

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: McGRAW-EDISON

Report Number: P821381

Luminaire Tested: **TT-D4-750-24VDC-CQ-HSS**

Issue Date: 12/2/2020

Test Information

Test Method: LM-79-08
Report Number: P821381
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2010-017-3)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: TT-D4-750-24VDC-CQ-HSS
Description: TOPTIER LED PARKING GARAGE LUMINAIRE
5000K, 70 CRI LEDS AND CONCENTRATED DISTRIBUTION WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

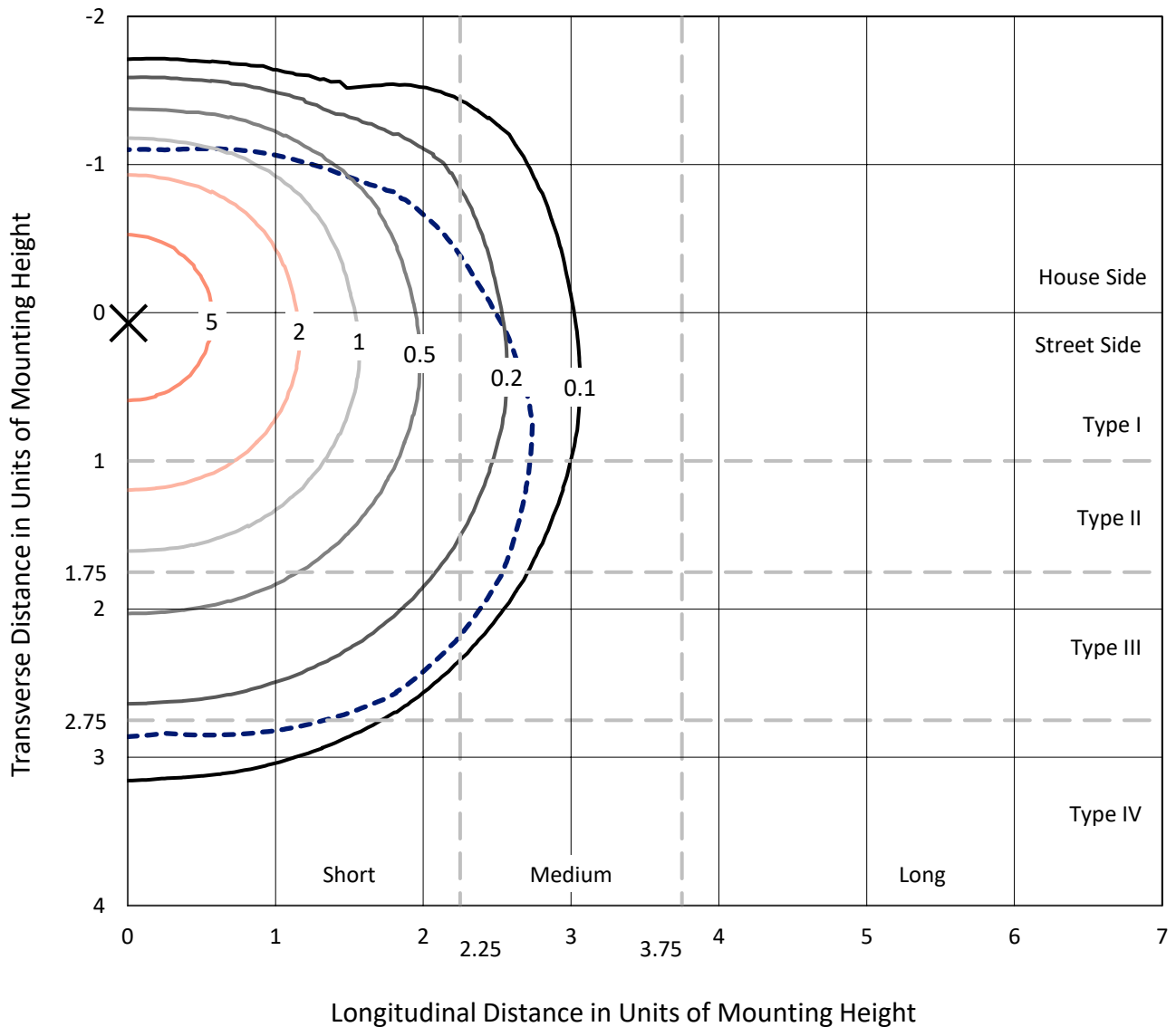
Lumens per Lamp: N/A
Luminaire Lumens: 6330.1 lumens
Efficiency: N/A
Efficacy: 111.1 lumens/watt
Luminous Opening: Circular (Dia: 1.12' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U2 - G1

