

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: LUMARK

Report Number: P188100

Luminaire Tested: **QDCAST1B (4PANELS 0°TILT)**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P188100  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P22240)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: QDCAST1B (4PANELS 0°TILT)  
Description: LUMARK QUADCAST PARKING GARAGE/CANOPY FIXTURE W/4 ROTATING OPTICAL LIGHT PANELS  
Light Source: (4) 4000K SMT LED OPTICAL PANELS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5100.1 lumens  
Efficiency: N/A  
Efficacy: 94.4 lumens/watt  
Luminous Opening: Rectangular w/ Sides (W: 1.23' x L: 1.23' x H: 0.08')  
IES Classification: Type V - Short - Cutoff  
BUG Rating: B2 - U2 - G1

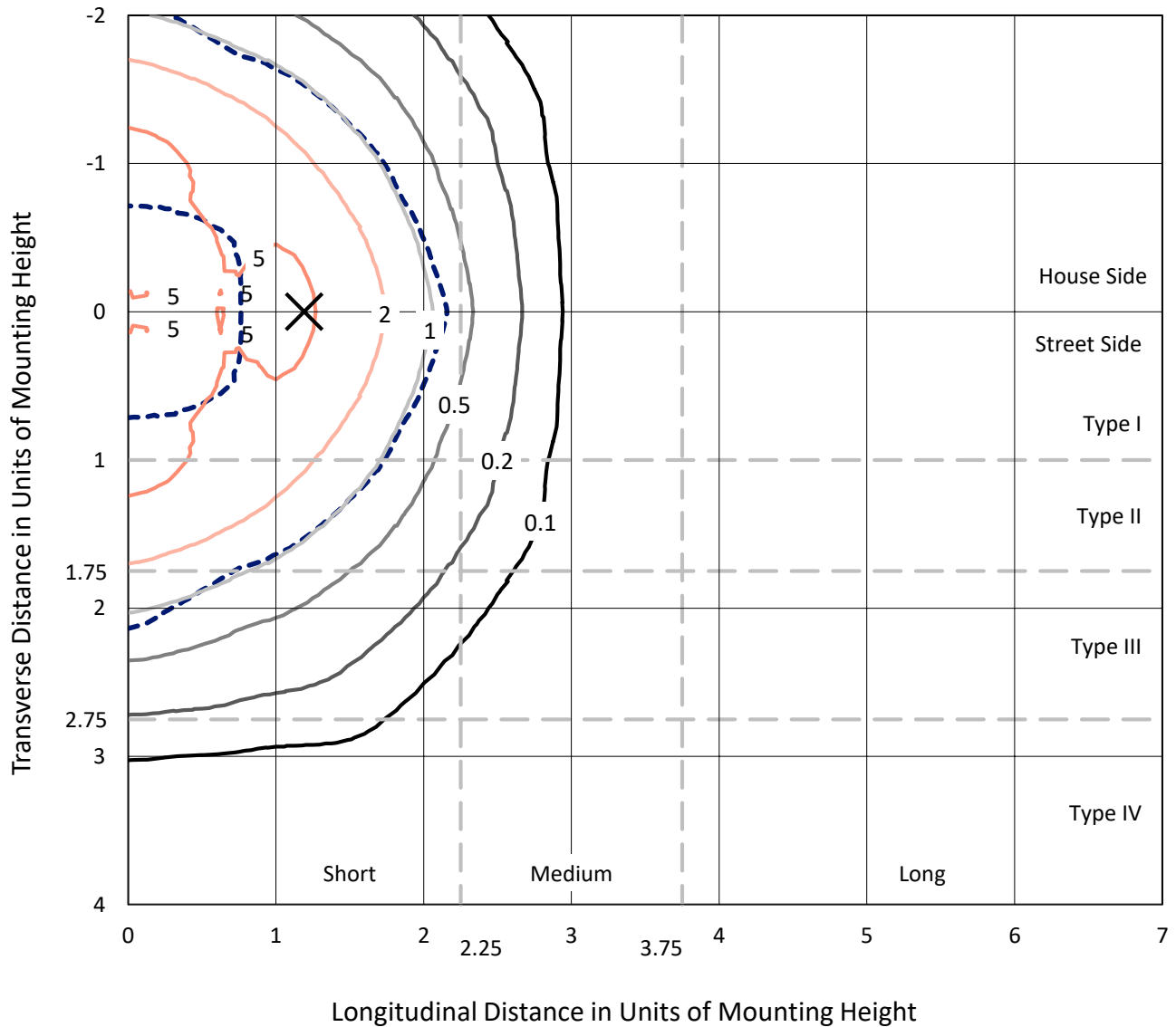
Input Watts (W): 54  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

