

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: P95382

Luminaire Tested: **VFS-K-B20-3-LED-E1-MST-SG**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P95382
REPORT SCALED FROM IESNA LM79-08 TEST DATA (P22792)
Test Lab: INNOVATION CENTER
Issue Date: 03/03/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: VFS-K-B20-3-LED-E1-MST-SG
Description: ARCHITECTURAL FLOOD LUMINAIRE
MEDIUM SYMMETRIC RECTANGULAR WITH SOFTENING GLASS DISTRIBUTION
WITH 20 LED'S, 350mA DRIVE CURRENT
Light Source: -
Ballast/Driver: -

Summary

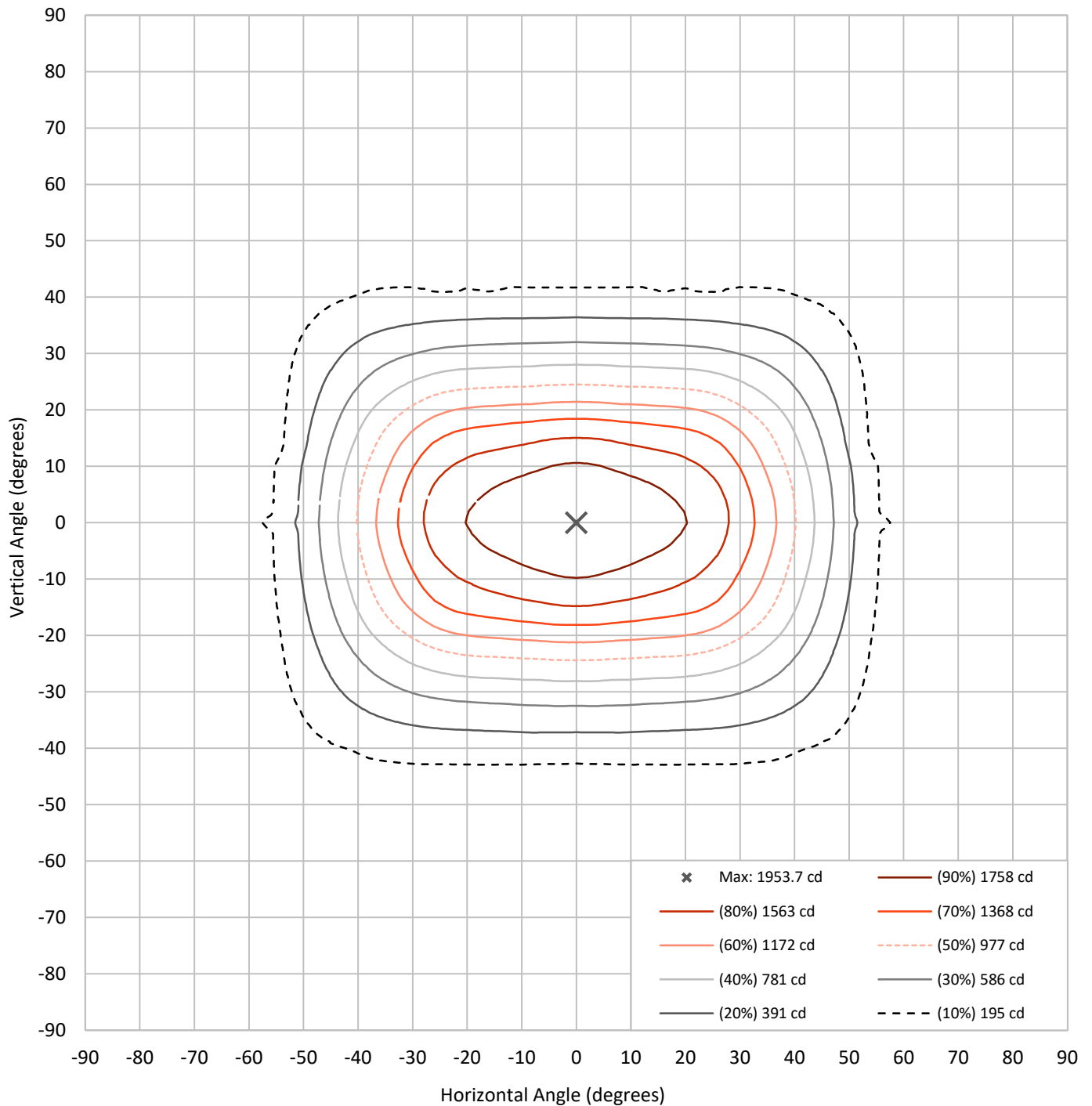
Lumens per Lamp:	N/A	NEMA Type:	6H x 5V
Luminaire Lumens:	2293.3 lumens	Max Intensity:	1953.7 candela
Efficiency:	N/A	Max Intensity Angle:	0°H x 0°V
Efficacy:	96.0 lumens/watt		
Luminous Opening:	(L: 0.83 ' x W: 0 ' x H: 0.5 ')		
Beam Angle (50%):	80.5°H x 48.9°V	Field Angle (10%):	115.1°H x 84.2°V
Beam Lumens:	1424.2 lumens	Field Lumens:	2131.1 lumens
Beam Efficiency:	62.1%	Field Efficiency:	92.9%

