

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: P821224

Luminaire Tested: **TT-D3-735-24VDC-MQ-HSS**

Issue Date: 12/2/2020

Test Information

Test Method: LM-79-08
Report Number: P821224
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-D3-735-24VDC-MQ-HSS
Description: TOPTIER LED PARKING GARAGE LUMINAIRE
3500K, 70 CRI LEDS AND MEDIUM DISTRIBUTION WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

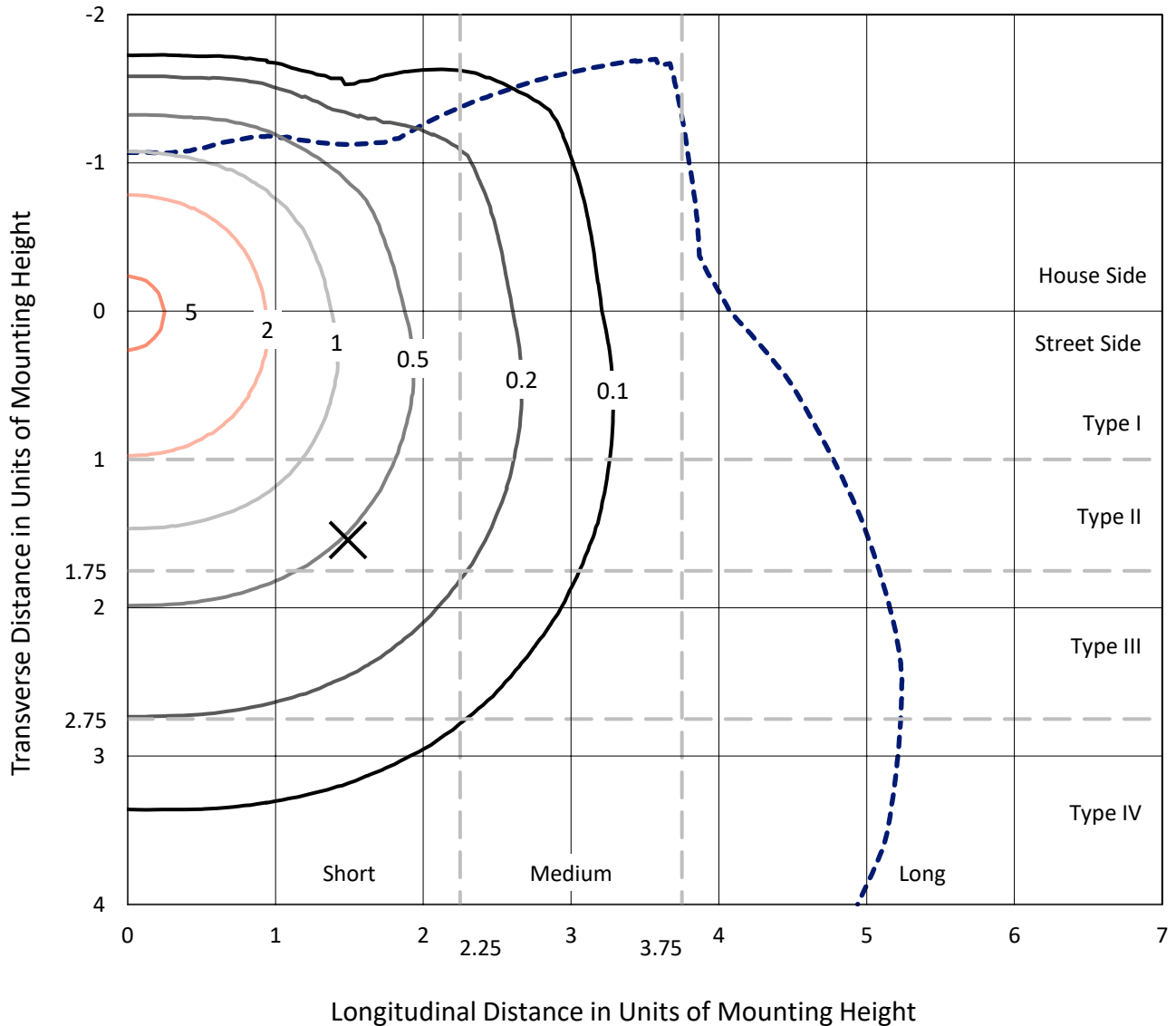
Lumens per Lamp: N/A
Luminaire Lumens: 5348.9 lumens
Efficiency: N/A
Efficacy: 116.3 lumens/watt
Luminous Opening: Circular (Dia: 1.12' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U2 - G2

