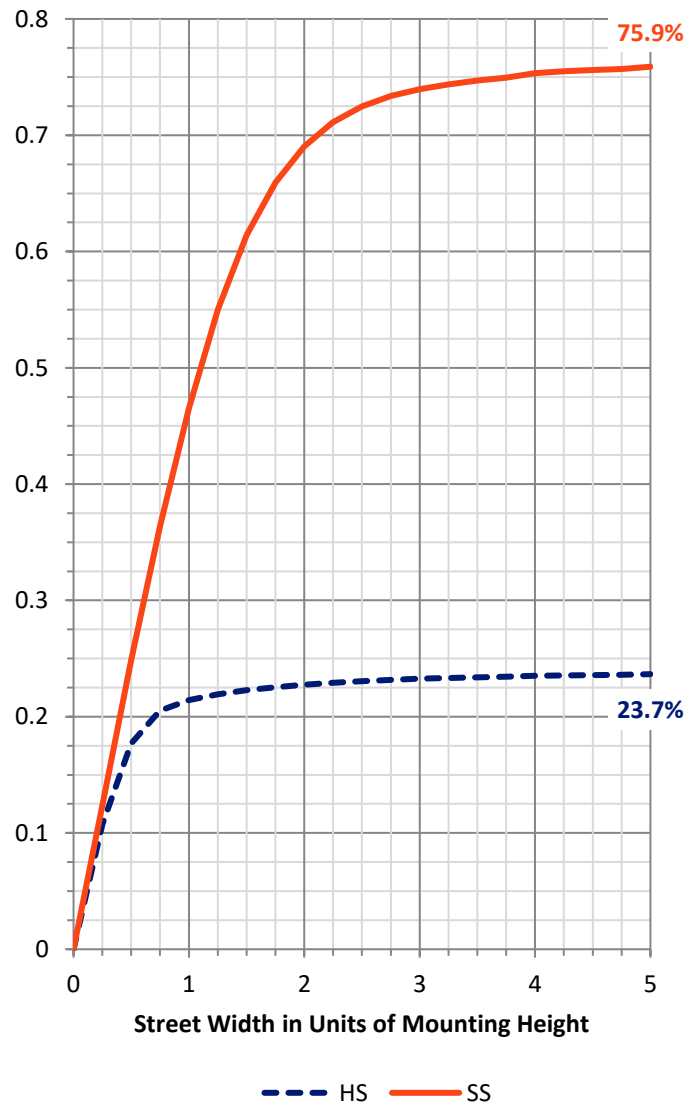
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2389.9	0.0	2389.9
	% Fixture	24.0	0.0	24.0
Street Side	Lumens	7572.1	0.0	7572.1
	% Fixture	76.0	0.0	76.0
Total	Lumens	9962.0	0.0	9962.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	107.3	1.1
10°-20°	365.6	3.7
20°-30°	652.8	6.6
30°-40°	956.7	9.6
40°-50°	1478.2	14.8
50°-60°	2152.5	21.6
60°-70°	2804.0	28.1
70°-80°	1255.2	12.6
80°-90°	189.8	1.9
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°	9962.0	100.0
0°-180°	9962.0	100.0

Coefficient of Utilization



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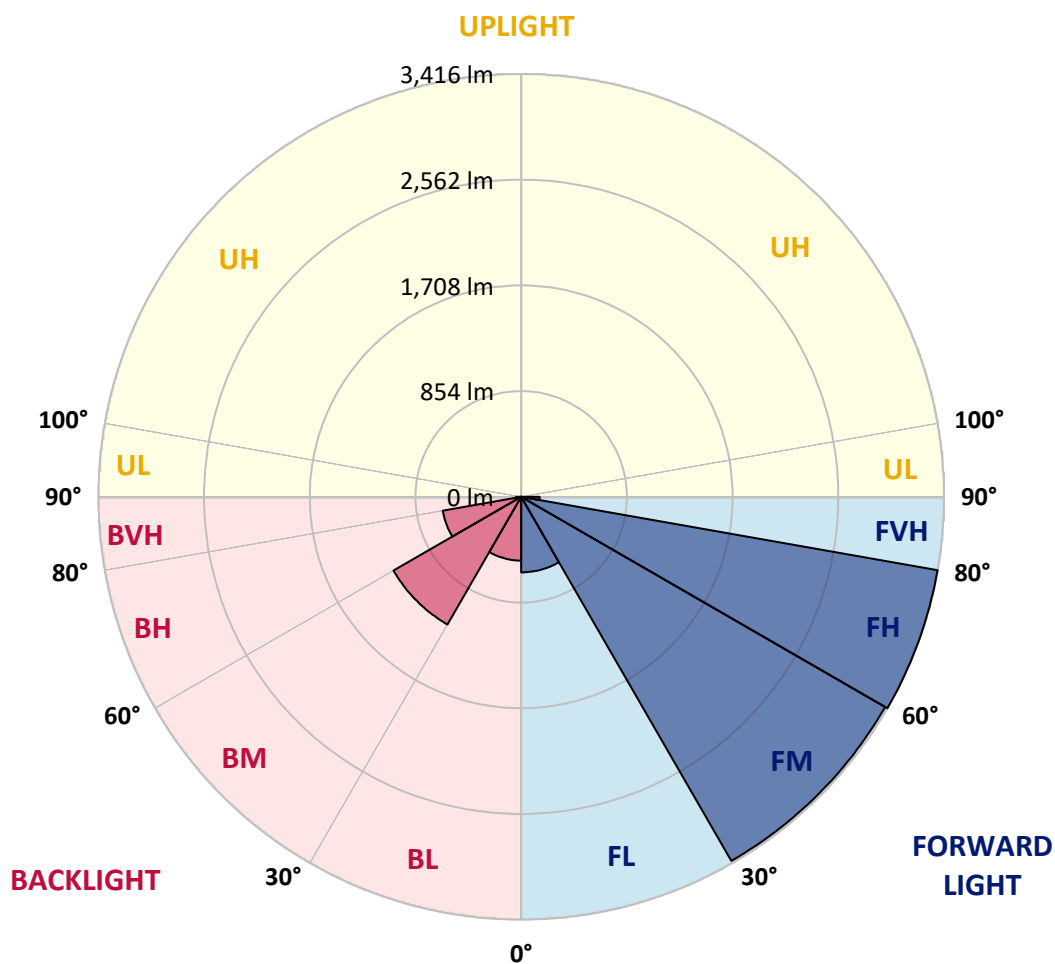
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	610.4	6.1			
FM	(30°-60°)	3396.5	34.1			
FH	(60°-80°)	3416.2	34.3			G2/5000
FVH	(80°-90°)	149.0	1.5			G2/225
BL	(0°-30°)	515.3	5.2	B2/1000		
BM	(30°-60°)	1190.8	12.0	B2/2500		
BH	(60°-80°)	643.0	6.5	B2/1000		G2/1000
BVH	(80°-90°)	40.7	0.4			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G2

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1079.8	1079.8	1079.8	1079.8	1079.8	1079.8	1079.8	1079.8	1079.8	1079.8	1079.8
2.5°	1122.1	1124.7	1125.4	1124.7	1125.4	1122.7	1122.1	1118.1	1120.1	1114.8	1113.5
5°	1182.8	1184.8	1186.1	1180.8	1182.2	1179.5	1176.2	1172.2	1167.0	1159.7	1155.1
7.5°	1242.2	1245.6	1244.9	1242.9	1238.3	1235.6	1229.0	1223.1	1213.9	1205.3	1199.3
10°	1322.2	1321.5	1321.5	1310.3	1303.7	1297.7	1285.8	1276.6	1267.3	1254.8	1248.2
12.5°	1414.6	1410.0	1408.0	1400.1	1386.2	1375.7	1358.5	1340.7	1324.1	1310.9	1300.4
15°	1503.8	1503.8	1498.5	1485.9	1472.7	1458.9	1434.4	1408.7	1381.6	1360.5	1349.9
17.5°	1585.0	1577.7	1573.1	1556.6	1542.7	1520.3	1493.2	1465.5	1431.8	1402.1	1381.6
20°	1644.4	1638.5	1628.6	1608.1	1584.3	1557.9	1526.2	1493.9	1457.5	1425.2	1402.1
22.5°	1678.8	1671.5	1656.3	1629.3	1596.9	1559.9	1522.9	1492.5	1459.5	1435.1	1415.9
