

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: P821511

Luminaire Tested: **TT-D5-735-12VDC-WQ-HSS**

Issue Date: 12/2/2020



Test Information

Test Method: LM-79-08
Report Number: P821511
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2010-017-2)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: TT-D5-735-12VDC-WQ-HSS
Description: TOPTIER LED PARKING GARAGE LUMINAIRE
3500K, 70 CRI LEDS AND WIDE DISTRIBUTION WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

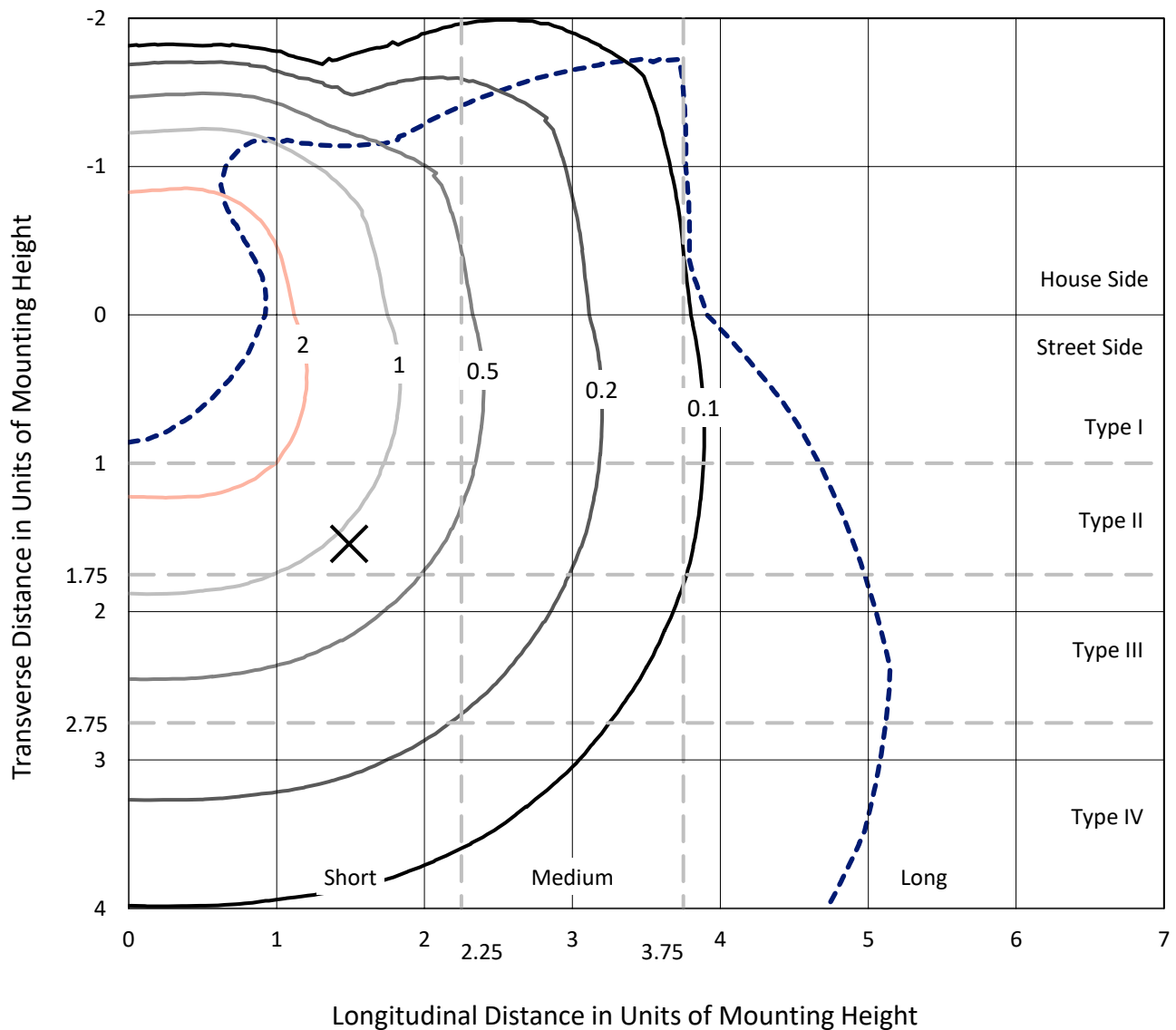
Lumens per Lamp: N/A
Luminaire Lumens: 7253 lumens
Efficiency: N/A
Efficacy: 99.4 lumens/watt
Luminous Opening: Circular (Dia: 1.12' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U2 - G3