Input Watts (W): 23.9
Input Voltage (V): NR
Input Current (A_{in}): 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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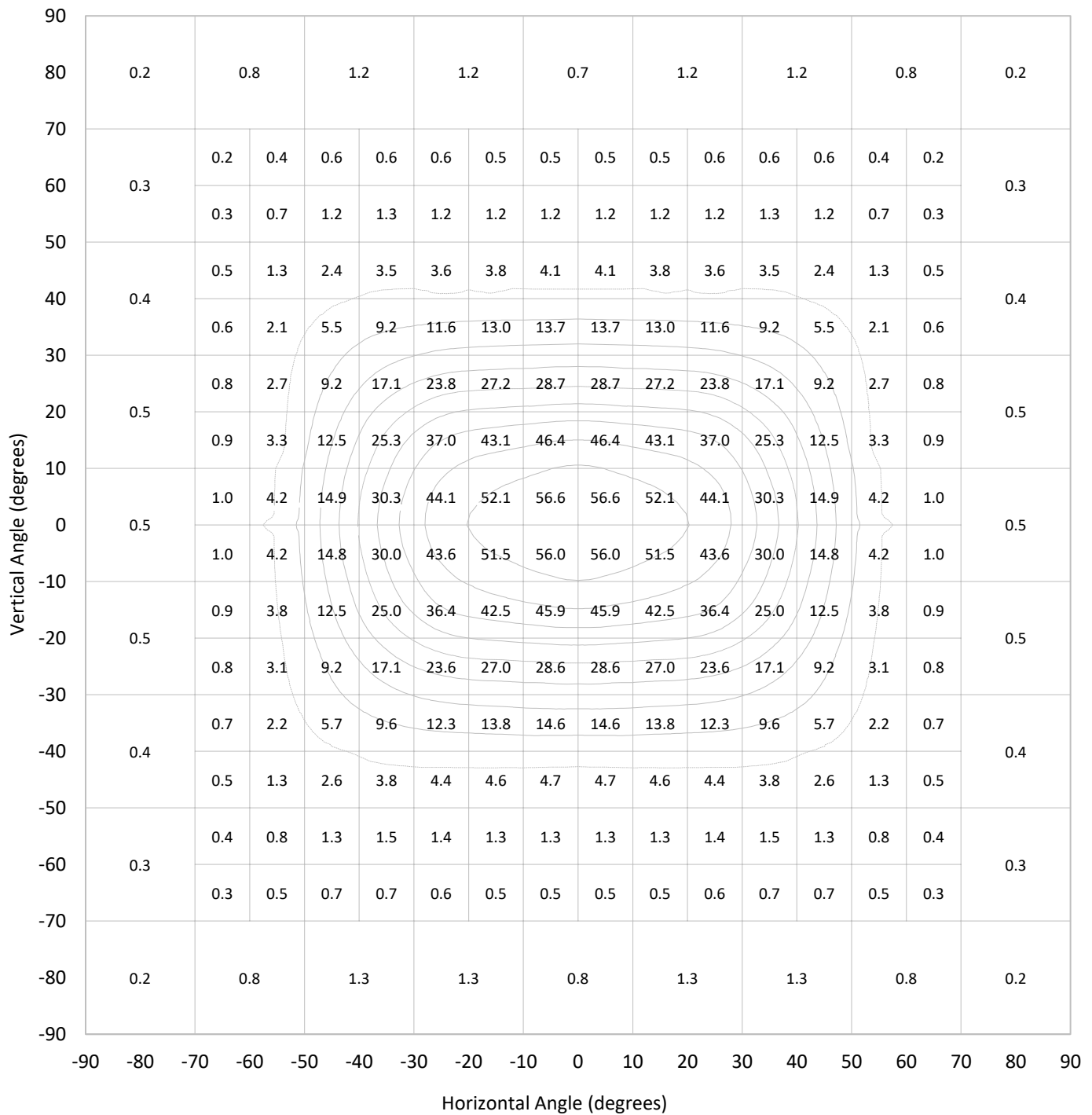
Iso-Candela Plot