Input Watts (W): 46
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

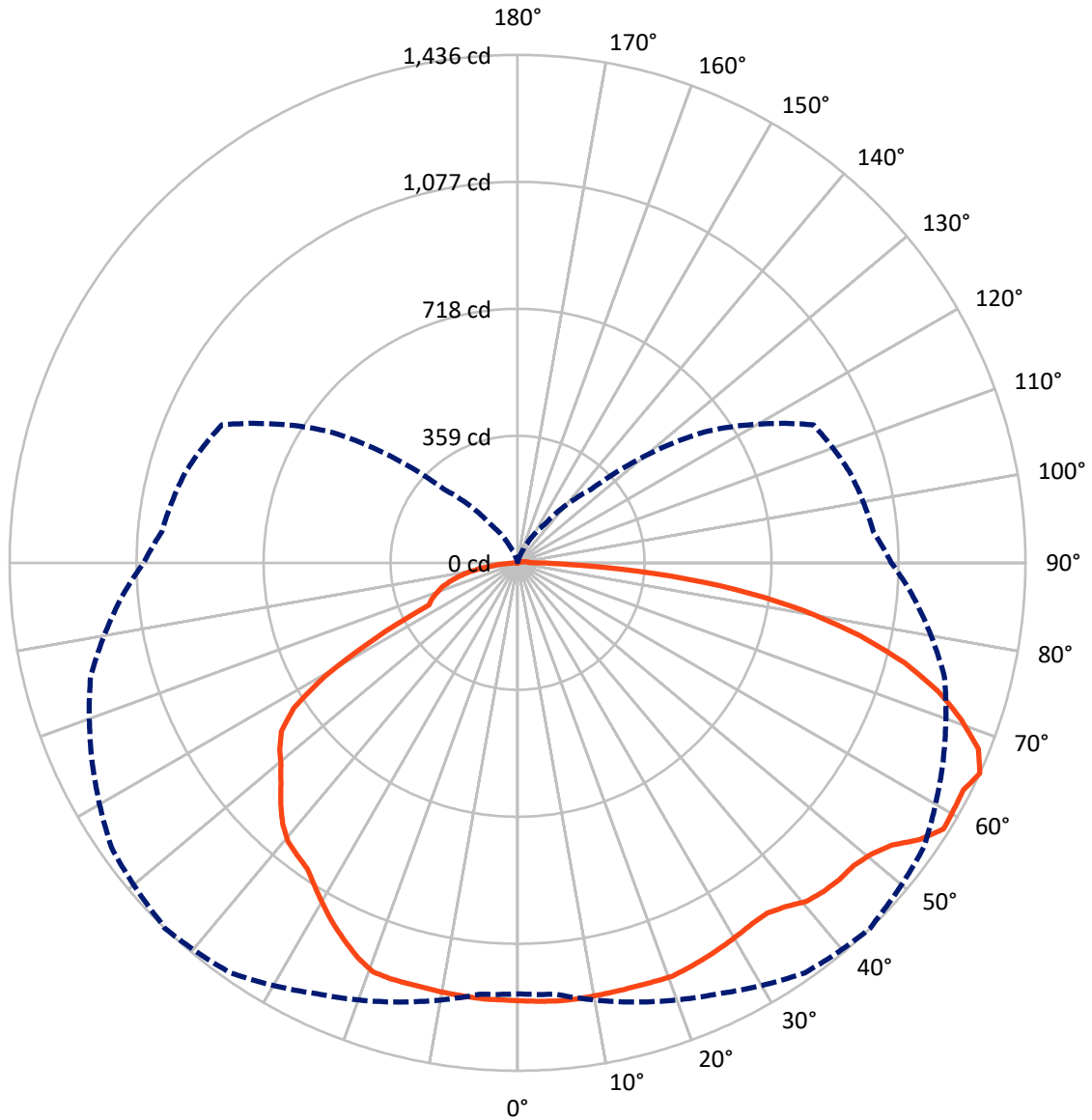
× Max cd
 - - - 1/2 Max cd



Based on 15 foot mounting height. Maximum calculated value = 5.5 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 44-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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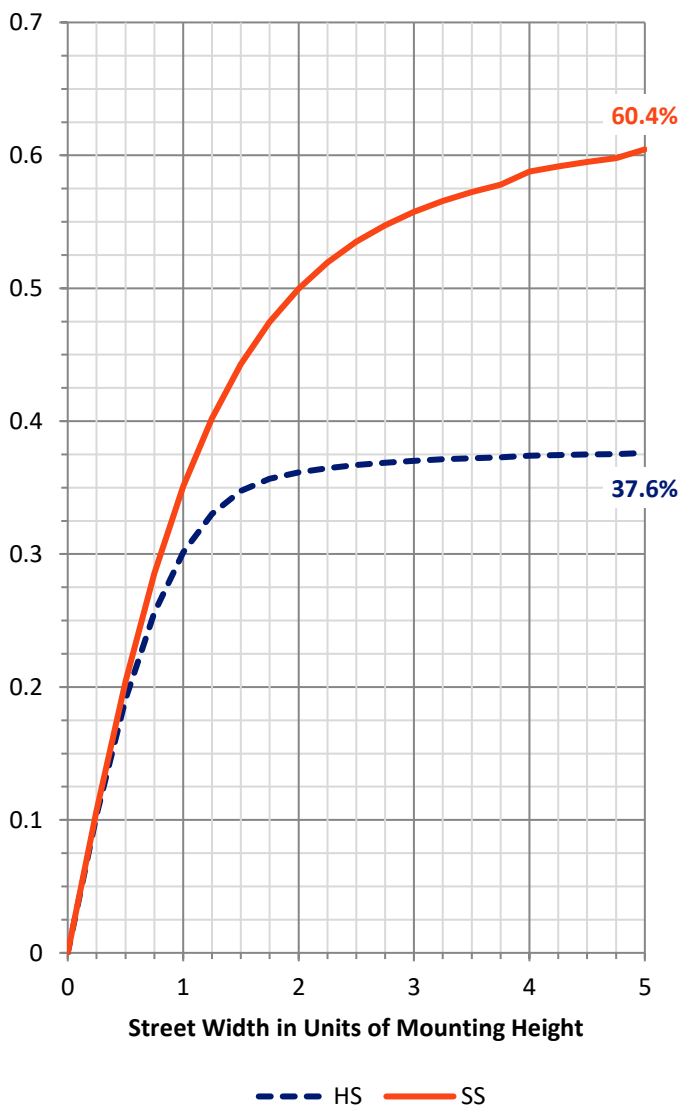
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2025.4	1.3	2026.7
	% Fixture	37.9	0.0	37.9
Street Side	Lumens	3304.1	18.1	3322.1
	% Fixture	61.8	0.3	62.1
Total	Lumens	5329.4	19.4	5348.9
	% Fixture	99.6	0.4	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	118.2	2.2
10°-20°	350.0	6.5
20°-30°	557.0	10.4
30°-40°	713.7	13.3
40°-50°	845.5	15.8
50°-60°	926.0	17.3
60°-70°	880.2	16.5
70°-80°	700.8	13.1
80°-90°	238.1	4.5
90°-100°	12.5	0.2
100°-110°	4.1	0.1
110°-120°	0.9	0.0
120°-130°	0.5	0.0
130°-140°	0.4	0.0
140°-150°	0.4	0.0
150°-160°	0.3	0.0
160°-170°	0.2	0.0
170°-180°	0.1	0.0
0°-90°	5329.4	99.6
0°-180°	5348.9	100.0