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

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Iso-Footcandle Lines of Horizontal Illumination

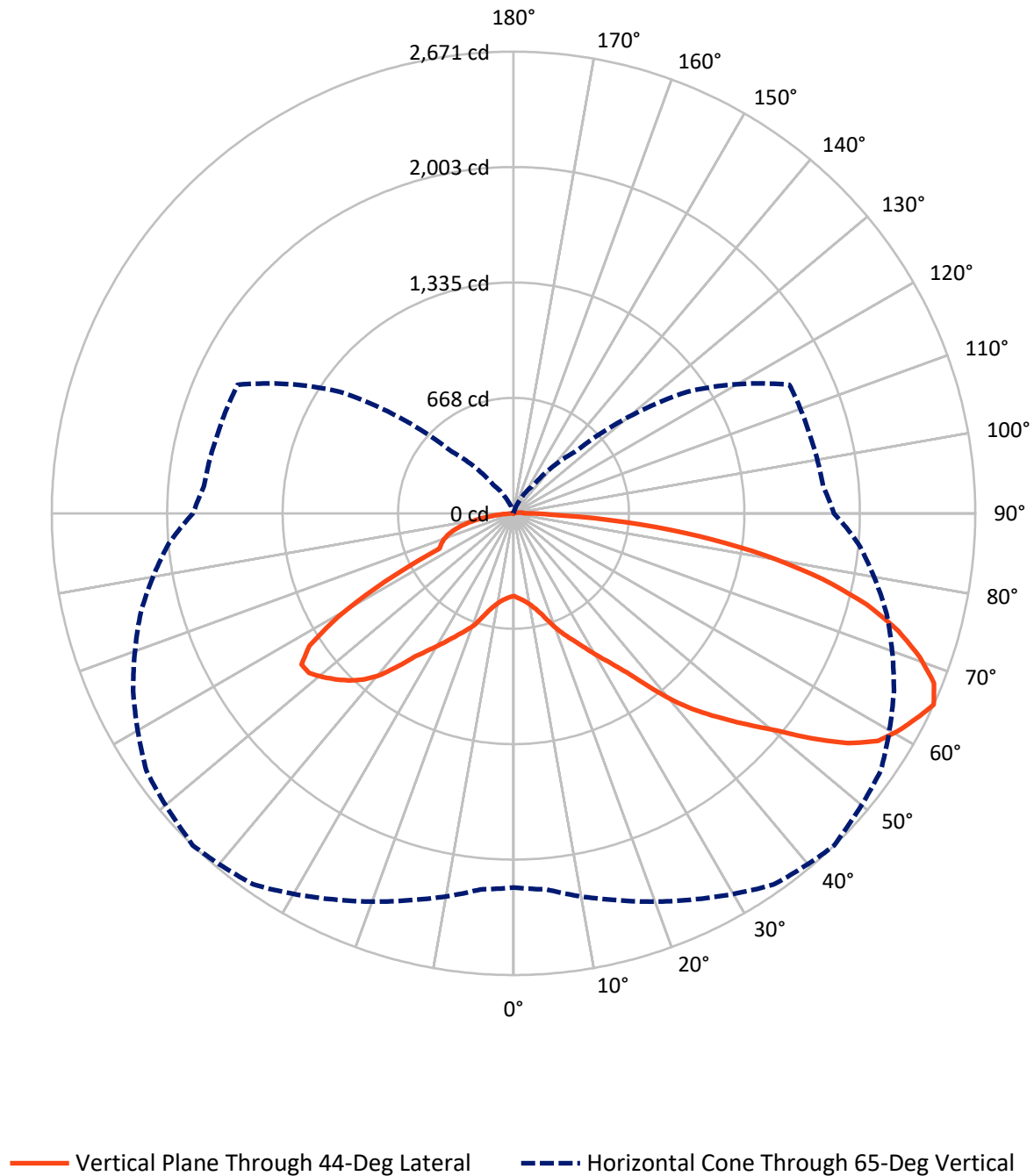
✕ Max cd
 - - - 1/2 Max cd



Based on 15 foot mounting height. Maximum calculated value = 2.8 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