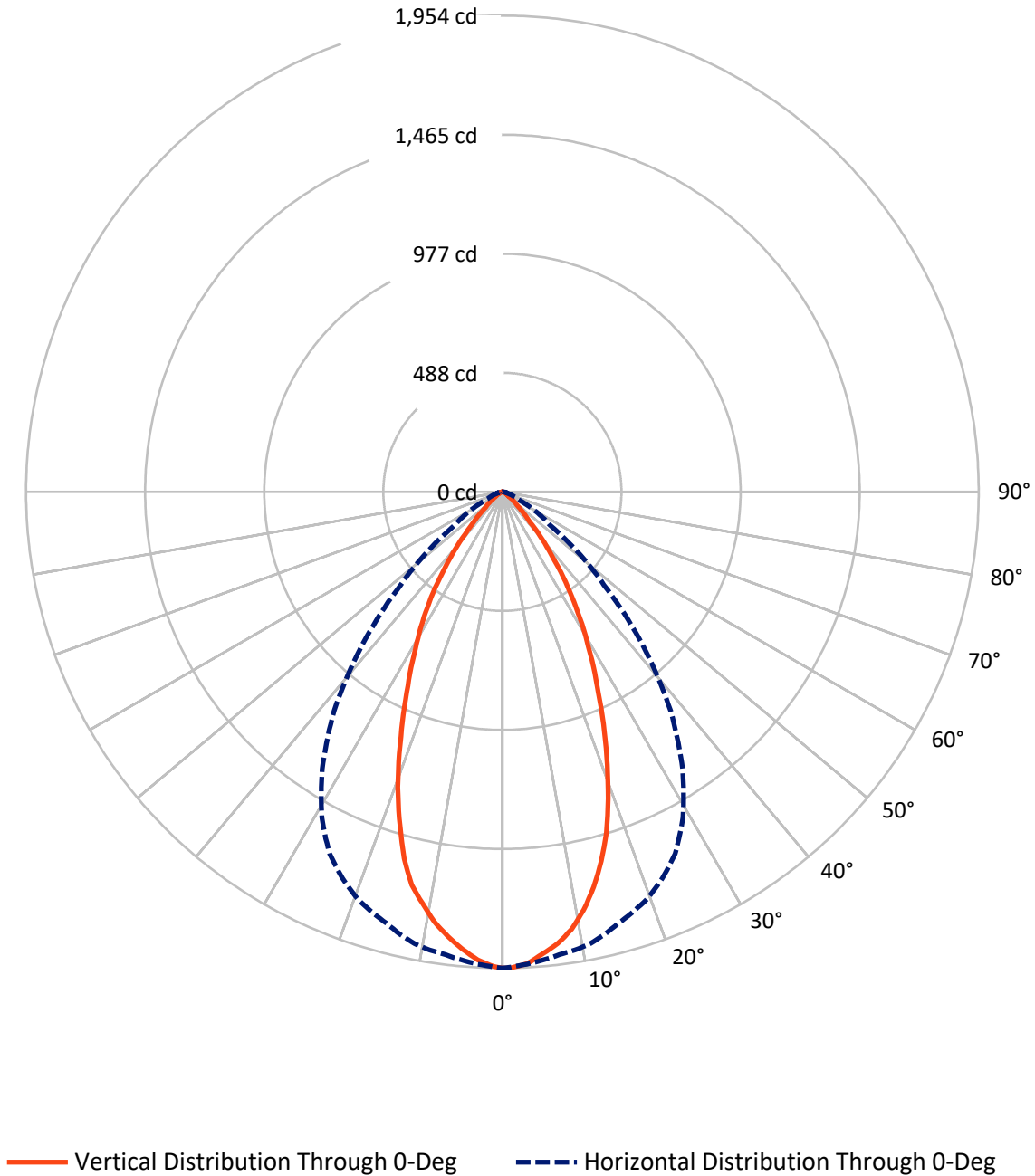
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Lumen Table