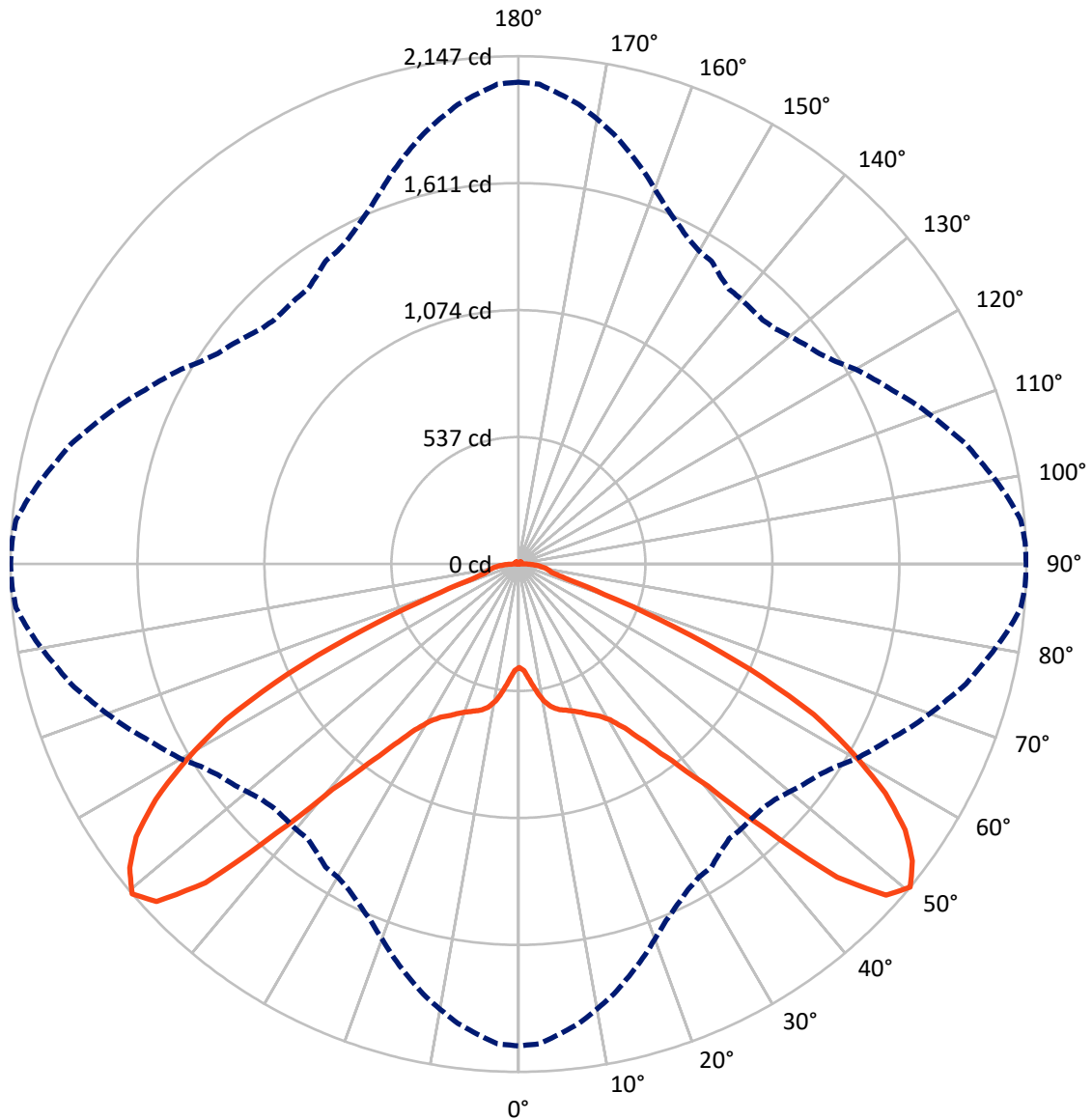
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 6.7 fc  
 Type V - Short - Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 90-Deg Lateral      - - - Horizontal Cone Through 50-Deg Vertical