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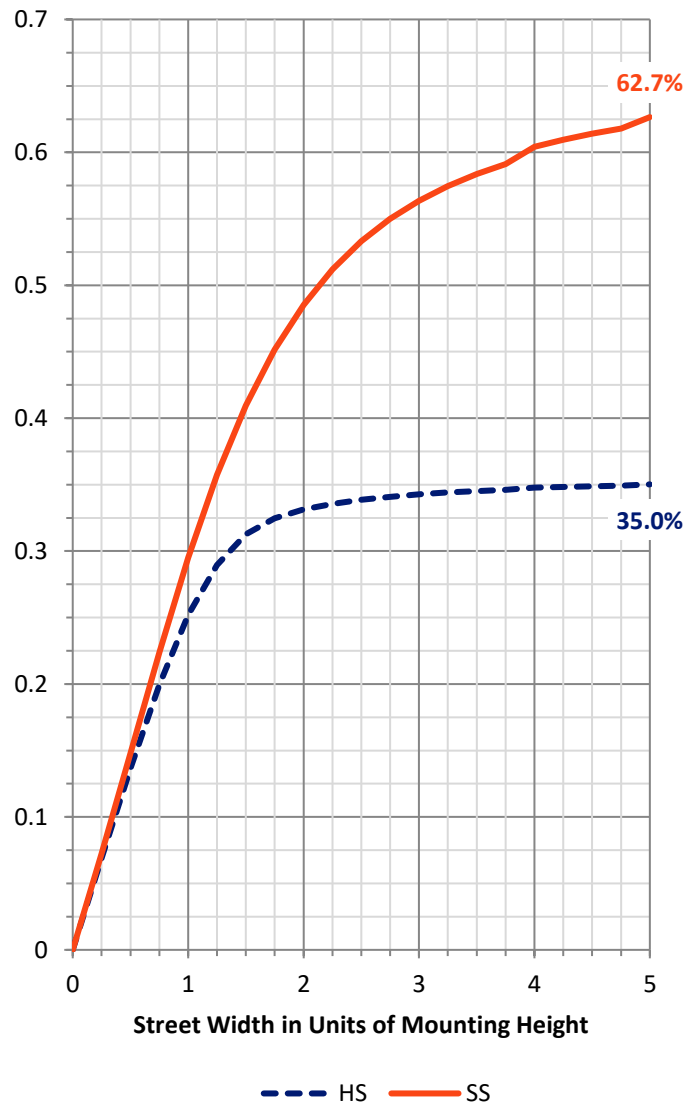
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2554.7	1.7	2556.3
	% Fixture	35.2	0.0	35.2
Street Side	Lumens	4667.3	29.3	4696.6
	% Fixture	64.4	0.4	64.8
Total	Lumens	7222.0	31.0	7253.0
	% Fixture	99.6	0.4	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	48.5	0.7
10°-20°	172.3	2.4
20°-30°	369.2	5.1
30°-40°	668.6	9.2
40°-50°	1115.6	15.4
50°-60°	1545.3	21.3
60°-70°	1601.4	22.1
70°-80°	1288.8	17.8
80°-90°	412.2	5.7
90°-100°	20.9	0.3
100°-110°	6.7	0.1
110°-120°	1.3	0.0
120°-130°	0.8	0.0
130°-140°	0.5	0.0
140°-150°	0.4	0.0
150°-160°	0.2	0.0
160°-170°	0.2	0.0
170°-180°	0.1	0.0
0°-90°	7222.0	99.6
0°-180°	7253.0	100.0