25°	1696.6	1689.4	1668.9	1633.2	1589.6	1540.8	1498.5	1468.8	1449.6	1443.7	1441.0
27.5°	1696.0	1690.0	1668.2	1627.3	1571.1	1515.0	1469.4	1444.3	1442.4	1465.5	1482.6
30°	1678.8	1674.8	1655.0	1614.1	1555.3	1496.5	1454.2	1441.0	1461.5	1510.4	1552.6
32.5°	1661.6	1659.6	1645.8	1608.8	1558.6	1509.1	1480.0	1481.3	1523.6	1598.9	1666.9
35°	1663.6	1666.2	1664.3	1644.4	1612.7	1587.0	1573.1	1602.2	1668.2	1759.4	1850.5
37.5°	1680.8	1690.7	1703.2	1705.2	1705.9	1701.9	1731.0	1792.4	1888.8	2007.7	2150.3
40°	1718.4	1729.6	1766.0	1797.7	1838.6	1887.5	1946.3	2031.5	2151.0	2297.6	2472.6
42.5°	1835.3	1851.2	1896.1	1954.8	2030.1	2106.7	2194.6	2310.8	2457.4	2612.0	2795.6
45°	1987.9	2020.9	2070.4	2135.8	2248.7	2356.4	2470.0	2600.1	2755.9	2949.4	3134.4
47.5°	2178.1	2211.1	2283.1	2353.1	2486.5	2620.5	2744.7	2880.8	3049.8	3247.9	3452.7
50°	2344.5	2382.1	2446.2	2540.6	2695.2	2859.6	2997.0	3144.3	3286.2	3494.9	3701.7
52.5°	2475.3	2502.3	2563.8	2650.3	2822.6	3002.9	3176.6	3340.4	3508.8	3717.5	3909.0
55°	2491.8	2516.9	2577.0	2676.0	2851.0	3051.1	3251.2	3445.4	3683.8	3911.7	4165.3
57.5°	2420.4	2440.9	2501.7	2590.2	2760.6	2988.4	3241.3	3490.3	3795.4	4103.2	4412.9
60°	2319.4	2339.9	2387.4	2458.1	2612.0	2857.6	3152.8	3493.6	3899.1	4343.6	4799.3
62.5°	2208.4	2226.3	2264.6	2314.8	2450.2	2676.7	3014.8	3471.8	3983.7	4582.7	5285.3
65°	2021.5	2064.5	2081.0	2132.5	2267.9	2481.9	2825.9	3324.6	3949.3	4689.0	5590.5
67°	1814.8	1858.4	1867.0	1919.2	2027.5	2232.9	2582.9	3051.8	3677.2	4505.4	5523.1
67.5°	1748.8	1785.8	1799.0	1851.2	1953.5	2147.0	2479.2	2953.4	3594.0	4405.0	5441.9
70°	1285.8	1326.8	1341.3	1363.1	1436.4	1597.6	1817.5	2228.9	2865.6	3594.7	4590.6
72.5°	688.2	721.2	735.0	767.4	805.1	892.9	1061.3	1356.5	1758.7	2405.2	3265.8
75°	465.6	478.8	488.7	511.2	550.1	620.1	694.1	797.8	1040.8	1357.2	1858.4
77.5°	265.5	271.4	272.8	276.7	307.8	374.5	496.0	671.6	861.2	983.4	1188.8
80°	114.9	126.8	136.0	130.1	128.1	142.0	177.7	264.8	519.1	824.2	978.1