Input Watts (W): 57
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-Footcandle Lines of Horizontal Illumination

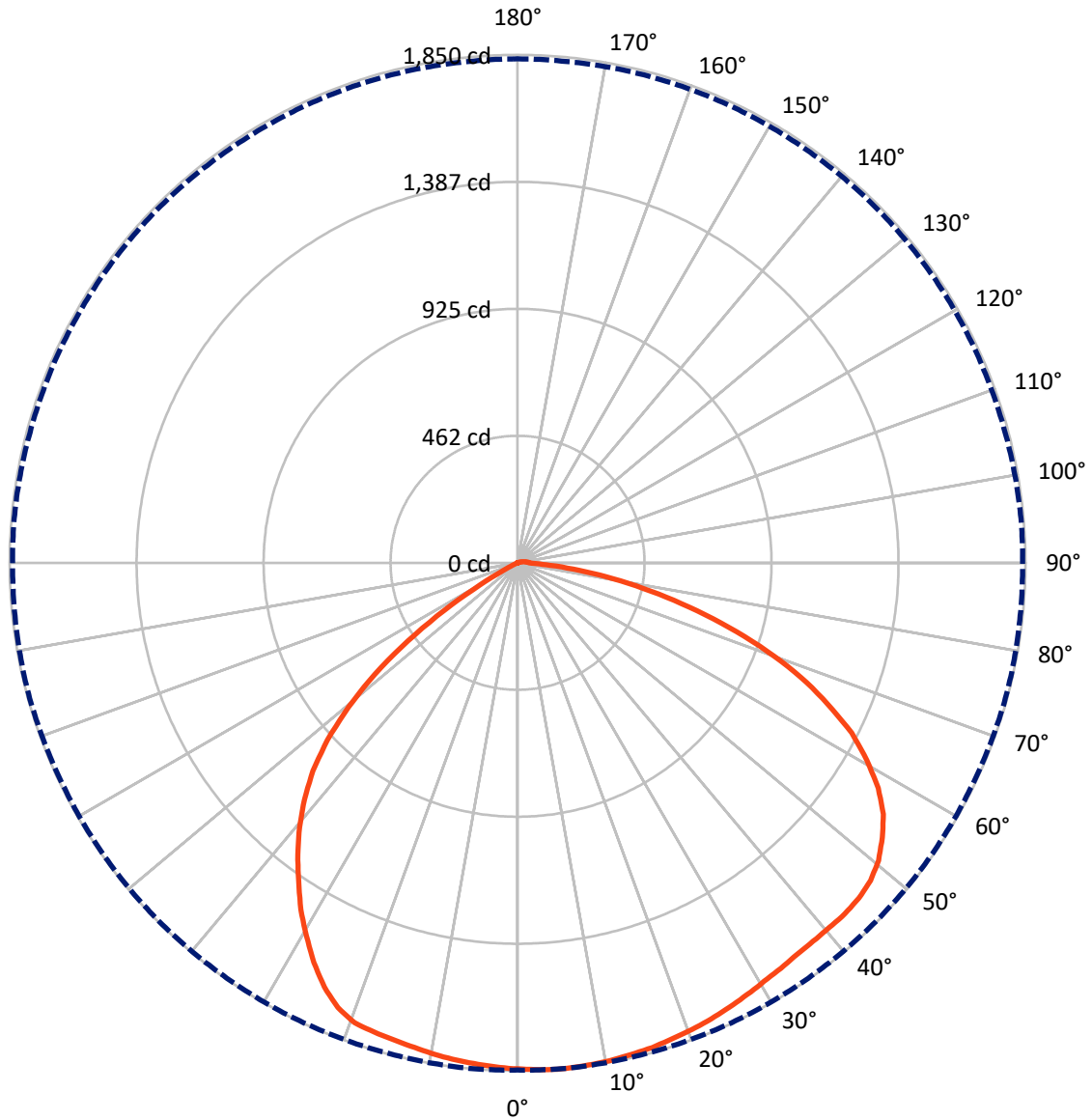
× Max cd
 - - - 1/2 Max cd



Based on 15 foot mounting height. Maximum calculated value = 8.2 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 5-Deg Lateral - - - Horizontal Cone Through 4-Deg Vertical

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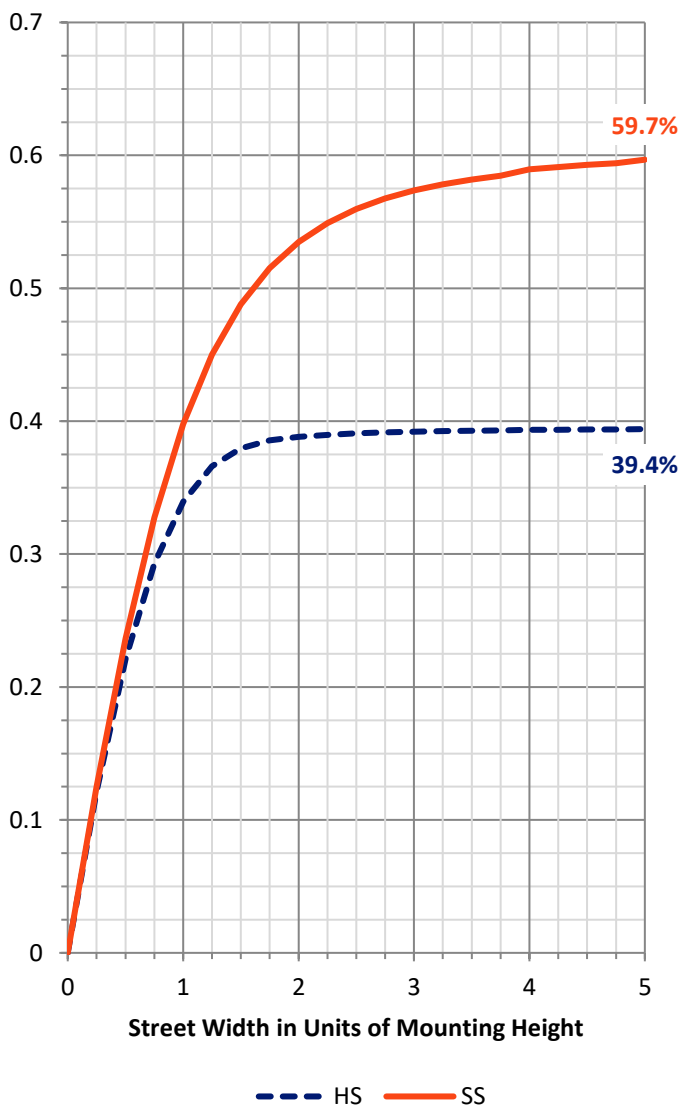
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2508.5	3.3	2511.8
	% Fixture	39.6	0.1	39.7
Street Side	Lumens	3800.6	17.7	3818.3
	% Fixture	60.0	0.3	60.3
Total	Lumens	6309.1	20.9	6330.1
	% Fixture	99.7	0.3	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	175.2	2.8
10°-20°	513.1	8.1
20°-30°	808.5	12.8
30°-40°	1029.0	16.3
40°-50°	1188.4	18.8
50°-60°	1163.7	18.4
60°-70°	866.7	13.7
70°-80°	469.4	7.4
80°-90°	95.2	1.5
90°-100°	12.1	0.2
100°-110°	4.7	0.1
110°-120°	1.4	0.0
120°-130°	1.0	0.0
130°-140°	0.8	0.0
140°-150°	0.5	0.0
150°-160°	0.3	0.0
160°-170°	0.2	0.0
170°-180°	0.1	0.0
0°-90°	6309.1	99.7
0°-180°	6330.1	100.0