Coefficient of Utilization



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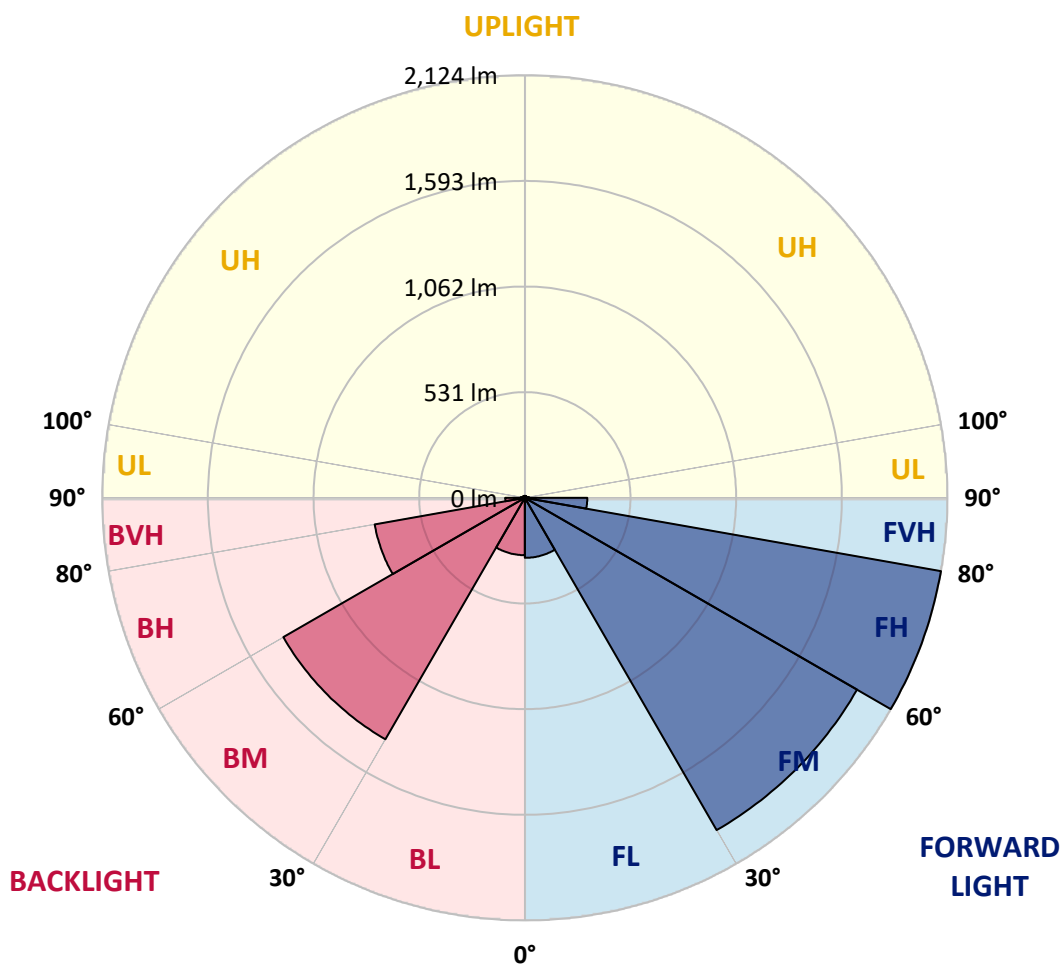
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	301.6	4.2			
FM	(30°-60°)	1928.2	26.6			
FH	(60°-80°)	2123.8	29.3			G2/5000
FVH	(80°-90°)	313.7	4.3			G3/500
BL	(0°-30°)	288.4	4.0	B1/500		
BM	(30°-60°)	1401.3	19.3	B2/2500		
BH	(60°-80°)	766.4	10.6	B2/1000		G2/1000
BVH	(80°-90°)	98.6	1.4			G1/100
UL	(90°-100°)	20.9	0.3		U2/50	
UH	(100°-180°)	10.1	0.1		U2/50	