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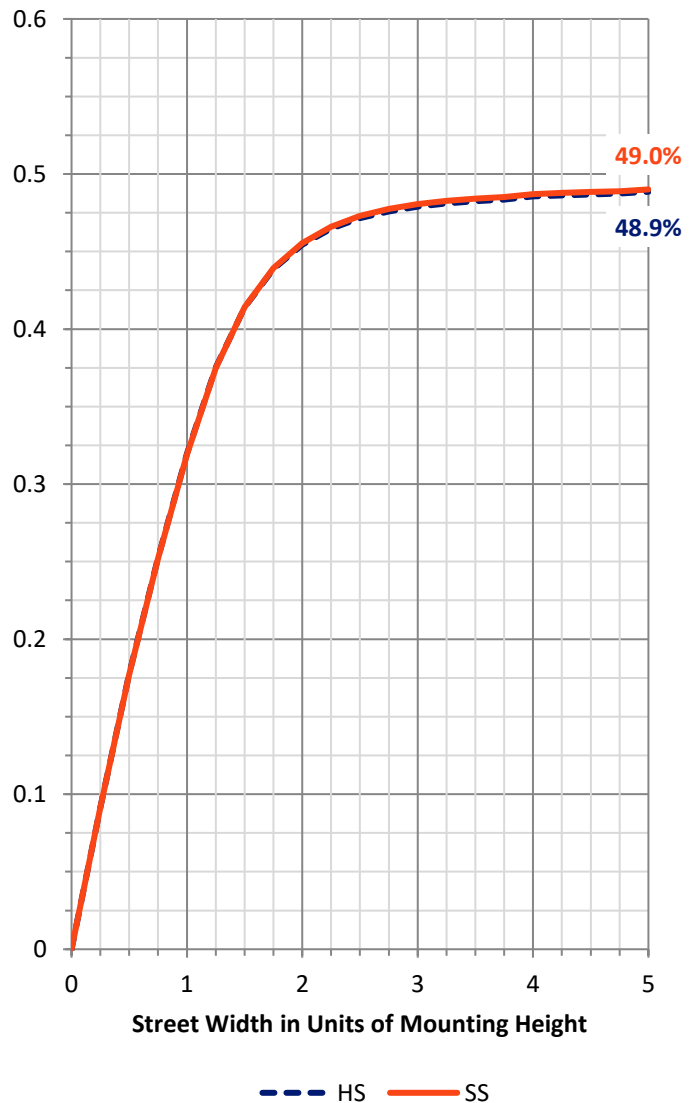
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2517.0	33.0	2550.0
	% Fixture	49.4	0.6	50.0
<b>Street Side</b>	Lumens	2517.0	33.0	2550.0
	% Fixture	49.4	0.6	50.0
<b>Total</b>	Lumens	5034.1	66.0	5100.1
	% Fixture	98.7	1.3	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	47.9	0.9
10°-20°	177.7	3.5
20°-30°	354.4	6.9
30°-40°	617.9	12.1
40°-50°	1150.3	22.6
50°-60°	1440.5	28.2
60°-70°	909.0	17.8
70°-80°	254.8	5.0
80°-90°	81.6	1.6
90°-100°	17.9	0.4
100°-110°	10.0	0.2
110°-120°	7.9	0.2
120°-130°	10.5	0.2
130°-140°	10.0	0.2
140°-150°	6.0	0.1
150°-160°	2.9	0.1
160°-170°	0.6	0.0
170°-180°	0.0	0.0
0°-90°	5034.1	98.7
0°-180°	5100.1	100.0



