

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: P821327

Luminaire Tested: **TT-D5-740-24VDC-MQ-HSS**

Issue Date: 12/2/2020



Test Information

Test Method: LM-79-08
Report Number: P821327
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2010-017-1)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: TT-D5-740-24VDC-MQ-HSS
Description: TOPTIER LED PARKING GARAGE LUMINAIRE
4000K, 70 CRI LEDS AND MEDIUM DISTRIBUTION WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

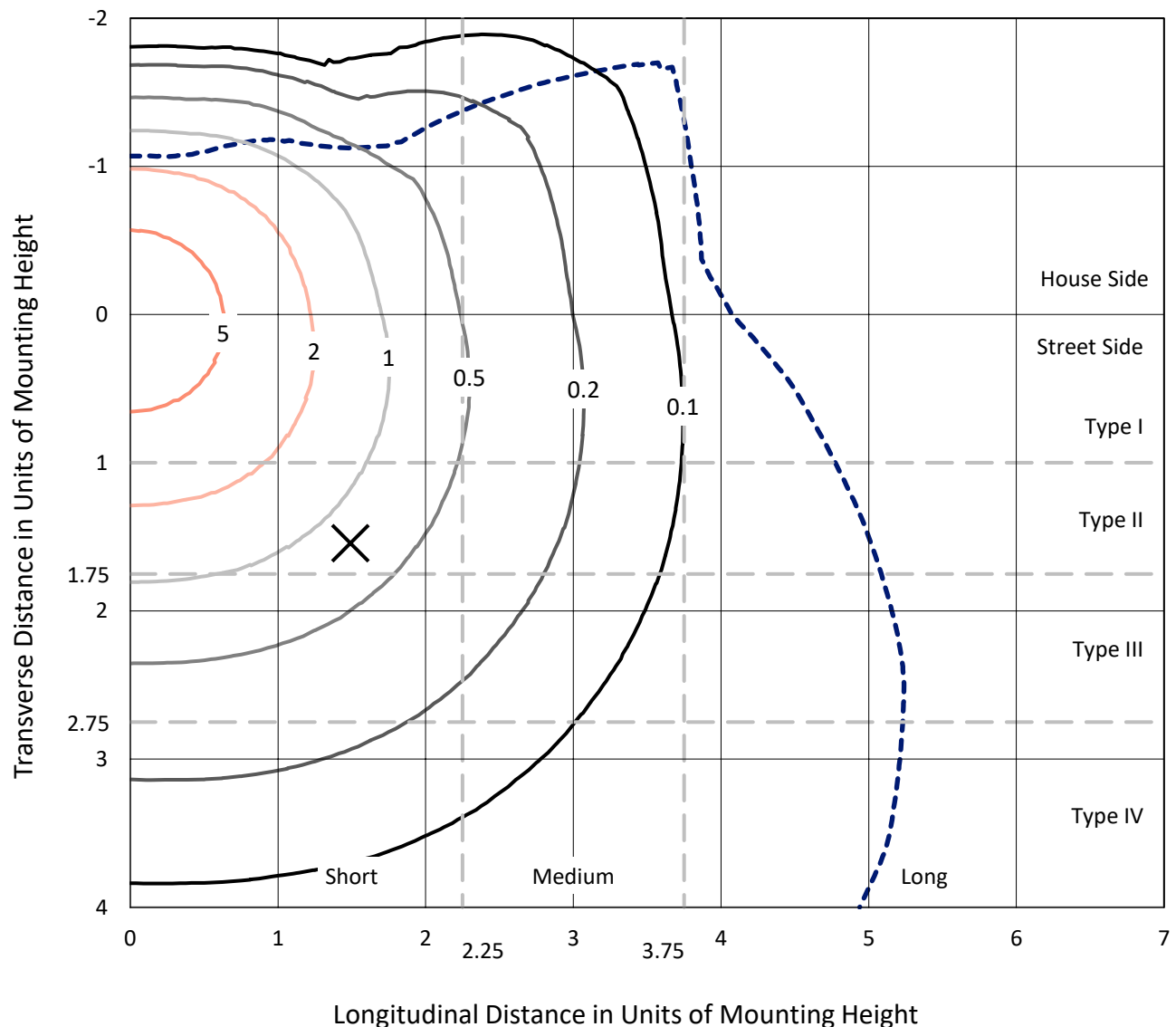
Lumens per Lamp: N/A
Luminaire Lumens: 8478 lumens
Efficiency: N/A
Efficacy: 116.1 lumens/watt
Luminous Opening: Circular (Dia: 1.12' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U2 - G3