BUG Rating: B2-U2-G3

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	478.6	478.6	478.6	478.6	478.6	478.6	478.6	478.6	478.6	478.6	478.6
2.5°	492.8	491.3	491.3	489.9	489.9	489.9	489.9	489.9	488.5	487.1	485.7
5°	505.5	505.5	504.1	504.1	502.7	501.3	502.7	501.3	499.8	498.4	497.0
7.5°	522.5	521.1	521.1	518.2	518.2	516.8	516.8	516.8	515.4	512.6	511.2
10°	546.6	543.7	543.7	540.9	539.5	538.1	538.1	535.2	535.2	533.8	532.4
12.5°	573.5	570.6	573.5	572.1	569.2	566.4	566.4	563.6	562.1	560.7	555.1
15°	608.9	604.6	607.5	607.5	606.0	604.6	604.6	599.0	596.1	593.3	587.6
17.5°	651.3	648.5	649.9	651.3	655.6	655.6	657.0	649.9	644.3	634.4	630.1
20°	705.2	703.7	708.0	708.0	712.2	712.2	713.7	706.6	696.7	689.6	681.1
22.5°	757.5	757.5	763.2	763.2	767.5	764.6	764.6	761.8	750.5	742.0	733.5
25°	811.4	809.9	815.6	819.9	825.5	818.4	821.3	817.0	805.7	794.4	783.0
27.5°	870.8	868.0	870.8	876.5	886.4	880.7	883.6	876.5	865.2	849.6	839.7
30°	936.0	931.7	936.0	944.5	951.5	954.4	953.0	943.0	933.1	910.5	903.4
32.5°	999.7	999.7	1009.6	1025.2	1033.7	1032.2	1033.7	1025.2	1011.0	982.7	965.7
35°	1077.6	1083.2	1096.0	1118.6	1137.0	1129.9	1129.9	1127.1	1103.0	1069.1	1046.4
37.5°	1180.9	1186.6	1212.1	1239.0	1273.0	1270.1	1271.5	1263.1	1216.3	1180.9	1148.4
40°	1301.3	1306.9	1345.2	1383.4	1416.0	1425.9	1427.3	1408.9	1357.9	1306.9	1256.0
42.5°	1411.7	1418.8	1458.5	1512.3	1547.7	1563.2	1566.1	1536.3	1482.5	1424.5	1360.8
45°	1522.2	1530.7	1576.0	1632.6	1683.6	1690.7	1692.1	1666.6	1607.1	1540.6	1458.5
47.5°	1635.5	1642.5	1689.3	1757.2	1812.4	1826.6	1828.0	1804.0	1731.7	1651.0	1554.7
50°	1738.8	1753.0	1816.7	1888.9	1962.5	1973.9	1975.3	1948.4	1863.4	1772.8	1645.4
52.5°	1860.6	1867.7	1935.6	2056.0	2118.3	2162.2	2163.6	2111.2	2020.6	1898.8	1734.6
55°	2002.2	2014.9	2084.3	2204.7	2316.5	2346.3	2354.8	2292.5	2172.1	2040.4	1847.8
57.5°	2084.3	2108.4	2210.3	2325.0	2465.2	2485.0	2489.3	2424.2	2291.0	2146.6	1932.8
60°	2128.2	2142.4	2250.0	2428.4	2537.4	2555.8	2554.4	2504.9	2371.8	2196.2	1972.5
62.5°	2177.8	2201.8	2292.5	2473.7	2568.6	2613.9	2606.8	2555.8	2419.9	2227.3	2010.7
65°	2163.6	2183.4	2316.5	2463.8	2621.0	2670.5	2660.6	2592.7	2427.0	2233.0	2000.8
67.5°	2107.0	2122.5	2254.2	2436.9	2587.0	2622.4	2639.4	2572.8	2387.3	2172.1	1938.5
70°	1990.9	2014.9	2142.4	2329.3	2466.6	2492.1	2494.9	2453.9	2286.8	2060.2	1835.1
72.5°	1830.9	1850.7	1989.4	2179.2	2298.1	2327.9	2330.7	2268.4	2142.4	1907.3	1686.4
75°	1639.7	1658.1	1765.7	1964.0	2081.5	2111.2	2108.4	2050.3	1917.2	1694.9	1489.6
77.5°	1403.2	1437.2	1532.1	1694.9	1809.6	1825.2	1828.0	1764.3	1656.7	1464.1	1264.5
80°	1107.3	1139.9	1247.5	1369.2	1465.5	1478.3	1482.5	1428.7	1331.0	1161.1	991.2
82.5°	787.3	815.6	900.6	999.7	1080.4	1080.4	1083.2	1039.3	964.3	818.4	685.3
85°	448.9	470.1	526.7	597.5	655.6	648.5	649.9	610.3	560.7	447.4	362.5
87.5°	147.3	157.2	169.9	196.8	223.7	206.7	215.2	178.4	161.4	120.4	93.5
90°	77.9	77.9	75.0	72.2	66.6	58.1	58.1	46.7	35.4	22.7	8.5
92.5°	70.8	70.8	68.0	65.1	59.5	52.4	52.4	42.5	31.2	19.8	7.1
95°	58.1	58.1	56.6	53.8	49.6	43.9	42.5	35.4	26.9	15.6	5.7
97.5°	45.3	45.3	43.9	42.5	38.2	34.0	34.0	26.9	19.8	12.7	4.2