82.5°	62.1	67.4	75.3	75.9	79.9	84.5	91.8	109.0	153.2	309.1	674.3
85°	32.4	33.7	44.9	51.5	54.8	57.5	58.8	65.4	75.3	95.8	167.7
87.5°	4.6	6.6	7.9	10.6	11.9	12.5	14.5	18.5	21.8	26.4	44.9
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: VST-F04-LED-E-U-SL3

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°	100°
0°	1079.8	1079.8	1079.8	1079.8	1079.8	1079.8	1079.8	1079.8	1079.8	1079.8	1079.8
2.5°	1107.5	1106.2	1102.2	1099.6	1097.0	1094.3	1091.0	1088.4	1083.7	1080.4	1076.5
5°	1148.5	1140.5	1135.3	1128.0	1126.7	1118.1	1109.5	1105.5	1097.6	1091.0	1083.1
7.5°	1190.1	1180.8	1172.2	1166.3	1163.0	1151.1	1142.5	1132.6	1123.4	1114.8	1105.5
10°	1238.9	1229.7	1220.5	1216.5	1210.5	1199.3	1192.1	1179.5	1170.3	1159.7	1147.1
12.5°	1289.8	1283.2	1276.6	1271.3	1268.7	1263.4	1252.8	1242.2	1229.7	1219.1	1204.6
15°	1334.7	1330.1	1327.4	1326.1	1326.1	1322.8	1312.9	1303.0	1289.8	1277.9	1262.1
17.5°	1366.4	1364.4	1366.4	1368.4	1371.0	1368.4	1366.4	1355.2	1346.6	1332.1	1316.2
20°	1384.9	1388.9	1398.8	1405.4	1411.3	1415.9	1417.9	1408.7	1397.4	1386.9	1376.3
22.5°	1404.7	1415.9	1433.1	1443.0	1452.9	1469.4	1473.4	1466.8	1458.2	1451.6	1440.4
25°	1437.7	1454.2	1484.0	1499.8	1513.7	1538.1	1541.4	1542.7	1540.8	1535.5	1521.6
27.5°	1489.2	1521.6	1561.2	1581.7	1596.9	1628.6	1641.1	1641.1	1635.9	1641.8	1641.8
30°	1579.1	1622.0	1673.5	1685.4	1709.2	1736.9	1757.4	1760.0	1760.7	1773.2	1791.7
32.5°	1717.1	1758.0	1815.5	1828.7	1849.2	1875.6	1898.7	1896.1	1902.0	1929.1	1953.5
35°	1917.9	1959.5	1997.1	2014.9	2024.2	2048.0	2056.5	2071.1	2088.9	2122.6	2119.3
37.5°	2215.0	2252.0	2257.3	2268.5	2257.3	2261.9	2268.5	2285.7	2333.3	2363.6	2314.8
40°	2573.0	2634.4	2628.5	2615.3	2590.2	2556.5	2568.4	2594.8	2646.3	2619.9	2488.5
42.5°	2910.5	2973.9	2962.0	2946.8	2891.3	2878.8	2877.4	2899.2	2927.0	2851.7	2624.5
45°	3242.7	3307.4	3286.9	3278.3	3241.3	3214.3	3236.7	3238.0	3230.8	3069.6	2743.4
47.5°	3585.4	3644.9	3631.6	3638.9	3600.6	3582.8	3584.8	3575.5	3507.5	3254.5	2835.8