Input Watts (W): 73
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: P821327
 CATALOG NUMBER: TT-D5-740-24VDC-MQ-HSS

Iso-Footcandle Lines of Horizontal Illumination

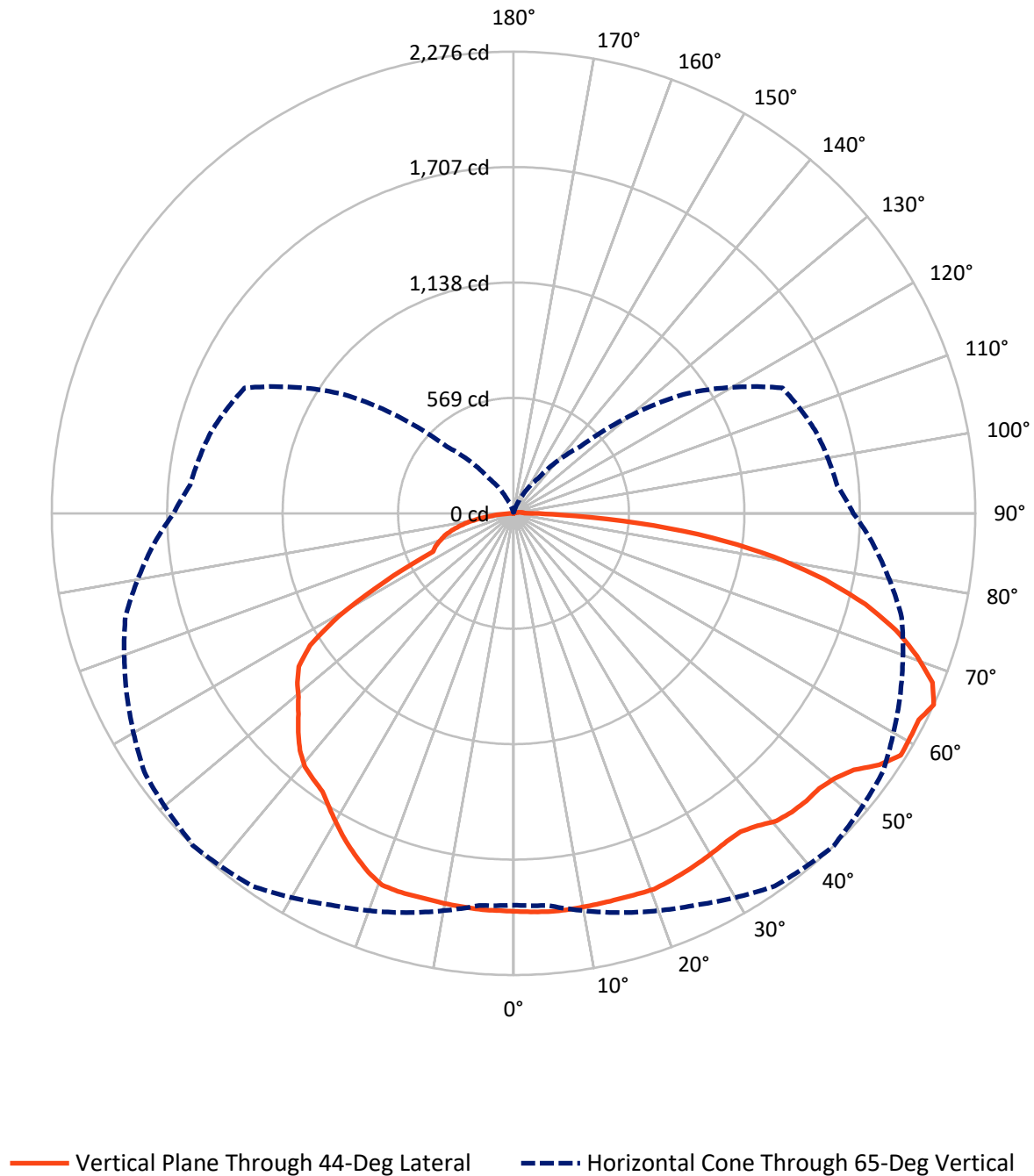
× Max cd
 --- 1/2 Max cd



Based on 15 foot mounting height. Maximum calculated value = 8.7 fc
 Type IV - Short - N/A

REPORT NUMBER: P821327
CATALOG NUMBER: TT-D5-740-24VDC-MQ-HSS

Luminous Intensity Polar Plot



REPORT NUMBER: P821327

CATALOG NUMBER: TT-D5-740-24VDC-MQ-HSS

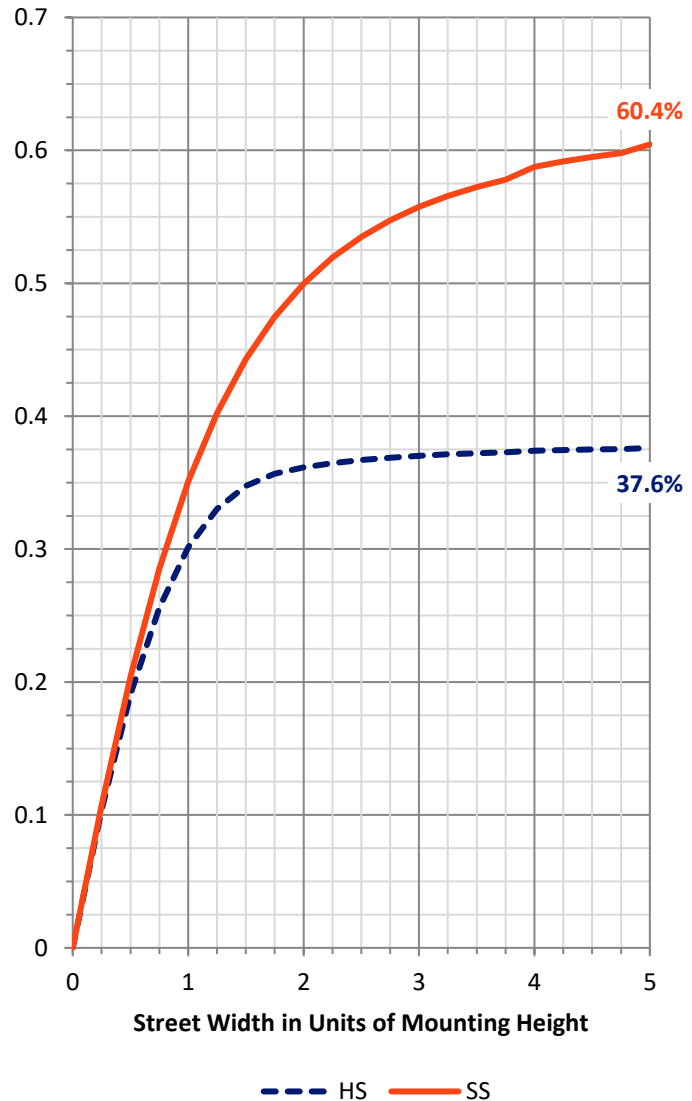
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3210.1	2.2	3212.4
	% Fixture	37.9	0.0	37.9
Street Side	Lumens	5236.9	28.8	5265.6
	% Fixture	61.8	0.3	62.1
Total	Lumens	8447.0	31.0	8478.0
	% Fixture	99.6	0.4	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	187.4	2.2
10°-20°	554.8	6.5
20°-30°	882.9	10.4
30°-40°	1131.2	13.3
40°-50°	1340.0	15.8
50°-60°	1467.6	17.3
60°-70°	1395.0	16.5
70°-80°	1110.7	13.1
80°-90°	377.3	4.5
90°-100°	19.9	0.2
100°-110°	6.5	0.1
110°-120°	1.4	0.0
120°-130°	0.9	0.0
130°-140°	0.7	0.0
140°-150°	0.6	0.0
150°-160°	0.5	0.0
160°-170°	0.3	0.0
170°-180°	0.1	0.0
0°-90°	8447.0	99.6
0°-180°	8478.0	100.0