100°	34.0	34.0	34.0	31.2	29.7	25.5	25.5	21.2	15.6	9.9	2.8
102.5°	24.1	25.5	24.1	22.7	21.2	18.4	18.4	15.6	11.3	7.1	2.8
105°	17.0	17.0	15.6	15.6	14.2	12.7	12.7	9.9	7.1	4.2	1.4
107.5°	9.9	9.9	9.9	9.9	8.5	8.5	8.5	7.1	4.2	2.8	1.4
110°	5.7	5.7	5.7	5.7	4.2	4.2	4.2	2.8	2.8	1.4	1.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
112.5°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	1.4	1.4	1.4	1.4
115°	1.4	1.4	1.4	2.8	1.4	1.4	1.4	1.4	1.4	1.4	1.4
117.5°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
120°	0.0	0.0	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
122.5°	0.0	0.0	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
125°	0.0	0.0	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
127.5°	0.0	0.0	0.0	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
130°	0.0	0.0	0.0	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
132.5°	0.0	0.0	0.0	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
135°	0.0	0.0	0.0	0.0	1.4	1.4	1.4	1.4	1.4	1.4	1.4
137.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.4	1.4	1.4	1.4	1.4
140°	1.4	1.4	0.0	0.0	0.0	0.0	1.4	1.4	1.4	1.4	1.4
142.5°	1.4	1.4	1.4	0.0	0.0	1.4	1.4	1.4	1.4	1.4	1.4
145°	1.4	1.4	0.0	0.0	0.0	0.0	0.0	1.4	1.4	1.4	1.4
147.5°	1.4	1.4	1.4	0.0	0.0	1.4	1.4	1.4	1.4	1.4	1.4
150°	1.4	1.4	0.0	0.0	0.0	0.0	1.4	1.4	1.4	1.4	1.4
152.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	1.4	1.4	1.4
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	1.4	1.4
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	1.4	1.4	1.4
160°	1.4	0.0	0.0	0.0	0.0	0.0	0.0	1.4	1.4	1.4	1.4
162.5°	1.4	1.4	0.0	0.0	0.0	0.0	0.0	1.4	1.4	1.4	1.4
165°	1.4	0.0	0.0	0.0	0.0	0.0	1.4	1.4	1.4	1.4	1.4
167.5°	1.4	1.4	0.0	0.0	0.0	0.0	1.4	1.4	1.4	1.4	1.4
170°	1.4	0.0	0.0	0.0	0.0	1.4	0.0	1.4	1.4	1.4	1.4
172.5°	1.4	1.4	0.0	0.0	0.0	0.0	1.4	1.4	1.4	1.4	1.4
175°	1.4	1.4	1.4	0.0	0.0	0.0	1.4	1.4	1.4	1.4	1.4
177.5°	0.0	1.4	0.0	0.0	0.0	0.0	0.0	1.4	1.4	1.4	1.4
180°	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°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	478.6	478.6	478.6	478.6	478.6	478.6	478.6	478.6	478.6	478.6	478.6
2.5°	485.7	485.7	484.3	482.8	482.8	482.8	481.4	481.4	481.4	480.0	480.0
5°	497.0	495.6	495.6	494.2	494.2	492.8	492.8	491.3	489.9	489.9	488.5
7.5°	512.6	511.2	508.3	509.8	506.9	505.5	504.1	504.1	504.1	502.7	502.7
10°	531.0	531.0	528.2	528.2	525.3	523.9	522.5	522.5	523.9	523.9	522.5
12.5°	555.1	553.6	553.6	552.2	550.8	549.4	550.8	550.8	549.4	548.0	546.6
15°	584.8	584.8	584.8	586.2	584.8	584.8	584.8	583.4	580.6	577.7	577.7
17.5°	630.1	628.7	625.9	627.3	630.1	634.4	630.1	625.9	621.6	621.6	620.2
20°	676.8	678.3	678.3	679.7	683.9	688.2	682.5	679.7	676.8	674.0	671.2
22.5°	727.8	729.2	729.2	727.8	730.6	729.2	726.4	723.6	720.7	716.5	713.7
25°	777.4	778.8	777.4	776.0	777.4	773.1	768.9	764.6	757.5	750.5	750.5
27.5°	832.6	831.2	825.5	826.9	824.1	821.3	812.8	802.9	792.9	785.9	785.9
30°	890.6	890.6	879.3	885.0	879.3	877.9	859.5	846.8	832.6	822.7	821.3
32.5°	954.4	951.5	943.0	948.7	943.0	937.4	914.7	897.7	873.7	859.5	858.1
35°	1030.8	1023.8	1016.7	1022.3	1022.3	1006.8	984.1	953.0	919.0	902.0	900.6