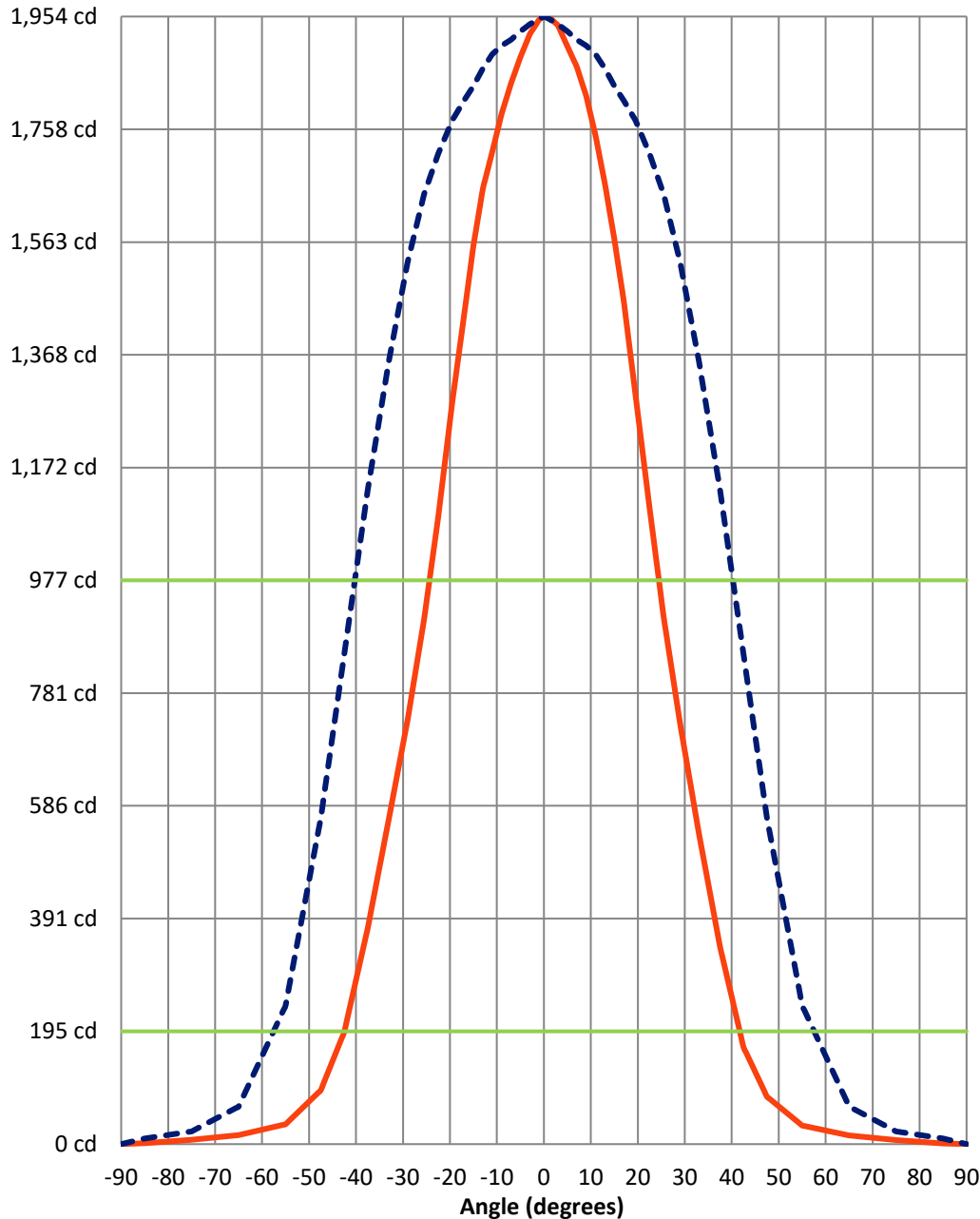
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Luminous Intensity Polar Plot