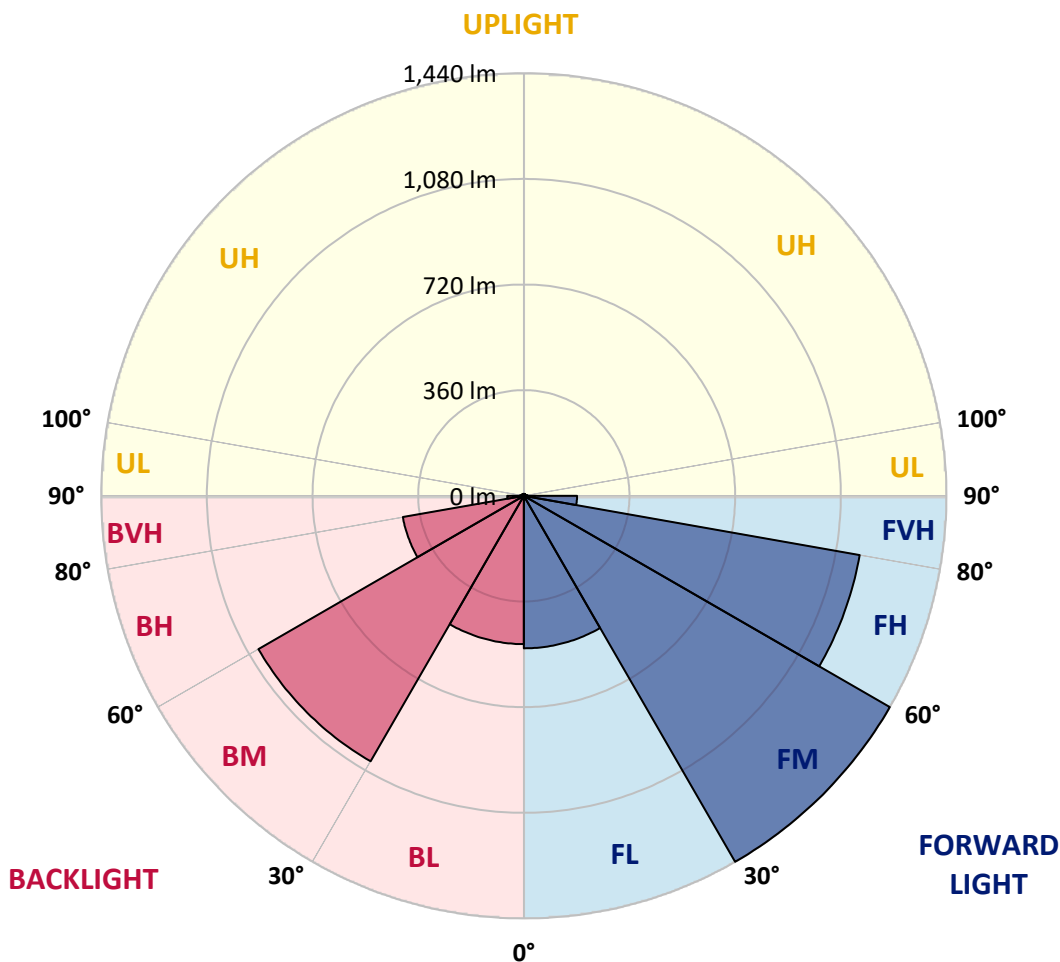


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	519.9	9.7			
FM (30°-60°)	1440.4	26.9			
FH (60°-80°)	1162.4	21.7			G1/1800
FVH (80°-90°)	181.3	3.4			G2/225
BL (0°-30°)	505.4	9.4	B2/1000		
BM (30°-60°)	1044.7	19.5	B2/2500		
BH (60°-80°)	418.5	7.8	B1/500		G1/500
BVH (80°-90°)	56.7	1.1			G1/100
UL (90°-100°)	12.5	0.2		U2/50	
UH (100°-180°)	6.9	0.1		U1/10	