37.5°	1124.3	1120.0	1111.5	1118.6	1124.3	1108.7	1074.7	1029.4	981.3	955.8	954.4
40°	1227.7	1222.0	1217.7	1227.7	1231.9	1216.3	1171.0	1107.3	1042.2	1005.3	999.7
42.5°	1325.4	1312.6	1305.5	1319.7	1315.4	1298.5	1236.1	1162.5	1073.3	1030.8	1023.8
45°	1413.1	1399.0	1389.1	1401.8	1396.2	1362.2	1292.8	1193.7	1086.1	1033.7	1025.2
47.5°	1499.5	1478.3	1462.7	1479.7	1468.4	1416.0	1331.0	1209.2	1071.9	1009.6	995.4
50°	1573.1	1547.7	1537.8	1557.6	1540.6	1467.0	1357.9	1202.2	1036.5	945.9	923.2
52.5°	1660.9	1622.7	1612.8	1651.0	1612.8	1515.1	1363.6	1185.2	955.8	846.8	825.5
55°	1750.1	1707.7	1692.1	1727.5	1669.4	1525.0	1335.3	1087.5	834.0	717.9	686.7
57.5°	1796.9	1757.2	1743.1	1768.6	1660.9	1428.7	1209.2	906.2	651.3	521.1	487.1
60°	1839.4	1770.0	1751.6	1785.5	1573.1	1205.0	936.0	649.9	393.6	295.9	270.5
62.5°	1869.1	1802.5	1764.3	1779.9	1411.7	876.5	538.1	312.9	148.7	103.4	102.0
65°	1853.5	1796.9	1771.4	1760.1	1226.2	504.1	198.2	79.3	4.2	4.2	2.8
67.5°	1805.4	1743.1	1736.0	1745.9	1213.5	484.3	184.1	72.2	0.0	0.0	0.0
70°	1699.2	1655.3	1655.3	1689.3	1158.3	458.8	171.3	66.6	0.0	0.0	0.0
72.5°	1556.2	1522.2	1542.0	1593.0	1076.1	423.4	154.3	59.5	0.0	0.0	0.0
75°	1384.8	1349.4	1374.9	1431.6	974.2	378.1	134.5	51.0	0.0	0.0	0.0
77.5°	1166.8	1142.7	1182.3	1234.7	838.3	318.6	110.4	41.1	0.0	0.0	0.0
80°	909.1	896.3	948.7	995.4	676.8	250.6	83.5	29.7	0.0	0.0	0.0
82.5°	627.3	621.6	672.6	720.7	484.3	175.6	56.6	19.8	0.0	0.0	0.0
85°	328.5	328.5	368.2	412.0	270.5	94.9	28.3	8.5	0.0	0.0	0.0
87.5°	72.2	69.4	75.0	96.3	53.8	18.4	4.2	1.4	0.0	0.0	0.0
90°	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
92.5°	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95°	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
97.5°	1.4	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0
100°	1.4	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0
102.5°	1.4	1.4	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0
105°	1.4	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0
107.5°	1.4	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0
110°	1.4	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0



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CATALOG NUMBER: TT-D5-735-12VDC-WQ-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
112.5°	1.4	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0
115°	1.4	1.4	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0
117.5°	1.4	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0
120°	1.4	1.4	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0
122.5°	1.4	1.4	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0
125°	1.4	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0
127.5°	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130°	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135°	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140°	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5°	1.4	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150°	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152.5°	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)