Coefficient of Utilization



REPORT NUMBER: P821327

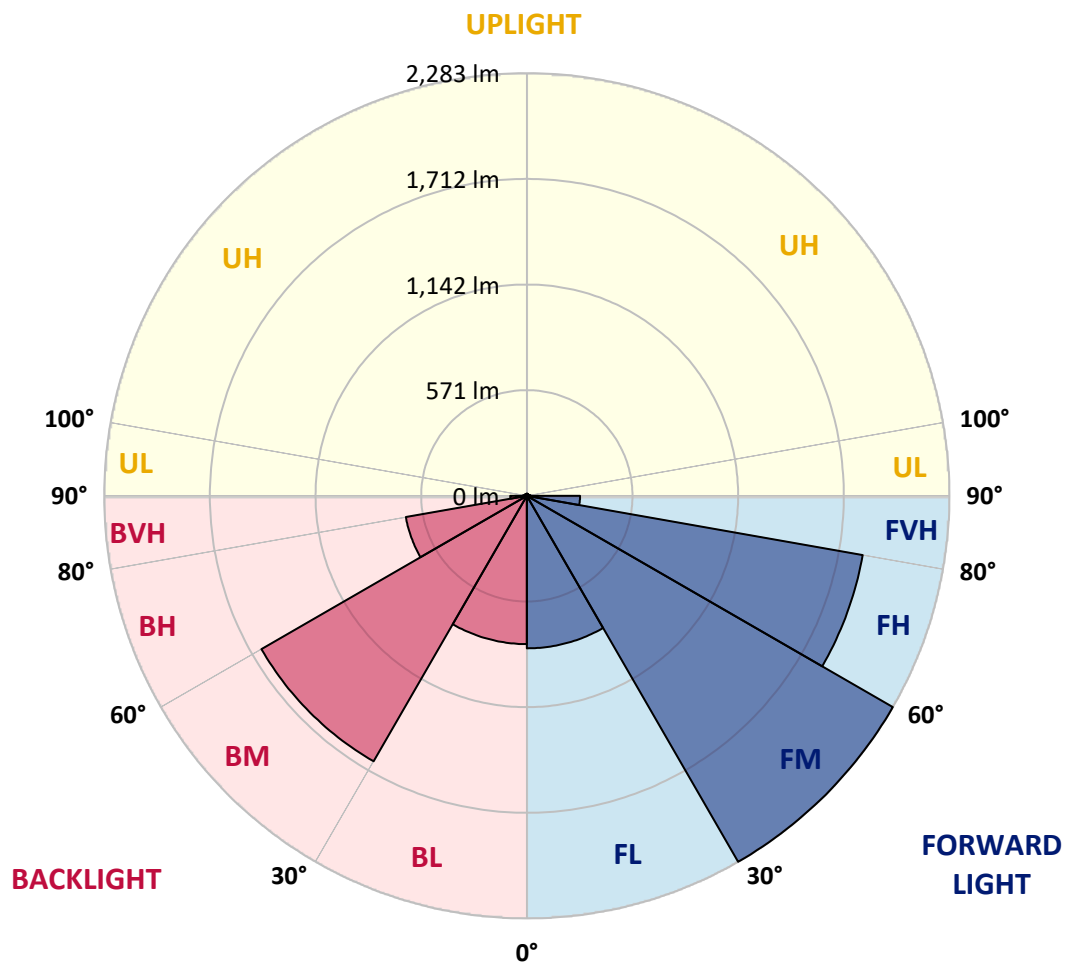
CATALOG NUMBER: TT-D5-740-24VDC-MQ-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	824.0	9.7			
FM	(30°-60°)	2283.0	26.9			
FH	(60°-80°)	1842.4	21.7			G2/5000
FVH	(80°-90°)	287.4	3.4			G3/500
BL	(0°-30°)	801.0	9.4	B2/1000		
BM	(30°-60°)	1655.8	19.5	B2/2500		
BH	(60°-80°)	663.4	7.8	B2/1000		G2/1000
BVH	(80°-90°)	89.9	1.1			G1/100
UL	(90°-100°)	19.9	0.2		U2/50	
UH	(100°-180°)	11.1	0.1		U2/50	