BUG Rating: B2-U2-G2
 Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	1238.3	1238.3	1238.3	1238.3	1238.3	1238.3	1238.3	1238.3	1238.3	1238.3	1238.3
2.5°	1243.0	1242.0	1242.0	1242.0	1242.0	1241.1	1242.0	1240.1	1241.1	1238.3	1238.3
5°	1245.8	1243.9	1244.9	1244.9	1244.9	1243.9	1244.9	1242.0	1243.0	1239.2	1238.3
7.5°	1246.8	1245.8	1245.8	1245.8	1245.8	1243.9	1244.9	1243.0	1242.0	1239.2	1237.3
10°	1246.8	1245.8	1245.8	1245.8	1244.9	1243.0	1243.9	1241.1	1241.1	1237.3	1235.4
12.5°	1246.8	1245.8	1246.8	1244.9	1244.9	1243.0	1243.0	1240.1	1240.1	1235.4	1233.5
15°	1245.8	1244.9	1244.9	1245.8	1244.9	1243.0	1243.0	1240.1	1239.2	1233.5	1231.6
17.5°	1244.9	1243.9	1244.9	1245.8	1246.8	1244.9	1245.8	1241.1	1239.2	1233.5	1230.7
20°	1245.8	1244.9	1245.8	1247.7	1247.7	1247.7	1247.7	1243.0	1239.2	1233.5	1228.8
22.5°	1243.0	1243.0	1243.0	1243.0	1244.9	1242.0	1242.0	1239.2	1234.5	1229.7	1225.0
25°	1236.4	1236.4	1237.3	1238.3	1238.3	1236.4	1235.4	1232.6	1228.8	1223.1	1217.5
27.5°	1228.8	1228.8	1229.7	1229.7	1231.6	1229.7	1228.8	1225.0	1221.2	1214.6	1208.0
30°	1220.3	1220.3	1220.3	1222.2	1223.1	1223.1	1222.2	1217.5	1212.7	1205.2	1196.7
32.5°	1210.8	1210.8	1213.7	1215.6	1216.5	1216.5	1216.5	1210.8	1205.2	1195.7	1183.4
35°	1203.3	1203.3	1207.1	1213.7	1217.5	1215.6	1214.6	1210.8	1202.3	1191.9	1172.1
37.5°	1208.0	1208.0	1216.5	1226.0	1234.5	1232.6	1232.6	1226.0	1214.6	1197.6	1173.0
40°	1219.4	1220.3	1233.5	1245.8	1256.2	1258.1	1258.1	1250.5	1233.5	1211.8	1177.8
42.5°	1222.2	1224.1	1237.3	1255.3	1264.7	1269.4	1269.4	1259.1	1241.1	1215.6	1175.9
45°	1222.2	1223.1	1238.3	1257.2	1272.3	1276.1	1276.1	1264.7	1242.0	1217.5	1169.3
47.5°	1222.2	1221.2	1234.5	1260.9	1276.1	1278.9	1278.9	1266.6	1244.9	1213.7	1159.8
50°	1219.4	1224.1	1243.9	1264.7	1291.2	1295.0	1294.0	1280.8	1250.5	1218.4	1152.2
52.5°	1226.0	1225.0	1251.5	1293.1	1316.7	1325.2	1326.2	1309.1	1278.0	1231.6	1147.5
55°	1253.4	1254.3	1279.8	1328.1	1364.0	1380.0	1378.2	1356.4	1312.0	1258.1	1160.7
57.5°	1262.8	1272.3	1309.1	1350.7	1405.6	1419.7	1419.7	1393.3	1339.4	1278.9	1170.2
60°	1243.9	1247.7	1293.1	1364.0	1414.1	1416.9	1417.9	1398.9	1342.2	1267.6	1151.3
62.5°	1239.2	1246.8	1281.7	1361.1	1393.3	1414.1	1413.1	1387.6	1339.4	1259.1	1144.7
65°	1218.4	1224.1	1285.5	1344.1	1415.0	1435.8	1431.1	1401.8	1327.1	1249.6	1123.9
67.5°	1175.9	1181.5	1238.3	1320.5	1384.8	1404.6	1409.3	1375.3	1297.8	1205.2	1079.5
70°	1105.0	1113.5	1171.1	1251.5	1319.5	1330.9	1329.0	1308.2	1230.7	1131.4	1014.2
72.5°	1005.7	1019.0	1091.7	1168.3	1226.9	1243.9	1236.4	1212.7	1149.4	1042.6	925.4
75°	900.8	913.1	970.8	1056.8	1118.2	1129.6	1123.9	1095.5	1031.3	926.3	820.5