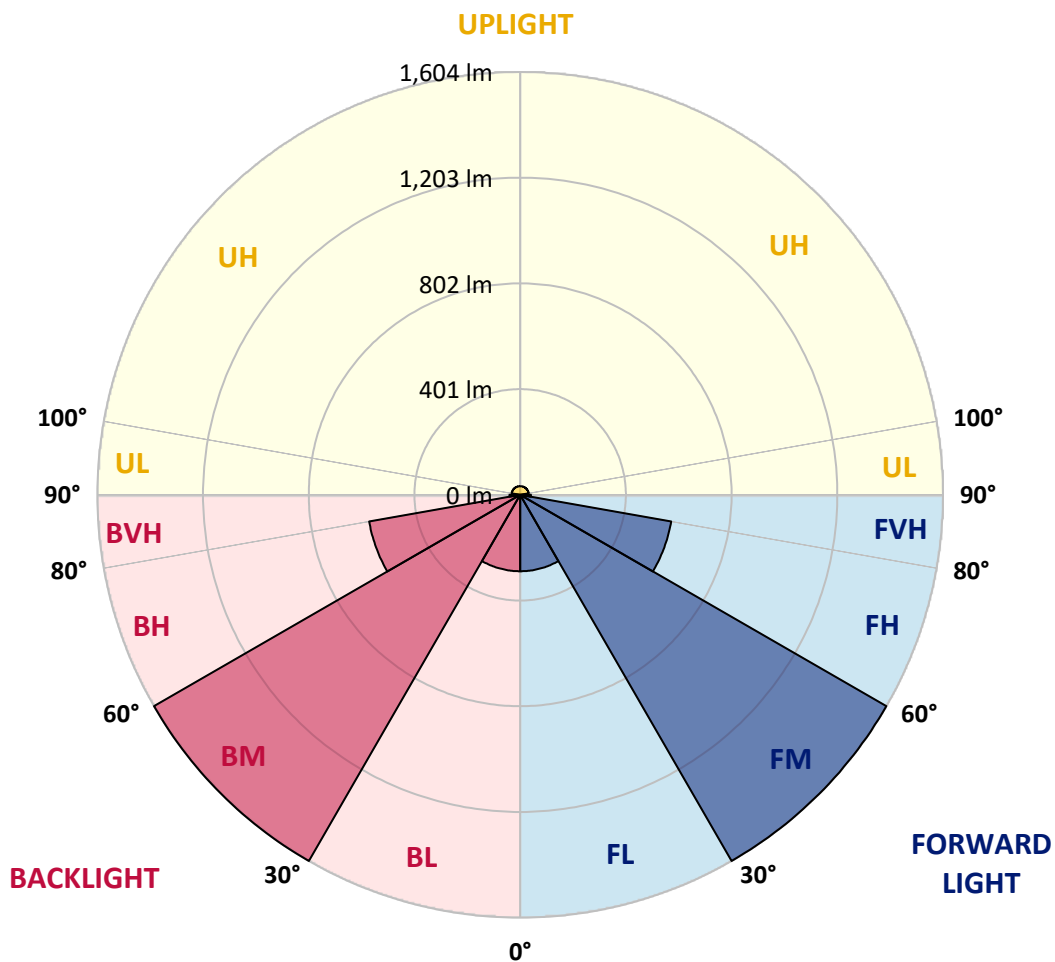
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	290.0	5.7			
FM	(30°-60°)	1604.3	31.5			
FH	(60°-80°)	581.9	11.4			G0/660
FVH	(80°-90°)	40.8	0.8			G1/100
BL	(0°-30°)	290.0	5.7	B1/500		
BM	(30°-60°)	1604.3	31.5	B2/2500		
BH	(60°-80°)	581.9	11.4	B2/1000		G0/660
BVH	(80°-90°)	40.8	0.8			G1/100
UL	(90°-100°)	17.9	0.4		U2/50	
UH	(100°-180°)	33.0	0.6		U2/50	