BUG Rating: B2-U2-G3

Type IV Short



REPORT NUMBER: P821327

CATALOG NUMBER: TT-D5-740-24VDC-MQ-HSS

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	1962.6	1962.6	1962.6	1962.6	1962.6	1962.6	1962.6	1962.6	1962.6	1962.6	1962.6
2.5°	1970.1	1968.6	1968.6	1968.6	1968.6	1967.1	1968.6	1965.6	1967.1	1962.6	1962.6
5°	1974.6	1971.6	1973.1	1973.1	1973.1	1971.6	1973.1	1968.6	1970.1	1964.1	1962.6
7.5°	1976.1	1974.6	1974.6	1974.6	1974.6	1971.6	1973.1	1970.1	1968.6	1964.1	1961.1
10°	1976.1	1974.6	1974.6	1974.6	1973.1	1970.1	1971.6	1967.1	1967.1	1961.1	1958.1
12.5°	1976.1	1974.6	1976.1	1973.1	1973.1	1970.1	1970.1	1965.6	1965.6	1958.1	1955.1
15°	1974.6	1973.1	1973.1	1974.6	1973.1	1970.1	1970.1	1965.6	1964.1	1955.1	1952.1
17.5°	1973.1	1971.6	1973.1	1974.6	1976.1	1973.1	1974.6	1967.1	1964.1	1955.1	1950.6
20°	1974.6	1973.1	1974.6	1977.6	1977.6	1977.6	1977.6	1970.1	1964.1	1955.1	1947.6
22.5°	1970.1	1970.1	1970.1	1970.1	1973.1	1968.6	1968.6	1964.1	1956.6	1949.1	1941.6
25°	1959.6	1959.6	1961.1	1962.6	1962.6	1959.6	1958.1	1953.6	1947.6	1938.6	1929.6
27.5°	1947.6	1947.6	1949.1	1949.1	1952.1	1949.1	1947.6	1941.6	1935.6	1925.1	1914.7
30°	1934.1	1934.1	1934.1	1937.1	1938.6	1938.6	1937.1	1929.6	1922.1	1910.2	1896.7
32.5°	1919.2	1919.2	1923.6	1926.6	1928.1	1928.1	1928.1	1919.2	1910.2	1895.2	1875.7
35°	1907.2	1907.2	1913.2	1923.6	1929.6	1926.6	1925.1	1919.2	1905.7	1889.2	1857.7
37.5°	1914.7	1914.7	1928.1	1943.1	1956.6	1953.6	1953.6	1943.1	1925.1	1898.2	1859.2
40°	1932.6	1934.1	1955.1	1974.6	1991.1	1994.1	1994.1	1982.1	1955.1	1920.6	1866.7
42.5°	1937.1	1940.1	1961.1	1989.6	2004.5	2012.0	2012.0	1995.6	1967.1	1926.6	1863.7
45°	1937.1	1938.6	1962.6	1992.6	2016.5	2022.5	2022.5	2004.5	1968.6	1929.6	1853.2
47.5°	1937.1	1935.6	1956.6	1998.6	2022.5	2027.0	2027.0	2007.5	1973.1	1923.6	1838.3