50°	3862.1	3942.0	3950.0	3933.5	3913.0	3885.9	3955.3	3930.2	3778.9	3434.2	2925.0
52.5°	4077.4	4185.1	4226.0	4215.5	4198.9	4202.3	4332.4	4360.8	4110.5	3660.7	3023.4
55°	4332.4	4502.1	4568.8	4608.4	4591.2	4657.3	4955.1	4969.7	4571.4	3956.6	3151.5
57.5°	4700.2	4943.2	5153.9	5210.1	5264.2	5478.8	5962.3	5815.0	5169.8	4404.3	3314.0
60°	5259.6	5791.9	6134.0	6313.6	6440.4	6740.2	7199.9	6826.8	5915.4	4937.3	3518.1
62.5°	6042.8	6820.8	7392.7	7573.0	7625.2	7797.6	8130.4	7416.5	6321.5	5176.4	3535.9
65°	6626.0	7559.2	8244.0	8336.5	8274.4	8277.7	8364.9	7385.5	6170.3	4967.7	3229.5
67°	6587.7	7632.5	8333.8	8455.4	8369.5	8256.6	8120.5	6964.8	5684.2	4530.5	2827.9
67.5°	6528.9	7561.8	8294.9	8423.0	8344.4	8215.6	8016.8	6801.7	5533.0	4394.4	2746.0
70°	5643.9	6669.6	7656.9	7837.2	7870.2	7752.7	7194.6	5735.1	4492.2	3574.9	2132.5
72.5°	4393.1	5306.5	6283.2	6439.8	6566.6	6227.8	5236.5	3961.2	3274.4	2576.3	1544.1
75°	2900.6	3829.8	4322.4	4345.6	4183.8	3556.4	2558.5	1983.9	1826.1	1514.3	955.6
77.5°	1552.0	2252.0	2265.9	2098.2	2021.5	1507.1	611.5	337.5	375.8	426.6	380.4
80°	1157.7	1434.4	1662.3	1787.1	1824.1	1292.4	316.3	179.0	156.5	142.7	140.7
82.5°	1044.1	1385.6	1553.3	1621.3	1604.2	1063.3	177.7	120.2	99.7	108.3	123.5
85°	409.5	739.7	972.8	941.8	791.2	396.3	97.1	64.7	64.7	93.8	121.5
87.5°	83.9	151.9	206.1	196.8	177.0	76.6	47.6	39.0	39.6	75.9	114.9
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):

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	1079.8	1079.8	1079.8	1079.8	1079.8	1079.8	1079.8	1079.8	1079.8	1079.8	1079.8
2.5°	1072.5	1068.6	1065.9	1063.3	1060.6	1059.3	1057.3	1057.3	1053.4	1052.0	1050.7
5°	1077.1	1070.5	1065.9	1060.0	1055.4	1051.4	1046.1	1044.8	1040.2	1036.9	1035.5
7.5°	1097.0	1087.1	1077.1	1069.9	1063.3	1054.7	1048.7	1043.5	1038.8	1035.5	1031.6
10°	1134.6	1124.0	1110.2	1097.0	1088.4	1075.2	1065.9	1056.7	1051.4	1047.4	1042.1