**BUG Rating: B2-U2-G1**

Type V Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	20°	22.5°	25°
0°	437.2	437.2	437.2	437.2	437.2	437.2	437.2	437.2	437.2	437.2	437.2
2.5°	443.0	443.0	443.0	443.0	443.0	444.2	445.4	446.6	445.4	445.4	445.4
5°	467.6	466.4	466.4	466.4	466.4	467.6	468.8	468.8	468.8	468.8	468.8
7.5°	510.9	509.7	509.7	508.5	507.3	506.2	507.3	506.2	503.8	502.7	501.5
10°	567.0	565.8	564.6	563.5	562.3	558.8	557.6	555.3	549.4	544.8	540.1
12.5°	621.9	618.4	617.2	616.1	613.7	607.9	603.2	597.4	589.2	582.2	575.1
15°	655.8	653.5	652.3	650.0	646.5	639.4	634.8	630.1	623.1	618.4	612.6
17.5°	678.0	674.5	673.3	672.2	669.8	665.2	664.0	661.7	658.1	657.0	657.0
20°	696.7	693.2	690.9	689.7	689.7	688.5	690.9	689.7	690.9	692.0	697.9
22.5°	725.9	722.4	720.1	720.1	721.3	718.9	721.3	723.6	724.8	729.5	736.5
25°	759.8	757.5	757.5	757.5	759.8	757.5	762.2	765.7	765.7	773.9	779.7
27.5°	794.9	792.6	794.9	796.1	797.3	798.4	804.3	807.8	811.3	818.3	826.5
30°	838.2	837.0	839.3	844.0	846.4	848.7	856.9	859.2	863.9	873.2	881.4
32.5°	903.6	902.5	904.8	907.1	909.5	911.8	917.7	916.5	923.5	927.0	935.2
35°	998.3	997.2	998.3	998.3	997.2	991.3	992.5	990.1	990.1	987.8	990.1
37.5°	1163.2	1159.6	1156.1	1149.1	1138.6	1119.9	1105.9	1089.5	1074.3	1063.8	1054.4
40°	1379.4	1375.9	1365.4	1350.2	1324.5	1294.1	1263.7	1233.3	1207.6	1177.2	1151.5
42.5°	1606.2	1603.9	1594.5	1575.8	1547.8	1509.2	1464.8	1415.7	1365.4	1317.5	1277.7
45°	1801.4	1796.7	1778.0	1753.5	1714.9	1672.8	1626.1	1579.3	1526.7	1481.1	1430.9
47.5°	1941.7	1938.2	1913.6	1887.9	1841.2	1797.9	1748.8	1698.6	1644.8	1588.7	1539.6
50°	2037.6	2030.5	1995.5	1959.2	1911.3	1862.2	1804.9	1747.6	1686.9	1631.9	1589.8
52.5°	2027.0	2004.8	1963.9	1924.2	1882.1	1837.7	1793.2	1745.3	1693.9	1640.1	1589.8
55°	1877.4	1844.7	1803.8	1765.2	1734.8	1702.1	1672.8	1641.3	1607.4	1562.9	1518.5
57.5°	1689.2	1660.0	1612.0	1573.5	1537.2	1501.0	1475.3	1456.6	1441.4	1419.2	1401.6
60°	1490.5	1463.6	1411.0	1371.2	1333.8	1299.9	1275.4	1256.7	1233.3	1216.9	1209.9
62.5°	1263.7	1245.0	1193.5	1159.6	1128.1	1100.0	1076.6	1056.8	1033.4	1022.9	1026.4
65°	1052.1	1040.4	992.5	962.1	935.2	910.6	891.9	873.2	846.4	851.0	867.4
67.5°	776.2	768.0	743.5	727.1	717.8	711.9	695.6	679.2	668.7	681.5	703.7
70°	457.1	457.1	446.6	447.7	464.1	478.1	479.3	480.5	495.7	520.2	548.3
72.5°	259.5	259.5	257.2	260.7	268.9	280.6	292.2	303.9	329.7	358.9	394.0
75°	157.8	156.6	156.6	159.0	167.2	176.5	178.9	187.0	208.1	232.6	259.5
77.5°	134.4	133.3	129.8	128.6	127.4	128.6	128.6	129.8	137.9	152.0	167.2
80°	120.4	119.2	116.9	114.6	113.4	111.1	107.5	106.4	106.4	109.9	116.9
82.5°	106.4	104.0	101.7	100.5	99.4	97.0	95.9	93.5	92.4	92.4	93.5
85°	77.2	76.0	73.6	73.6	73.6	73.6	72.5	71.3	71.3	71.3	72.5
87.5°	53.8	53.8	51.4	52.6	53.8	53.8	53.8	53.8	54.9	56.1	56.1
90°	18.7	21.0	24.5	28.1	30.4	31.6	33.9	36.2	36.2	36.2	36.2
92.5°	12.9	12.9	14.0	15.2	16.4	17.5	19.9	21.0	21.0	19.9	19.9
95°	11.7	11.7	11.7	12.9	12.9	14.0	14.0	15.2	15.2	15.2	15.2
97.5°	9.4	9.4	10.5	10.5	11.7	11.7	11.7	12.9	12.9	12.9	12.9
100°	9.4	9.4	9.4	9.4	10.5	10.5	11.7	11.7	12.9	12.9	12.9
102.5°	8.2	9.4	9.4	9.4	10.5	10.5	11.7	11.7	11.7	11.7	11.7
105°	7.0	7.0	8.2	8.2	8.2	8.2	9.4	9.4	9.4	9.4	9.4
107.5°	5.8	5.8	5.8	7.0	7.0	7.0	8.2	8.2	8.2	8.2	8.2
110°	4.7	4.7	5.8	5.8	5.8	7.0	7.0	7.0	8.2	8.2	8.2



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 CATALOG NUMBER: QDCAST1B (4PANELS 0°TILT)

**CANDELA DISTRIBUTION (continued):**

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	20°	22.5°	25°
112.5°	4.7	4.7	4.7	5.8	5.8	7.0	7.0	8.2	8.2	8.2	8.2
115°	5.8	5.8	5.8	7.0	8.2	8.2	8.2	8.2	8.2	8.2	8.2
117.5°	7.0	7.0	8.2	8.2	8.2	9.4	9.4	9.4	9.4	9.4	9.4
120°	11.7	10.5	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4
122.5°	14.0	12.9	11.7	10.5	9.4	9.4	9.4	10.5	10.5	10.5	10.5
125°	12.9	12.9	14.0	14.0	12.9	11.7	10.5	10.5	10.5	10.5	11.7
127.5°	11.7	11.7	11.7	12.9	14.0	14.0	15.2	15.2	14.0	14.0	12.9
130°	12.9	12.9	12.9	12.9	14.0	14.0	14.0	15.2	15.2	15.2	15.2
132.5°	10.5	10.5	10.5	11.7	11.7	11.7	12.9	12.9	14.0	14.0	15.2
135°	10.5	10.5	10.5	10.5	10.5	11.7	11.7	12.9	12.9	14.0	14.0
137.5°	9.4	9.4	9.4	9.4	9.4	10.5	10.5	11.7	11.7	12.9	12.9
140°	8.2	8.2	8.2	8.2	9.4	9.4	9.4	10.5	10.5	11.7	11.7
142.5°	8.2	8.2	8.2	8.2	8.2	8.2	8.2	9.4	9.4	10.5	10.5
145°	7.0	7.0	7.0	7.0	7.0	7.0	8.2	8.2	9.4	9.4	9.4
147.5°	5.8	5.8	5.8	5.8	7.0	7.0	7.0	8.2	8.2	8.2	9.4
150°	5.8	5.8	5.8	5.8	5.8	5.8	7.0	7.0	7.0	8.2	8.2
152.5°	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	7.0	7.0	7.0
155°	4.7	4.7	4.7	4.7	5.8	4.7	4.7	4.7	5.8	5.8	5.8
157.5°	4.7	4.7	3.5	3.5	4.7	4.7	4.7	4.7	4.7	4.7	4.7
160°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	3.5	3.5	3.5	3.5
162.5°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
165°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
167.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
170°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
177.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	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