50°	1932.6	1940.1	1971.6	2004.5	2046.5	2052.5	2051.0	2030.0	1982.1	1931.1	1826.3
52.5°	1943.1	1941.6	1983.6	2049.5	2086.9	2100.4	2101.9	2075.0	2025.5	1952.1	1818.8
55°	1986.6	1988.1	2028.5	2104.9	2161.9	2187.3	2184.3	2149.9	2079.5	1994.1	1839.7
57.5°	2001.6	2016.5	2075.0	2140.9	2227.8	2250.2	2250.2	2208.3	2122.9	2027.0	1854.7
60°	1971.6	1977.6	2049.5	2161.9	2241.3	2245.8	2247.3	2217.3	2127.4	2009.0	1824.8
62.5°	1964.1	1976.1	2031.5	2157.4	2208.3	2241.3	2239.8	2199.3	2122.9	1995.6	1814.3
65°	1931.1	1940.1	2037.5	2130.4	2242.8	2275.7	2268.2	2221.8	2103.4	1980.6	1781.3
67.5°	1863.7	1872.7	1962.6	2092.9	2194.8	2226.3	2233.8	2179.8	2057.0	1910.2	1710.9
70°	1751.4	1764.8	1856.2	1983.6	2091.4	2109.4	2106.4	2073.5	1950.6	1793.3	1607.5
72.5°	1594.0	1615.0	1730.4	1851.7	1944.6	1971.6	1959.6	1922.1	1821.8	1652.5	1466.7
75°	1427.8	1447.2	1538.6	1675.0	1772.3	1790.3	1781.3	1736.4	1634.5	1468.2	1300.4
77.5°	1246.5	1263.0	1340.9	1480.2	1552.1	1567.1	1571.6	1511.7	1415.8	1266.0	1116.1
80°	1002.3	1009.8	1114.6	1206.0	1268.9	1298.9	1295.9	1251.0	1155.1	1030.7	880.9
82.5°	740.1	746.1	827.0	904.9	961.8	988.8	973.8	928.9	852.5	746.1	632.2
85°	453.9	443.5	509.4	567.8	602.3	620.2	605.3	579.8	512.4	428.5	349.1
87.5°	163.3	154.3	184.3	193.3	232.2	226.2	239.7	193.3	155.8	110.9	77.9
90°	71.9	71.9	70.4	67.4	61.4	55.4	53.9	44.9	33.0	21.0	7.5
92.5°	65.9	65.9	64.4	61.4	55.4	49.4	49.4	40.5	30.0	19.5	7.5
95°	55.4	55.4	53.9	50.9	46.4	41.9	41.9	33.0	25.5	16.5	6.0
97.5°	43.4	43.4	41.9	40.5	36.0	33.0	33.0	27.0	19.5	12.0	4.5
100°	33.0	33.0	31.5	30.0	28.5	25.5	24.0	19.5	15.0	9.0	3.0
102.5°	24.0	24.0	24.0	22.5	19.5	18.0	18.0	15.0	10.5	7.5	3.0
105°	16.5	16.5	16.5	15.0	13.5	12.0	12.0	10.5	7.5	4.5	1.5
107.5°	10.5	10.5	10.5	10.5	9.0	7.5	7.5	6.0	4.5	3.0	1.5
110°	6.0	4.5	6.0	6.0	6.0	4.5	4.5	3.0	3.0	1.5	1.5