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Luminous Intensity Plot



Beam:
H Angle: 80.5°
V Angle: 48.9°
Lumens: 1424.2
Efficiency: 62.1%

Field:
H Angle: 115.1°
V Angle: 84.2°
Lumens: 2131.1
Efficiency: 92.9%

Spill:
Lumens: 162.2
Efficiency: 7.1%

— Vertical Distribution through 0-Deg
- - - Horizontal Distribution through 0-Deg



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FIELD
BEAM

CANDELA DISTRIBUTION:

	0°	1°	3°	5°	7°	9°	11°	13°	15°	17°	19.5°
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	1.1	1.6	2.7	4.8	8.1	9.7	10.7	10.7	11.3	11.3	11.8
75°	7.0	7.0	7.0	7.0	7.0	7.5	8.1	9.7	10.7	12.4	13.4
65°	15.0	15.0	15.0	15.0	15.0	15.0	14.5	15.0	15.0	15.6	16.1
55°	32.2	32.2	31.7	31.7	31.7	31.7	32.2	31.7	32.2	33.3	33.8
47.5°	82.2	82.2	81.6	83.2	82.7	83.8	85.4	85.9	85.9	85.9	87.5
42.5°	168.1	167.6	168.6	169.2	168.1	170.8	171.9	173.5	134.8	134.3	171.9
37.5°	342.1	341.6	340.5	338.3	336.7	336.7	335.1	336.2	337.3	335.1	329.2
33°	538.6	538.1	537.0	532.2	532.7	531.7	532.2	525.8	525.2	523.6	517.2
29°	728.8	728.8	728.2	727.1	721.2	712.1	715.9	708.9	703.5	700.3	693.3
25.5°	913.5	911.9	908.7	907.6	902.2	889.9	895.2	889.9	886.1	883.4	876.4
22.5°	1102.5	1102.5	1098.2	1093.4	1086.4	1073.5	1078.4	1069.8	1064.4	1059.6	1048.3
19.5°	1298.6	1300.2	1296.9	1288.3	1278.7	1265.3	1266.3	1255.1	1245.4	1240.6	1226.6
17°	1461.3	1459.7	1453.8	1446.8	1434.4	1415.6	1411.3	1402.2	1385.0	1377.0	1361.4
15°	1568.1	1567.1	1563.8	1556.3	1539.7	1518.2	1506.9	1492.4	1479.5	1468.3	1446.8
13°	1663.7	1664.8	1659.4	1644.4	1624.0	1602.0	1589.6	1575.1	1559.6	1548.3	1524.1
11°	1747.5	1748.1	1739.5	1720.7	1698.6	1678.2	1670.2	1651.4	1629.4	1614.9	1588.6
9°	1816.3	1814.6	1806.6	1792.1	1770.6	1749.7	1729.3	1713.1	1693.3	1672.9	1638.5
7°	1866.7	1864.6	1856.0	1841.5	1830.2	1803.4	1783.5	1766.3	1743.8	1719.6	1683.1
5°	1902.2	1903.3	1896.3	1888.8	1875.3	1854.9	1834.0	1809.8	1784.0	1758.8	1720.7