12.5°	1190.1	1174.9	1158.4	1142.5	1128.0	1110.8	1101.6	1090.4	1083.7	1080.4	1076.5
15°	1246.9	1230.4	1209.9	1194.7	1178.2	1165.0	1156.4	1146.5	1141.2	1137.2	1134.6
17.5°	1305.0	1285.8	1271.3	1256.1	1248.2	1238.3	1227.1	1214.5	1199.3	1190.1	1177.5
20°	1364.4	1349.9	1341.3	1332.7	1323.5	1309.6	1287.2	1261.4	1233.0	1205.9	1180.2
22.5°	1433.8	1425.2	1423.9	1415.9	1396.8	1363.8	1322.2	1274.0	1225.7	1180.8	1145.8
25°	1531.5	1531.5	1524.9	1492.5	1447.6	1388.2	1318.2	1248.9	1184.8	1123.4	1077.1
27.5°	1654.4	1649.7	1617.4	1550.7	1470.1	1377.6	1283.9	1196.0	1114.1	1046.8	987.3
30°	1789.7	1757.4	1688.0	1583.0	1462.2	1343.3	1228.4	1126.7	1030.3	947.7	877.7
32.5°	1930.4	1851.8	1727.0	1583.0	1434.4	1291.8	1159.0	1034.2	923.9	831.5	748.3
35°	2057.9	1914.6	1736.2	1557.3	1380.3	1215.8	1062.0	920.6	788.5	688.8	597.7
37.5°	2173.4	1956.2	1726.3	1507.1	1301.7	1108.8	928.6	772.7	623.4	527.0	449.1
40°	2248.7	1964.7	1685.4	1428.5	1189.4	964.2	764.8	590.4	472.2	384.4	332.2
42.5°	2295.6	1948.2	1619.3	1320.8	1038.2	782.6	573.9	423.3	335.5	286.6	266.8
45°	2322.0	1905.3	1521.6	1173.6	855.2	595.0	407.5	305.8	258.2	241.1	234.4
47.5°	2320.7	1836.0	1399.4	1003.2	653.2	414.7	288.6	238.4	225.2	219.9	218.6
50°	2306.8	1750.8	1256.1	818.3	471.5	289.3	228.5	214.0	210.7	207.4	206.1
52.5°	2287.7	1645.1	1097.6	638.0	334.8	231.1	207.4	203.4	200.8	197.5	196.1
55°	2252.0	1515.0	925.9	480.1	262.2	208.7	200.1	198.8	195.5	190.9	188.2
57.5°	2208.4	1382.9	761.5	375.1	231.8	203.4	198.8	196.8	192.2	186.9	181.6
60°	2192.6	1274.0	632.7	316.3	224.5	205.4	202.1	199.4	192.8	184.9	179.0
62.5°	2093.5	1151.1	540.2	293.2	228.5	214.0	212.7	208.7	198.8	189.5	180.3
65°	1837.3	973.5	457.7	277.4	236.4	228.5	229.8	223.9	214.0	201.4	184.9
67°	1554.0	793.8	381.1	262.2	242.4	243.7	248.3	243.7	231.1	213.3	190.9
67.5°	1478.7	748.3	361.9	257.6	243.7	247.7	252.9	249.6	237.1	216.6	193.5
70°	1098.9	527.0	270.1	233.1	243.7	259.5	271.4	274.7	260.9	232.5	198.8