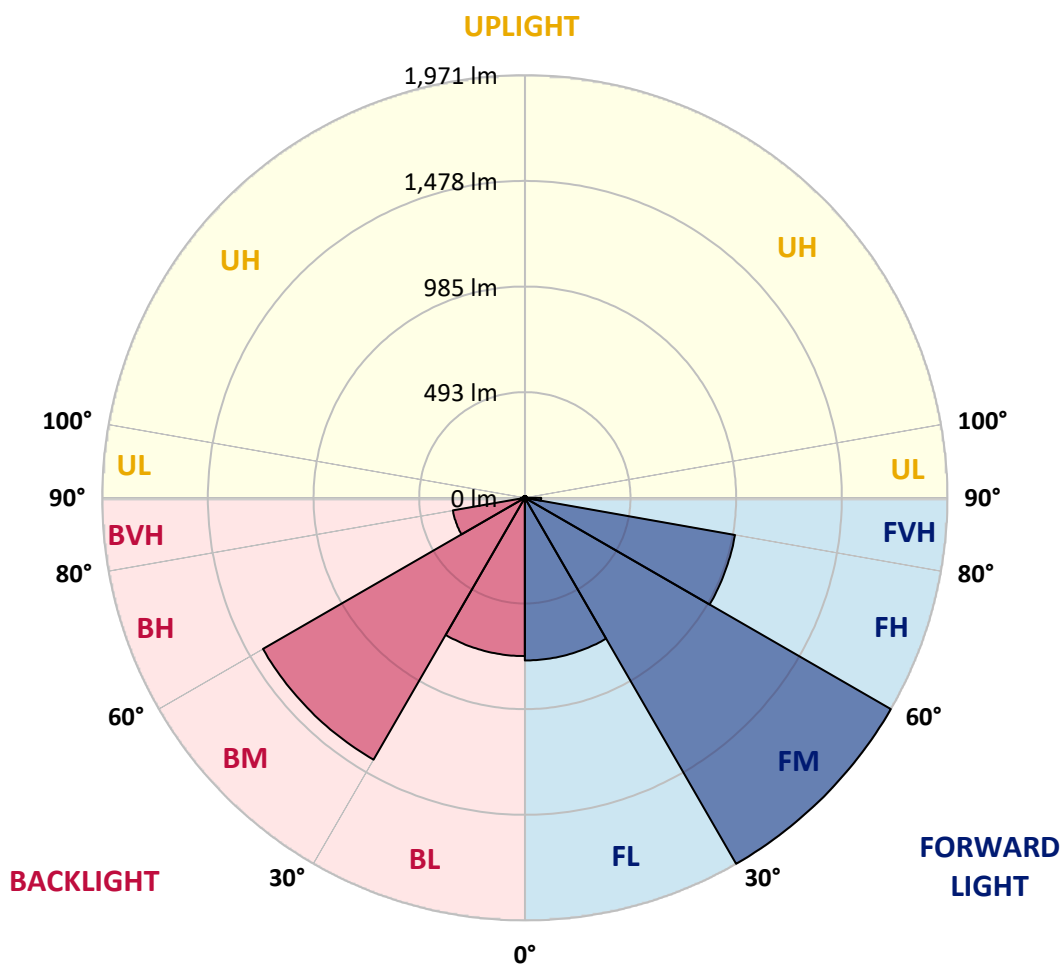


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	758.5	12.0			
FM (30°-60°)	1970.9	31.1			
FH (60°-80°)	995.2	15.7			G1/1800
FVH (80°-90°)	76.0	1.2			G1/100
BL (0°-30°)	738.3	11.7	B2/1000		
BM (30°-60°)	1410.2	22.3	B2/2500		
BH (60°-80°)	340.9	5.4	B1/500		G1/500
BVH (80°-90°)	19.2	0.3			G1/100
UL (90°-100°)	12.1	0.2		U2/50	
UH (100°-180°)	8.9	0.1		U1/10	