3°	1938.2	1934.4	1925.3	1916.1	1902.7	1887.1	1869.4	1844.7	1818.9	1790.5	1754.0
1°	1953.7	1950.0	1938.7	1930.1	1916.1	1901.6	1885.0	1861.9	1832.4	1807.1	1773.8
0°	1953.7	1950.0	1940.3	1928.0	1913.5	1903.3	1888.2	1863.5	1833.4	1808.2	1773.8
-1°	1948.4	1946.2	1937.6	1922.6	1905.4	1899.5	1883.9	1859.8	1830.8	1803.4	1765.8
-3°	1923.1	1921.5	1916.1	1905.4	1887.7	1873.7	1852.2	1831.3	1808.7	1781.3	1739.5
-5°	1883.4	1884.5	1877.5	1865.7	1849.6	1832.4	1807.7	1789.4	1765.8	1742.7	1698.6
-7°	1837.7	1836.7	1829.1	1810.3	1795.3	1780.3	1757.2	1735.7	1713.1	1690.6	1650.8
-9°	1785.1	1784.0	1776.0	1759.3	1745.9	1727.1	1708.3	1687.9	1662.7	1640.6	1609.0
-11°	1719.1	1719.1	1714.8	1698.1	1683.6	1667.0	1646.0	1627.2	1607.3	1589.6	1557.4
-13°	1655.1	1653.5	1643.3	1624.5	1609.5	1596.6	1582.1	1562.2	1543.4	1523.6	1499.9
-15°	1556.9	1556.9	1550.4	1538.1	1519.8	1506.4	1495.1	1479.5	1466.6	1446.2	1426.4
-17°	1435.5	1436.6	1441.4	1431.2	1416.2	1406.0	1392.5	1378.0	1365.1	1353.9	1336.1
-19.5°	1285.7	1283.5	1279.8	1274.4	1258.3	1255.6	1247.0	1234.1	1226.6	1218.5	1204.6
-22.5°	1086.4	1085.3	1089.6	1082.7	1070.8	1071.4	1063.3	1054.7	1048.3	1046.1	1035.9
-25.5°	909.7	909.7	909.2	903.8	894.7	896.9	892.0	884.0	878.1	879.7	871.1
-29°	735.7	735.7	737.9	732.5	725.0	727.7	721.8	715.3	711.6	711.6	701.4
-33°	563.9	562.3	565.5	563.4	559.6	561.2	553.1	549.9	545.6	543.5	536.0
-37.5°	374.3	373.8	377.5	375.9	377.0	378.1	372.7	367.9	368.4	365.7	360.9
-42.5°	194.4	197.1	196.0	196.0	197.6	199.2	199.8	197.6	200.9	199.8	199.2
-47.5°	93.4	95.1	96.1	97.2	97.7	96.7	97.7	99.9	99.9	100.4	102.6
-55°	34.4	34.9	34.9	36.0	36.0	36.0	36.5	36.5	36.5	37.6	39.2
-65°	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	16.1	17.2
-75°	7.5	7.5	7.5	7.5	7.5	8.1	8.6	10.2	11.3	12.9	14.0
-85°	1.6	1.6	3.2	5.4	8.6	10.7	11.3	11.8	11.8	11.8	11.8
-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: VFS-K-B20-3-LED-E1-MST-SG