REPORT NUMBER: P821327
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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
112.5°	3.0	3.0	3.0	3.0	3.0	3.0	3.0	1.5	1.5	1.5	1.5
115°	1.5	1.5	1.5	3.0	3.0	1.5	1.5	1.5	1.5	1.5	1.5
117.5°	0.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
120°	0.0	0.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
122.5°	0.0	0.0	0.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
125°	0.0	0.0	0.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
127.5°	0.0	0.0	0.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
130°	0.0	0.0	0.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
132.5°	0.0	0.0	0.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
135°	0.0	0.0	0.0	0.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5
137.5°	0.0	0.0	0.0	0.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5
140°	0.0	1.5	1.5	0.0	0.0	1.5	1.5	1.5	1.5	1.5	1.5
142.5°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
145°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
147.5°	1.5	1.5	0.0	0.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5
150°	1.5	1.5	1.5	0.0	0.0	1.5	1.5	1.5	1.5	1.5	1.5
152.5°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
155°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
157.5°	1.5	1.5	1.5	0.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5
160°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
162.5°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
165°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
167.5°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
170°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
172.5°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
175°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
177.5°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
180°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5



REPORT NUMBER: P821327

CATALOG NUMBER: TT-D5-740-24VDC-MQ-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1962.6	1962.6	1962.6	1962.6	1962.6	1962.6	1962.6	1962.6	1962.6	1962.6	1962.6
2.5°	1962.6	1961.1	1959.6	1961.1	1959.6	1959.6	1958.1	1958.1	1956.6	1956.6	1955.1
5°	1962.6	1961.1	1959.6	1961.1	1958.1	1959.6	1959.6	1958.1	1956.6	1955.1	1953.6
7.5°	1961.1	1961.1	1958.1	1959.6	1956.6	1956.6	1955.1	1955.1	1953.6	1953.6	1952.1
10°	1958.1	1956.6	1956.6	1956.6	1953.6	1953.6	1952.1	1950.6	1950.6	1949.1	1947.6
12.5°	1955.1	1953.6	1952.1	1952.1	1950.6	1949.1	1947.6	1947.6	1946.1	1944.6	1943.1
15°	1950.6	1949.1	1949.1	1949.1	1947.6	1947.6	1946.1	1944.6	1941.6	1940.1	1938.6
17.5°	1949.1	1947.6	1949.1	1949.1	1947.6	1949.1	1946.1	1943.1	1940.1	1938.6	1937.1
20°	1947.6	1947.6	1947.6	1946.1	1944.6	1943.1	1941.6	1940.1	1938.6	1937.1	1935.6
22.5°	1940.1	1938.6	1935.6	1926.6	1916.2	1908.7	1907.2	1910.2	1910.2	1910.2	1905.7
25°	1926.6	1922.1	1910.2	1893.7	1875.7	1863.7	1856.2	1856.2	1854.7	1851.7	1850.2
27.5°	1910.2	1901.2	1880.2	1859.2	1833.8	1818.8	1800.8	1790.3	1785.8	1784.3	1781.3
30°	1887.7	1874.2	1847.2	1820.3	1788.8	1767.8	1739.4	1721.4	1710.9	1706.4	1703.4
32.5°	1860.7	1847.2	1815.8	1782.8	1745.4	1715.4	1679.4	1651.0	1631.5	1622.5	1618.0
35°	1842.7	1823.3	1787.3	1748.4	1710.9	1667.5	1624.0	1585.1	1555.1	1544.6	1538.6
37.5°	1835.3	1817.3	1778.3	1739.4	1697.4	1645.0	1594.0	1538.6	1498.2	1480.2	1474.2
40°	1839.7	1817.3	1773.8	1731.9	1682.4	1624.0	1556.6	1487.7	1435.2	1409.8	1403.8
42.5°	1829.3	1803.8	1752.9	1707.9	1646.5	1580.6	1498.2	1418.8	1348.4	1327.4	1318.4
45°	1811.3	1779.8	1724.4	1667.5	1603.0	1522.1	1436.7	1334.9	1251.0	1225.5	1218.0
47.5°	1793.3	1749.9	1683.9	1631.5	1553.6	1459.2	1358.8	1245.0	1140.1	1114.6	1110.1
50°	1766.3	1725.9	1655.5	1594.0	1514.6	1405.3	1291.4	1149.1	1030.7	987.3	975.3