BUG Rating: B2-U2-G1
 Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	1843.7	1843.7	1843.7	1843.7	1843.7	1843.7	1843.7	1843.7	1843.7	1843.7	1843.7
2.5°	1846.0	1848.4	1847.2	1847.2	1844.8	1846.0	1844.8	1844.8	1843.7	1842.5	1842.5
4°	1847.2	1849.6	1847.2	1847.2	1846.0	1846.0	1844.8	1842.5	1843.7	1840.1	1838.9
5°	1848.4	1849.6	1848.4	1848.4	1846.0	1844.8	1842.5	1842.5	1841.3	1838.9	1838.9
7.5°	1846.0	1847.2	1847.2	1846.0	1843.7	1841.3	1840.1	1838.9	1837.7	1834.1	1834.1
10°	1841.3	1843.7	1841.3	1841.3	1840.1	1837.7	1834.1	1832.9	1829.4	1827.0	1825.8
12.5°	1836.5	1837.7	1836.5	1836.5	1834.1	1830.6	1829.4	1827.0	1822.2	1818.7	1818.7
15°	1829.4	1831.8	1830.6	1829.4	1828.2	1824.6	1821.0	1817.5	1813.9	1810.3	1810.3
17.5°	1821.0	1822.2	1823.4	1822.2	1819.9	1817.5	1813.9	1809.1	1805.6	1802.0	1800.8
20°	1811.5	1813.9	1813.9	1813.9	1811.5	1809.1	1804.4	1799.6	1797.2	1792.5	1791.3
22.5°	1802.0	1804.4	1803.2	1804.4	1803.2	1799.6	1794.9	1790.1	1785.3	1781.8	1779.4
25°	1792.5	1792.5	1792.5	1792.5	1792.5	1787.7	1783.0	1777.0	1772.2	1766.3	1766.3
27.5°	1780.6	1780.6	1781.8	1781.8	1780.6	1777.0	1771.1	1763.9	1756.8	1750.8	1748.4
30°	1769.9	1768.7	1771.1	1773.4	1772.2	1768.7	1761.5	1753.2	1742.5	1734.2	1727.0
32.5°	1756.8	1760.3	1762.7	1767.5	1768.7	1763.9	1755.6	1744.9	1734.2	1718.7	1705.6
35°	1752.0	1752.0	1758.0	1765.1	1767.5	1765.1	1753.2	1741.3	1725.8	1703.2	1687.7
37.5°	1747.2	1748.4	1758.0	1768.7	1772.2	1772.2	1759.2	1743.7	1722.3	1690.1	1671.1
40°	1744.9	1747.2	1759.2	1774.6	1784.1	1783.0	1767.5	1748.4	1722.3	1680.6	1656.8
42.5°	1742.5	1747.2	1760.3	1781.8	1796.0	1794.9	1778.2	1753.2	1719.9	1668.7	1641.3
45°	1738.9	1742.5	1760.3	1787.7	1806.8	1810.3	1791.3	1759.2	1719.9	1658.0	1622.3
47.5°	1728.2	1729.4	1753.2	1785.3	1813.9	1818.7	1799.6	1761.5	1715.1	1640.1	1598.5
50°	1699.6	1703.2	1730.6	1773.4	1806.8	1813.9	1797.2	1755.6	1703.2	1610.4	1560.4
52.5°	1662.7	1662.7	1696.1	1743.7	1784.1	1796.0	1780.6	1734.2	1673.5	1566.3	1509.2
55°	1608.0	1616.3	1650.8	1700.8	1744.9	1761.5	1740.1	1694.9	1624.7	1510.4	1447.3
57.5°	1546.1	1548.5	1584.2	1643.7	1688.9	1699.6	1681.8	1628.2	1560.4	1443.7	1368.8
60°	1456.8	1461.6	1506.8	1559.2	1608.0	1622.3	1599.7	1546.1	1474.7	1358.0	1281.9
62.5°	1358.0	1365.2	1405.7	1459.2	1505.6	1528.2	1500.9	1444.9	1374.7	1255.7	1189.0
65°	1239.0	1241.4	1285.4	1346.1	1392.6	1400.9	1377.1	1322.3	1252.1	1137.9	1078.3
67.5°	1102.1	1114.0	1156.9	1202.1	1242.6	1252.1	1235.5	1172.4	1116.4	1015.3	956.9
70°	970.0	964.1	999.8	1045.0	1081.9	1090.2	1071.2	1012.9	960.5	865.3	820.1