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**CANDELA DISTRIBUTION (continued):**

	27.5°	30°	32.5°	35°	37.5°	40°	42.5°	45°	47.5°	50°	52.5°
0°	437.2	437.2	437.2	437.2	437.2	437.2	437.2	437.2	437.2	437.2	437.2
2.5°	445.4	446.6	445.4	446.6	446.6	446.6	447.7	447.7	447.7	448.9	448.9
5°	468.8	468.8	468.8	469.9	471.1	469.9	472.3	473.4	473.4	475.8	477.0
7.5°	500.3	499.2	496.8	498.0	496.8	495.7	498.0	499.2	500.3	501.5	503.8
10°	534.2	530.7	527.2	523.7	521.4	520.2	520.2	520.2	521.4	523.7	526.0
12.5°	568.1	564.6	558.8	554.1	551.8	551.8	551.8	551.8	554.1	556.4	558.8
15°	607.9	605.5	599.7	596.2	595.0	591.5	591.5	593.9	596.2	598.5	600.9
17.5°	655.8	653.5	650.0	645.3	642.9	642.9	641.8	644.1	646.5	650.0	652.3
20°	701.4	702.6	701.4	699.1	697.9	696.7	697.9	699.1	701.4	701.4	700.2
22.5°	743.5	749.3	751.7	754.0	754.0	752.8	755.2	754.0	752.8	750.5	743.5
25°	786.7	792.6	798.4	804.3	810.1	814.8	813.6	806.6	799.6	792.6	785.6
27.5°	837.0	842.8	848.7	854.5	861.6	863.9	862.7	858.0	849.9	835.8	824.1
30°	890.8	896.6	900.1	904.8	909.5	910.6	909.5	903.6	893.1	879.1	866.2
32.5°	944.5	945.7	949.2	952.7	955.1	955.1	953.9	949.2	937.5	921.2	908.3
35°	996.0	998.3	999.5	997.2	997.2	999.5	998.3	990.1	979.6	966.8	950.4
37.5°	1052.1	1054.4	1048.6	1040.4	1039.2	1038.1	1039.2	1034.6	1022.9	1012.4	999.5
40°	1132.8	1118.7	1103.5	1086.0	1081.3	1080.2	1079.0	1073.1	1066.1	1056.8	1046.3
42.5°	1252.0	1228.6	1200.6	1156.1	1138.6	1125.7	1117.6	1115.2	1109.4	1104.7	1101.2
45°	1393.4	1359.5	1321.0	1268.4	1243.8	1221.6	1200.6	1187.7	1185.4	1184.2	1187.7
47.5°	1503.3	1477.6	1451.9	1405.1	1371.2	1347.9	1326.8	1317.5	1317.5	1326.8	1344.3
50°	1552.4	1527.9	1518.5	1487.0	1463.6	1463.6	1460.1	1460.1	1472.9	1497.5	1525.5
52.5°	1548.9	1526.7	1513.9	1505.7	1494.0	1502.2	1517.4	1530.2	1546.6	1561.8	1578.1
55°	1488.1	1476.4	1474.1	1479.9	1470.6	1471.8	1477.6	1489.3	1498.7	1509.2	1519.7
57.5°	1386.4	1387.6	1380.6	1380.6	1374.7	1373.6	1373.6	1377.1	1380.6	1386.4	1394.6
60°	1225.1	1243.8	1248.5	1247.3	1238.0	1233.3	1232.1	1232.1	1232.1	1236.8	1240.3
62.5°	1041.6	1053.3	1054.4	1069.6	1073.1	1075.5	1076.6	1081.3	1083.7	1086.0	1094.2
65°	881.4	883.8	882.6	884.9	887.3	897.8	909.5	917.7	928.2	936.4	943.4
67.5°	722.4	730.6	722.4	718.9	716.6	720.1	723.6	729.5	735.3	733.0	722.4
70°	563.5	567.0	556.4	549.4	541.2	537.7	534.2	528.4	523.7	516.7	508.5
72.5°	417.3	423.2	411.5	403.3	391.6	382.3	375.2	368.2	361.2	355.4	348.4
75°	284.1	291.1	287.6	281.7	274.7	268.9	258.3	247.8	239.6	236.1	233.8
77.5°	183.5	192.9	190.5	189.4	185.9	183.5	175.3	168.3	164.8	162.5	159.0
80°	123.9	129.8	130.9	130.9	130.9	129.8	128.6	125.1	121.6	119.2	118.1
82.5°	95.9	98.2	98.2	97.0	97.0	99.4	100.5	99.4	98.2	94.7	93.5
85°	72.5	72.5	71.3	71.3	73.6	77.2	78.3	78.3	78.3	76.0	73.6
87.5°	56.1	53.8	53.8	53.8	54.9	57.3	57.3	57.3	57.3	56.1	56.1
90°	35.1	32.7	31.6	30.4	29.2	29.2	30.4	28.1	28.1	29.2	30.4
92.5°	18.7	18.7	18.7	17.5	17.5	17.5	18.7	18.7	18.7	17.5	17.5
95°	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2
97.5°	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9	11.7
100°	12.9	12.9	12.9	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7
102.5°	11.7	10.5	10.5	10.5	10.5	9.4	9.4	9.4	9.4	10.5	10.5
105°	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4
107.5°	8.2	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4
110°	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2