77.5°	786.4	796.8	846.0	933.9	979.3	988.7	991.6	953.7	893.2	798.7	704.2
80°	632.4	637.1	703.3	760.9	800.6	819.5	817.6	789.3	728.8	650.3	555.8
82.5°	466.9	470.7	521.8	570.9	606.8	623.9	614.4	586.0	537.8	470.7	398.9
85°	286.4	279.8	321.4	358.2	380.0	391.3	381.9	365.8	323.3	270.3	220.2
87.5°	103.0	97.4	116.3	121.9	146.5	142.7	151.2	121.9	98.3	69.9	49.2
90°	45.4	45.4	44.4	42.5	38.8	35.0	34.0	28.4	20.8	13.2	4.7
92.5°	41.6	41.6	40.6	38.8	35.0	31.2	31.2	25.5	18.9	12.3	4.7
95°	35.0	35.0	34.0	32.1	29.3	26.5	26.5	20.8	16.1	10.4	3.8
97.5°	27.4	27.4	26.5	25.5	22.7	20.8	20.8	17.0	12.3	7.6	2.8
100°	20.8	20.8	19.8	18.9	18.0	16.1	15.1	12.3	9.5	5.7	1.9
102.5°	15.1	15.1	15.1	14.2	12.3	11.3	11.3	9.5	6.6	4.7	1.9
105°	10.4	10.4	10.4	9.5	8.5	7.6	7.6	6.6	4.7	2.8	0.9
107.5°	6.6	6.6	6.6	6.6	5.7	4.7	4.7	3.8	2.8	1.9	0.9
110°	3.8	2.8	3.8	3.8	3.8	2.8	2.8	1.9	1.9	0.9	0.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
112.5°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	0.9	0.9	0.9	0.9
115°	0.9	0.9	0.9	1.9	1.9	0.9	0.9	0.9	0.9	0.9	0.9
117.5°	0.0	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
120°	0.0	0.0	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
122.5°	0.0	0.0	0.0	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
125°	0.0	0.0	0.0	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
127.5°	0.0	0.0	0.0	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
130°	0.0	0.0	0.0	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
132.5°	0.0	0.0	0.0	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
135°	0.0	0.0	0.0	0.0	0.9	0.9	0.9	0.9	0.9	0.9	0.9
137.5°	0.0	0.0	0.0	0.0	0.9	0.9	0.9	0.9	0.9	0.9	0.9
140°	0.0	0.9	0.9	0.0	0.0	0.9	0.9	0.9	0.9	0.9	0.9
142.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
145°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
147.5°	0.9	0.9	0.0	0.0	0.9	0.9	0.9	0.9	0.9	0.9	0.9
150°	0.9	0.9	0.9	0.0	0.0	0.9	0.9	0.9	0.9	0.9	0.9
152.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
155°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
157.5°	0.9	0.9	0.9	0.0	0.9	0.9	0.9	0.9	0.9	0.9	0.9
160°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
162.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
165°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
167.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
170°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
172.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
175°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
177.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
180°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9