72.5°	810.5	805.8	843.9	878.4	914.1	909.3	890.3	843.9	798.6	717.7	676.0
75°	649.9	645.1	674.9	704.6	722.5	724.8	711.8	677.2	628.4	565.4	533.2
77.5°	492.8	497.5	510.6	535.6	552.3	559.4	536.8	502.3	471.3	422.5	398.7
80°	351.1	352.3	357.1	374.9	386.8	386.8	376.1	348.7	314.2	279.7	267.8
82.5°	221.4	226.1	226.1	244.0	244.0	234.5	229.7	211.9	194.0	166.6	150.0
85°	121.4	119.0	126.2	127.4	126.2	119.0	111.9	101.2	89.3	70.2	63.1
87.5°	53.6	52.4	52.4	52.4	51.2	46.4	39.3	30.9	21.4	13.1	9.5
90°	41.7	41.7	40.5	38.1	34.5	30.9	25.0	19.0	11.9	4.8	2.4
92.5°	38.1	38.1	36.9	35.7	32.1	28.6	22.6	16.7	10.7	4.8	2.4
95°	33.3	32.1	32.1	29.8	27.4	23.8	20.2	14.3	9.5	3.6	2.4
97.5°	27.4	26.2	26.2	25.0	22.6	19.0	16.7	11.9	8.3	3.6	2.4
100°	20.2	21.4	20.2	19.0	17.9	15.5	13.1	9.5	6.0	2.4	2.4
102.5°	15.5	15.5	14.3	14.3	13.1	11.9	9.5	7.1	4.8	2.4	1.2
105°	10.7	10.7	10.7	9.5	9.5	8.3	7.1	4.8	3.6	2.4	1.2
107.5°	6.0	6.0	6.0	6.0	6.0	6.0	4.8	3.6	2.4	1.2	1.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
110°	3.6	3.6	3.6	3.6	3.6	3.6	2.4	2.4	1.2	1.2	1.2
112.5°	1.2	1.2	2.4	2.4	2.4	2.4	2.4	1.2	1.2	1.2	1.2
115°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
117.5°	0.0	0.0	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
120°	0.0	0.0	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
122.5°	0.0	0.0	0.0	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
125°	0.0	0.0	0.0	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
127.5°	0.0	0.0	0.0	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
130°	0.0	0.0	0.0	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
132.5°	0.0	0.0	0.0	0.0	1.2	1.2	1.2	1.2	1.2	1.2	1.2
135°	0.0	0.0	0.0	0.0	1.2	1.2	1.2	1.2	1.2	1.2	1.2
137.5°	0.0	0.0	0.0	0.0	1.2	1.2	1.2	1.2	1.2	1.2	1.2
140°	0.0	0.0	0.0	0.0	1.2	1.2	1.2	1.2	1.2	1.2	1.2
142.5°	0.0	0.0	0.0	0.0	0.0	1.2	1.2	1.2	1.2	1.2	1.2
145°	1.2	1.2	0.0	0.0	0.0	1.2	1.2	1.2	1.2	1.2	1.2
147.5°	1.2	1.2	0.0	0.0	0.0	1.2	1.2	1.2	1.2	1.2	1.2
150°	1.2	0.0	0.0	0.0	0.0	1.2	1.2	1.2	1.2	1.2	1.2
152.5°	0.0	0.0	0.0	0.0	0.0	1.2	1.2	1.2	1.2	1.2	1.2
155°	0.0	0.0	0.0	0.0	0.0	1.2	1.2	1.2	1.2	1.2	1.2
157.5°	0.0	0.0	0.0	0.0	0.0	1.2	1.2	1.2	1.2	1.2	1.2
160°	0.0	0.0	0.0	0.0	0.0	1.2	1.2	1.2	1.2	1.2	1.2
162.5°	0.0	0.0	0.0	0.0	0.0	1.2	1.2	1.2	1.2	1.2	1.2
165°	0.0	0.0	0.0	0.0	0.0	1.2	1.2	1.2	1.2	1.2	1.2
167.5°	0.0	0.0	0.0	0.0	0.0	1.2	1.2	1.2	1.2	1.2	1.2
170°	0.0	0.0	0.0	0.0	0.0	1.2	1.2	1.2	1.2	1.2	1.2
172.5°	0.0	0.0	0.0	0.0	1.2	1.2	1.2	1.2	1.2	1.2	1.2
175°	0.0	0.0	0.0	0.0	1.2	1.2	1.2	1.2	1.2	1.2	1.2
177.5°	0.0	0.0	0.0	0.0	1.2	1.2	1.2	1.2	1.2	1.2	1.2
180°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2