52.5°	1754.4	1701.9	1634.5	1586.6	1490.7	1366.3	1222.5	1069.7	898.9	845.0	833.0
55°	1766.3	1700.4	1628.5	1582.1	1471.2	1316.9	1140.1	945.3	747.6	690.7	674.2
57.5°	1745.4	1688.4	1616.5	1564.1	1420.3	1215.0	1020.3	770.1	564.8	491.4	485.4
60°	1718.4	1637.5	1570.1	1522.1	1313.9	1023.2	794.0	548.3	340.1	277.2	265.2
62.5°	1707.9	1624.0	1546.1	1487.7	1171.6	752.1	483.9	277.2	140.8	98.9	89.9
65°	1675.0	1600.0	1544.6	1462.2	1023.2	464.4	208.2	82.4	6.0	4.5	4.5
67.5°	1612.0	1535.6	1498.2	1450.2	1008.3	443.5	188.8	74.9	3.0	0.0	0.0
70°	1504.2	1444.2	1418.8	1393.3	964.8	410.5	172.3	67.4	1.5	0.0	0.0
72.5°	1361.8	1321.4	1316.9	1313.9	901.9	379.0	154.3	59.9	1.5	0.0	0.0
75°	1219.5	1170.1	1177.6	1195.5	824.0	335.6	133.3	52.4	1.5	0.0	0.0
77.5°	1039.7	1003.8	1021.7	1051.7	722.1	284.7	109.4	41.9	1.5	0.0	0.0
80°	818.0	794.0	834.5	861.4	590.3	226.2	82.4	30.0	0.0	0.0	0.0
82.5°	581.3	567.8	605.3	639.7	439.0	160.3	56.9	19.5	0.0	0.0	0.0
85°	313.1	305.6	341.6	379.0	263.7	91.4	28.5	9.0	0.0	0.0	0.0
87.5°	77.9	71.9	73.4	88.4	64.4	19.5	4.5	1.5	0.0	0.0	0.0
90°	1.5	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
92.5°	1.5	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95°	1.5	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
97.5°	1.5	1.5	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0
100°	1.5	1.5	1.5	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0
102.5°	1.5	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
105°	1.5	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
107.5°	1.5	1.5	1.5	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0
110°	1.5	1.5	1.5	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P821327
 CATALOG NUMBER: TT-D5-740-24VDC-MQ-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
112.5°	1.5	1.5	1.5	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0
115°	1.5	1.5	1.5	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0
117.5°	1.5	1.5	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0
120°	1.5	1.5	1.5	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0
122.5°	1.5	1.5	1.5	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0
125°	1.5	1.5	1.5	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0
127.5°	1.5	1.5	1.5	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0
130°	1.5	1.5	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	1.5	1.5	1.5	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0
135°	1.5	1.5	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	1.5	1.5	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0
140°	1.5	1.5	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	1.5	1.5	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0
145°	1.5	1.5	1.5	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0
147.5°	1.5	1.5	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0
150°	1.5	1.5	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0
152.5°	1.5	1.5	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0
155°	1.5	1.5	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	1.5	1.5	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0
160°	1.5	1.5	1.5	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0
162.5°	1.5	1.5	1.5	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0
165°	1.5	1.5	1.5	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0
167.5°	1.5	1.5	1.5	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0
170°	1.5	1.5	1.5	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0
172.5°	1.5	1.5	1.5	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0
175°	1.5	1.5	1.5	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0
177.5°	1.5	1.5	1.5	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0
180°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5

(END OF REPORT)