CANDELA DISTRIBUTION (continued):

	22.5°	25.5°	29°	33°	37.5°	42.5°	47.5°	55°	65°	75°	85°
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	12.4	11.8	11.8
75°	14.5	15.0	15.6	15.6	15.6	16.1	16.1	15.6	14.0	12.4	11.8
65°	17.7	18.8	20.4	22.6	24.2	26.3	26.9	24.7	18.8	14.0	11.8
55°	36.0	38.7	42.4	46.2	49.9	52.1	51.0	41.4	24.7	15.6	11.8
47.5°	88.6	91.3	95.6	98.3	101.0	97.7	87.5	60.7	32.2	17.2	12.4
42.5°	134.8	134.8	176.1	176.1	170.8	129.4	123.5	80.6	36.5	18.8	12.4
37.5°	328.1	322.8	313.1	304.0	279.8	240.1	184.2	100.4	41.4	19.9	11.8
33°	508.6	497.8	475.8	446.8	404.4	333.5	246.5	113.3	46.2	20.4	11.8
29°	685.8	666.5	630.5	585.9	517.7	415.1	299.7	121.4	50.5	21.5	11.8
25.5°	863.0	834.0	780.9	711.0	614.4	486.0	346.9	125.1	53.7	21.5	11.3
22.5°	1031.6	994.1	923.7	826.5	705.1	545.6	380.8	126.7	56.4	22.0	11.3
19.5°	1200.3	1155.2	1066.0	945.2	796.4	604.2	415.1	128.9	59.1	22.0	11.3
17°	1329.7	1276.0	1180.9	1042.9	868.9	652.5	444.1	130.5	60.1	22.6	10.7
15°	1413.5	1361.4	1261.0	1110.1	917.3	685.8	466.1	131.0	61.8	22.6	10.7
13°	1484.9	1430.7	1321.1	1166.4	962.4	720.7	487.6	131.6	62.8	22.6	10.7
11°	1547.2	1489.7	1376.4	1214.2	1002.1	755.1	506.4	185.3	63.9	22.6	10.2
9°	1594.5	1538.6	1427.4	1255.1	1039.2	782.5	523.1	189.6	63.9	22.6	10.2
7°	1640.1	1581.0	1467.2	1291.0	1080.0	807.2	538.6	191.2	64.4	22.6	10.2
5°	1671.8	1611.6	1501.0	1322.2	1107.4	824.4	552.1	192.3	65.5	22.0	10.2
3°	1700.8	1635.3	1522.0	1345.8	1121.3	838.3	559.6	193.3	65.5	22.0	9.7
1°	1713.1	1647.6	1530.6	1354.4	1131.0	846.9	562.8	194.9	65.0	22.0	9.7
0°	1715.8	1646.0	1528.4	1357.1	1133.7	849.1	565.0	240.1	65.0	22.0	9.7
-1°	1711.0	1642.3	1522.5	1354.4	1129.9	846.9	563.9	194.9	65.0	22.6	9.7
-3°	1691.1	1624.5	1505.8	1338.3	1114.3	835.6	558.0	194.9	64.4	22.0	9.7
-5°	1651.4	1590.7	1478.5	1309.3	1087.5	821.1	548.9	193.9	64.4	22.0	9.7
-7°	1605.7	1553.1	1438.7	1274.4	1062.3	797.0	537.0	191.7	64.4	22.0	10.2
-9°	1569.2	1509.1	1396.3	1239.5	1030.0	770.1	520.9	190.1	63.9	22.0	10.2
-11°	1522.5	1467.2	1354.4	1197.1	991.4	742.7	505.9	186.4	62.8	22.0	10.2
-13°	1468.8	1412.4	1300.7	1151.9	958.1	714.8	486.0	182.1	62.3	22.0	10.2
-15°	1399.0	1342.1	1235.7	1098.2	911.4	684.7	467.2	178.8	61.2	22.0	10.2
-17°	1308.8	1255.1	1155.7	1029.0	858.7	649.8	446.3	173.5	60.7	22.0	10.7
-19.5°	1179.3	1131.5	1048.3	935.0	787.3	603.1	419.4	168.1	60.1	22.0	10.7
-22.5°	1012.3	973.6	909.7	818.4	695.5	543.5	382.4	160.0	57.5	22.0	10.7
-25.5°	852.3	824.4	779.2	708.9	612.2	487.1	349.1	150.4	54.8	22.0	11.3
-29°	689.0	669.7	642.3	590.2	518.8	421.6	307.7	137.5	51.6	21.5	11.3
-33°	530.1	516.6	497.3	462.4	414.1	344.2	254.0	122.4	47.3	20.4	11.8
-37.5°	358.2	352.8	342.6	324.4	295.9	254.6	194.9	104.7	41.9	19.9	11.8
-42.5°	198.7	197.1	198.2	191.2	183.7	131.6	125.1	84.3	37.6	18.8	12.4
-47.5°	104.2	105.8	107.9	110.6	112.8	105.8	94.5	64.4	33.3	17.2	12.4
-55°	41.4	43.5	47.3	51.6	55.3	57.5	55.9	44.0	25.8	16.1	12.4
-65°	18.3	19.9	22.0	23.6	25.8	27.9	29.0	26.3	19.3	14.0	11.8
-75°	15.0	15.6	16.1	16.1	16.6	16.6	17.2	16.6	14.5	12.4	11.8
-85°	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	11.8	11.8
-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°
90°	0.0
85°	0.0
75°	0.0
65°	0.0
55°	0.0
47.5°	0.0
42.5°	0.0
37.5°	0.0
33°	0.0
29°	0.0
25.5°	0.0
22.5°	0.0
19.5°	0.0
17°	0.0
15°	0.0
13°	0.0
11°	0.0
9°	0.0
7°	0.0
5°	0.0
3°	0.0
1°	0.0
0°	0.0
-1°	0.0
-3°	0.0
-5°	0.0
-7°	0.0
-9°	0.0
-11°	0.0
-13°	0.0
-15°	0.0
-17°	0.0
-19.5°	0.0
-22.5°	0.0
-25.5°	0.0
-29°	0.0
-33°	0.0
-37.5°	0.0
-42.5°	0.0
-47.5°	0.0
-55°	0.0
-65°	0.0
-75°	0.0
-85°	0.0
-90°	0.0

(END OF REPORT)