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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1843.7	1843.7	1843.7	1843.7	1843.7	1843.7	1843.7	1843.7	1843.7	1843.7
2.5°	1841.3	1837.7	1840.1	1838.9	1840.1	1837.7	1837.7	1837.7	1838.9	1836.5
4°	1840.1	1837.7	1837.7	1837.7	1837.7	1835.3	1835.3	1835.3	1834.1	1835.3
5°	1837.7	1836.5	1835.3	1834.1	1835.3	1832.9	1831.8	1831.8	1831.8	1832.9
7.5°	1832.9	1829.4	1829.4	1825.8	1827.0	1825.8	1824.6	1825.8	1824.6	1824.6
10°	1824.6	1822.2	1821.0	1818.7	1818.7	1816.3	1815.1	1815.1	1815.1	1813.9
12.5°	1816.3	1813.9	1812.7	1810.3	1809.1	1806.8	1805.6	1806.8	1804.4	1804.4
15°	1806.8	1804.4	1803.2	1803.2	1800.8	1798.4	1797.2	1794.9	1794.9	1794.9
17.5°	1798.4	1796.0	1797.2	1794.9	1793.7	1791.3	1791.3	1786.5	1786.5	1785.3
20°	1790.1	1787.7	1787.7	1786.5	1786.5	1784.1	1780.6	1778.2	1777.0	1777.0
22.5°	1779.4	1775.8	1769.9	1761.5	1756.8	1753.2	1752.0	1748.4	1747.2	1744.9
25°	1762.7	1753.2	1740.1	1725.8	1711.5	1704.4	1702.0	1697.3	1697.3	1697.3
27.5°	1742.5	1724.6	1706.8	1685.4	1663.9	1649.7	1640.1	1635.4	1633.0	1633.0
30°	1716.3	1693.7	1668.7	1641.3	1617.5	1591.3	1574.7	1565.1	1560.4	1561.6
32.5°	1692.5	1663.9	1635.4	1600.9	1568.7	1537.8	1509.2	1494.9	1489.0	1486.6
35°	1668.7	1636.6	1602.0	1565.1	1523.5	1478.3	1440.2	1418.7	1406.8	1408.0
37.5°	1650.8	1612.8	1574.7	1529.4	1481.8	1427.1	1378.3	1343.8	1329.5	1331.9
40°	1631.8	1588.9	1547.3	1494.9	1439.0	1373.5	1310.4	1264.0	1247.4	1243.8
42.5°	1613.9	1564.0	1516.3	1460.4	1390.2	1316.4	1239.0	1184.3	1159.3	1155.7
45°	1591.3	1535.4	1484.2	1419.9	1342.6	1250.9	1160.5	1089.1	1062.9	1052.2
47.5°	1561.6	1499.7	1442.6	1368.8	1284.3	1180.7	1067.6	979.6	946.2	937.9
50°	1517.5	1446.1	1387.8	1304.5	1202.1	1087.9	961.7	853.4	809.4	803.4
52.5°	1459.2	1386.6	1321.1	1225.9	1101.0	966.5	823.6	711.8	660.6	657.0
55°	1389.0	1310.4	1239.0	1131.9	985.5	829.6	680.8	539.2	489.2	483.2
57.5°	1306.9	1225.9	1148.6	1016.5	847.4	673.7	501.1	365.4	317.8	305.9
60°	1216.4	1133.1	1046.2	885.5	661.8	477.3	303.5	194.0	158.3	146.4
62.5°	1128.3	1037.9	946.2	729.6	453.5	272.6	138.1	55.9	35.7	34.5
65°	1024.8	939.1	845.1	588.0	286.8	122.6	40.5	1.2	0.0	0.0
67.5°	904.6	832.0	748.7	526.1	253.5	107.1	34.5	1.2	0.0	0.0
70°	776.0	718.9	645.1	452.3	217.8	90.5	29.8	0.0	0.0	0.0
72.5°	640.3	591.5	536.8	376.1	180.9	75.0	23.8	0.0	0.0	0.0
75°	502.3	471.3	422.5	297.6	140.4	57.1	17.9	0.0	0.0	0.0
77.5°	372.5	347.5	311.8	219.0	105.9	41.7	13.1	0.0	0.0	0.0
80°	251.1	232.1	211.9	148.8	71.4	27.4	8.3	0.0	0.0	0.0
82.5°	146.4	132.1	119.0	84.5	39.3	15.5	3.6	0.0	0.0	0.0