REPORT NUMBER: P188100

CATALOG NUMBER: QDCAST1B (4PANELS 0°TILT)

**CANDELA DISTRIBUTION (continued):**

	27.5°	30°	32.5°	35°	37.5°	40°	42.5°	45°	47.5°	50°	52.5°
112.5°	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2
115°	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2
117.5°	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4
120°	10.5	9.4	9.4	9.4	9.4	10.5	10.5	10.5	10.5	9.4	9.4
122.5°	10.5	10.5	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7
125°	11.7	11.7	11.7	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9
127.5°	12.9	12.9	12.9	14.0	14.0	14.0	14.0	14.0	14.0	14.0	12.9
130°	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0
132.5°	15.2	15.2	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	12.9
135°	14.0	14.0	14.0	14.0	15.2	15.2	15.2	15.2	15.2	15.2	14.0
137.5°	12.9	12.9	14.0	14.0	14.0	14.0	14.0	14.0	14.0	12.9	15.2
140°	11.7	11.7	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9
142.5°	10.5	11.7	11.7	11.7	11.7	12.9	12.9	12.9	12.9	12.9	12.9
145°	10.5	10.5	10.5	10.5	10.5	11.7	11.7	11.7	12.9	11.7	11.7
147.5°	9.4	9.4	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5
150°	8.2	9.4	9.4	9.4	9.4	9.4	9.4	9.4	10.5	10.5	10.5
152.5°	7.0	8.2	8.2	8.2	9.4	9.4	9.4	9.4	9.4	9.4	9.4
155°	7.0	7.0	7.0	7.0	8.2	8.2	8.2	8.2	7.0	7.0	7.0
157.5°	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
160°	3.5	4.7	4.7	4.7	4.7	3.5	3.5	4.7	4.7	4.7	4.7
162.5°	2.3	2.3	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
165°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
167.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	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



REPORT NUMBER: P188100  
 CATALOG NUMBER: QDCAST1B (4PANELS 0°TILT)