72.5°	774.0	340.1	207.4	202.1	221.2	242.4	264.8	276.1	260.2	229.2	191.5
75°	464.9	212.7	168.4	171.7	186.2	208.0	225.9	230.5	210.7	190.9	165.8
77.5°	215.3	141.3	132.1	136.7	150.6	160.5	160.5	151.2	136.0	124.2	118.9
80°	126.8	115.6	114.9	123.5	132.7	125.5	114.3	101.7	93.8	89.8	87.8
82.5°	118.9	123.5	131.4	133.4	126.1	108.3	94.4	81.9	77.9	75.9	74.0
85°	140.0	149.9	136.7	126.1	111.6	91.1	74.0	63.4	61.4	59.4	56.8
87.5°	129.4	123.5	107.6	92.5	76.6	55.5	40.3	36.3	39.0	38.3	37.0
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):

	160°	165°	170°	175°	180°
0°	1079.8	1079.8	1079.8	1079.8	1079.8
2.5°	1051.4	1051.4	1048.7	1047.4	1050.7
5°	1032.9	1033.6	1031.6	1030.9	1031.6
7.5°	1028.9	1028.3	1027.0	1025.6	1027.0
10°	1040.8	1040.2	1038.2	1039.5	1037.5
12.5°	1076.5	1080.4	1079.8	1081.1	1083.7
15°	1134.6	1133.9	1132.0	1133.3	1135.3
17.5°	1167.6	1162.3	1157.7	1155.7	1155.7
20°	1159.7	1144.5	1136.6	1132.0	1130.6
22.5°	1112.8	1091.0	1074.5	1070.5	1067.2
25°	1036.2	1009.1	988.0	983.4	974.8
27.5°	947.0	910.7	885.6	880.3	875.7
30°	830.1	788.5	759.5	741.0	746.9
32.5°	687.5	647.9	614.2	584.5	579.8
35°	531.0	487.4	457.7	444.5	435.9
37.5°	396.3	359.9	340.1	327.6	328.2
40°	303.1	284.0	273.4	264.8	265.5
42.5°	252.9	244.4	241.7	237.8	235.8
45°	229.2	226.5	227.2	223.2	221.9
47.5°	216.0	214.0	214.6	212.0	211.3
50°	205.4	204.1	204.7	202.7	202.1
52.5°	194.8	195.5	194.8	193.5	193.5
55°	185.6	184.9	186.2	184.3	184.3
57.5°	178.3	177.7	177.7	177.0	177.0
60°	174.4	171.7	171.0	171.0	171.7
62.5°	172.4	167.7	167.1	167.1	167.7
65°	173.0	165.8	163.1	162.5	161.8
67°	173.7	163.1	157.8	155.2	154.5
67.5°	174.4	161.8	155.9	153.2	151.9
70°	170.4	152.6	144.0	139.3	138.0
72.5°	160.5	141.3	130.8	124.8	123.5
75°	142.7	128.1	118.9	112.3	109.6
77.5°	110.3	103.7	100.4	96.4	95.1
80°	85.9	82.6	81.2	78.6	77.9
82.5°	71.3	68.0	66.0	62.7	60.8
85°	55.5	51.5	50.2	47.6	46.2
87.5°	36.3	34.3	33.7	30.4	29.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)