85°	59.5	54.8	52.4	35.7	15.5	4.8	1.2	0.0	0.0	0.0
87.5°	7.1	6.0	6.0	3.6	1.2	0.0	0.0	0.0	0.0	0.0
90°	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
92.5°	1.2	1.2	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0
95°	1.2	1.2	1.2	1.2	1.2	1.2	0.0	0.0	0.0	0.0
97.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	0.0
100°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
102.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
105°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
107.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2



REPORT NUMBER: P821381
 CATALOG NUMBER: TT-D4-750-24VDC-CQ-HSS

CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
110°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
112.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
115°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
117.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
120°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
122.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
125°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
127.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
130°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
132.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
135°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
137.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	0.0	0.0
140°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	0.0	0.0
142.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	0.0	0.0	0.0
145°	1.2	1.2	1.2	1.2	1.2	1.2	0.0	0.0	0.0	0.0
147.5°	1.2	1.2	1.2	1.2	1.2	1.2	0.0	0.0	0.0	1.2
150°	1.2	1.2	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0
152.5°	1.2	1.2	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0
155°	1.2	1.2	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0
157.5°	1.2	1.2	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0
160°	1.2	1.2	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0
162.5°	1.2	1.2	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0
165°	1.2	1.2	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0
167.5°	1.2	1.2	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0
170°	1.2	1.2	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0
172.5°	1.2	1.2	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0
175°	1.2	1.2	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0
177.5°	1.2	1.2	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0
180°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2

(END OF REPORT)