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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1238.3	1238.3	1238.3	1238.3	1238.3	1238.3	1238.3	1238.3	1238.3	1238.3	1238.3
2.5°	1238.3	1237.3	1236.4	1237.3	1236.4	1236.4	1235.4	1235.4	1234.5	1234.5	1233.5
5°	1238.3	1237.3	1236.4	1237.3	1235.4	1236.4	1236.4	1235.4	1234.5	1233.5	1232.6
7.5°	1237.3	1237.3	1235.4	1236.4	1234.5	1234.5	1233.5	1233.5	1232.6	1232.6	1231.6
10°	1235.4	1234.5	1234.5	1234.5	1232.6	1232.6	1231.6	1230.7	1230.7	1229.7	1228.8
12.5°	1233.5	1232.6	1231.6	1231.6	1230.7	1229.7	1228.8	1228.8	1227.9	1226.9	1226.0
15°	1230.7	1229.7	1229.7	1229.7	1228.8	1228.8	1227.9	1226.9	1225.0	1224.1	1223.1
17.5°	1229.7	1228.8	1229.7	1229.7	1228.8	1229.7	1227.9	1226.0	1224.1	1223.1	1222.2
20°	1228.8	1228.8	1228.8	1227.9	1226.9	1226.0	1225.0	1224.1	1223.1	1222.2	1221.2
22.5°	1224.1	1223.1	1221.2	1215.6	1209.0	1204.2	1203.3	1205.2	1205.2	1205.2	1202.3
25°	1215.6	1212.7	1205.2	1194.8	1183.4	1175.9	1171.1	1171.1	1170.2	1168.3	1167.4
27.5°	1205.2	1199.5	1186.3	1173.0	1157.0	1147.5	1136.2	1129.6	1126.7	1125.8	1123.9
30°	1191.0	1182.5	1165.5	1148.5	1128.6	1115.4	1097.4	1086.1	1079.5	1076.6	1074.7
32.5°	1174.0	1165.5	1145.6	1124.8	1101.2	1082.3	1059.6	1041.6	1029.4	1023.7	1020.9
35°	1162.6	1150.3	1127.7	1103.1	1079.5	1052.0	1024.6	1000.1	981.2	974.5	970.8
37.5°	1157.9	1146.6	1122.0	1097.4	1071.0	1037.9	1005.7	970.8	945.2	933.9	930.1
40°	1160.7	1146.6	1119.2	1092.7	1061.5	1024.6	982.1	938.6	905.5	889.5	885.7
42.5°	1154.1	1138.1	1105.9	1077.6	1038.8	997.2	945.2	895.1	850.7	837.5	831.8
45°	1142.8	1122.9	1088.0	1052.0	1011.4	960.4	906.5	842.2	789.3	773.2	768.5
47.5°	1131.4	1104.0	1062.4	1029.4	980.2	920.7	857.3	785.5	719.3	703.3	700.4
50°	1114.4	1088.9	1044.5	1005.7	955.6	886.6	814.8	725.0	650.3	622.9	615.3
52.5°	1106.9	1073.8	1031.3	1001.0	940.5	862.1	771.3	674.9	567.1	533.1	525.6
55°	1114.4	1072.8	1027.5	998.2	928.2	830.9	719.3	596.4	471.7	435.8	425.4
57.5°	1101.2	1065.3	1019.9	986.8	896.1	766.6	643.7	485.9	356.4	310.0	306.3
60°	1084.2	1033.1	990.6	960.4	829.0	645.6	501.0	346.0	214.6	174.9	167.3
62.5°	1077.6	1024.6	975.5	938.6	739.2	474.5	305.3	174.9	88.9	62.4	56.7
65°	1056.8	1009.5	974.5	922.5	645.6	293.0	131.4	52.0	3.8	2.8	2.8
67.5°	1017.1	968.9	945.2	915.0	636.1	279.8	119.1	47.3	1.9	0.0	0.0
70°	949.0	911.2	895.1	879.1	608.7	259.0	108.7	42.5	0.9	0.0	0.0
72.5°	859.2	833.7	830.9	829.0	569.0	239.1	97.4	37.8	0.9	0.0	0.0
75°	769.4	738.2	743.0	754.3	519.9	211.7	84.1	33.1	0.9	0.0	0.0
77.5°	656.0	633.3	644.6	663.6	455.6	179.6	69.0	26.5	0.9	0.0	0.0
80°	516.1	501.0	526.5	543.5	372.4	142.7	52.0	18.9	0.0	0.0	0.0
82.5°	366.8	358.2	381.9	403.6	277.0	101.1	35.9	12.3	0.0	0.0	0.0
85°	197.6	192.8	215.5	239.1	166.4	57.7	18.0	5.7	0.0	0.0	0.0
87.5°	49.2	45.4	46.3	55.8	40.6	12.3	2.8	0.9	0.0	0.0	0.0
90°	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
92.5°	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95°	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
97.5°	0.9	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0
100°	0.9	0.9	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0
102.5°	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
105°	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
107.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0
110°	0.9	0.9	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P821224
 CATALOG NUMBER: TT-D3-735-24VDC-MQ-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
112.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0
115°	0.9	0.9	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0
117.5°	0.9	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0
120°	0.9	0.9	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0
122.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0
125°	0.9	0.9	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0
127.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0
130°	0.9	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0
135°	0.9	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	0.9	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0
140°	0.9	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	0.9	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0
145°	0.9	0.9	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0
147.5°	0.9	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0
150°	0.9	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0
152.5°	0.9	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0
155°	0.9	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	0.9	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.9	0.9	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0
162.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0
165°	0.9	0.9	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0
167.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0
170°	0.9	0.9	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0
172.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0
175°	0.9	0.9	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0
177.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0
180°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9

(END OF REPORT)