**CANDELA DISTRIBUTION (continued):**

	55°	57.5°	60°	62.5°	65°	67.5°	70°	72.5°	75°	77.5°	80°
0°	437.2	437.2	437.2	437.2	437.2	437.2	437.2	437.2	437.2	437.2	437.2
2.5°	448.9	450.1	451.2	452.4	452.4	452.4	453.6	453.6	453.6	453.6	452.4
5°	478.1	481.6	481.6	485.1	486.3	487.5	489.8	491.0	491.0	492.1	491.0
7.5°	507.3	512.0	515.5	520.2	524.9	527.2	531.9	535.4	537.7	540.1	540.1
10°	530.7	537.7	543.6	550.6	556.4	563.5	570.5	576.3	578.7	583.3	585.7
12.5°	562.3	567.0	572.8	581.0	588.0	595.0	602.0	606.7	611.4	614.9	618.4
15°	604.4	607.9	611.4	614.9	617.2	620.7	626.6	630.1	632.4	634.8	637.1
17.5°	653.5	653.5	652.3	650.0	648.8	646.5	646.5	647.6	647.6	648.8	648.8
20°	697.9	692.0	686.2	681.5	675.7	672.2	667.5	665.2	662.8	662.8	664.0
22.5°	736.5	727.1	718.9	709.6	701.4	693.2	687.4	685.0	681.5	682.7	680.4
25°	773.9	763.4	752.8	742.3	729.5	721.3	710.7	704.9	702.6	702.6	702.6
27.5°	817.1	804.3	792.6	782.1	766.9	756.3	747.0	741.1	736.5	736.5	734.1
30°	856.9	849.9	840.5	828.8	817.1	804.3	794.9	786.7	780.9	776.2	773.9
32.5°	897.8	890.8	886.1	875.6	863.9	852.2	845.2	839.3	833.5	832.3	831.2
35°	938.7	930.5	931.7	929.4	920.0	910.6	906.0	908.3	904.8	911.8	918.8
37.5°	987.8	979.6	989.0	991.3	991.3	987.8	993.6	1000.7	1003.0	1019.4	1032.2
40°	1040.4	1039.2	1055.6	1067.3	1072.0	1075.5	1093.0	1114.1	1135.1	1160.8	1188.9
42.5°	1100.0	1105.9	1133.9	1152.6	1174.8	1197.1	1238.0	1285.9	1332.7	1389.9	1442.5
45°	1199.4	1220.4	1276.5	1318.6	1373.6	1434.4	1527.9	1593.3	1679.8	1743.0	1800.3
47.5°	1371.2	1422.7	1502.2	1564.1	1620.2	1689.2	1757.0	1828.3	1897.3	1953.4	2006.0
50°	1552.4	1592.2	1647.1	1693.9	1741.8	1797.9	1850.5	1903.1	1959.2	2001.3	2048.1
52.5°	1589.8	1614.4	1643.6	1676.3	1725.4	1776.9	1823.6	1866.9	1907.8	1948.7	1986.1
55°	1530.2	1546.6	1562.9	1586.3	1631.9	1669.3	1710.2	1741.8	1781.6	1823.6	1861.0
57.5°	1409.8	1423.8	1433.2	1451.9	1482.3	1524.4	1567.6	1607.4	1643.6	1678.7	1710.2
60°	1249.7	1259.0	1283.6	1299.9	1323.3	1357.2	1387.6	1415.7	1440.2	1465.9	1491.6
62.5°	1104.7	1121.1	1135.1	1143.3	1136.3	1145.6	1174.8	1195.9	1218.1	1247.3	1270.7
65°	949.2	941.0	930.5	927.0	918.8	911.8	931.7	944.5	951.6	966.8	978.4
67.5°	715.4	707.2	704.9	704.9	687.4	665.2	650.0	664.0	660.5	664.0	661.7
70°	502.7	502.7	499.2	499.2	482.8	447.7	424.3	430.2	430.2	411.5	396.3
72.5°	347.2	344.9	344.9	341.3	320.3	289.9	261.9	256.0	250.2	229.1	216.3
75°	233.8	230.3	224.4	220.9	204.6	184.7	168.3	159.0	157.8	154.3	147.3
77.5°	157.8	155.5	153.1	148.5	139.1	129.8	123.9	121.6	123.9	125.1	126.3
80°	115.7	113.4	112.2	109.9	107.5	105.2	104.0	105.2	107.5	109.9	112.2
82.5°	91.2	90.0	91.2	90.0	90.0	88.8	88.8	88.8	91.2	93.5	94.7
85°	72.5	72.5	73.6	74.8	74.8	74.8	74.8	76.0	77.2	78.3	78.3
87.5°	56.1	54.9	57.3	58.4	58.4	58.4	58.4	57.3	56.1	56.1	56.1
90°	31.6	31.6	33.9	35.1	36.2	37.4	37.4	36.2	35.1	32.7	30.4
92.5°	18.7	18.7	18.7	18.7	18.7	18.7	19.9	19.9	18.7	17.5	16.4
95°	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	14.0	14.0	14.0
97.5°	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9	11.7	11.7	11.7
100°	11.7	11.7	12.9	12.9	12.9	11.7	11.7	11.7	10.5	10.5	10.5
102.5°	10.5	10.5	10.5	11.7	11.7	11.7	11.7	11.7	11.7	10.5	10.5
105°	9.4	9.4	9.4	9.4	10.5	10.5	11.7	11.7	11.7	10.5	10.5
107.5°	9.4	8.2	8.2	8.2	9.4	9.4	9.4	9.4	8.2	8.2	8.2
110°	8.2	8.2	8.2	8.2	8.2	8.2	7.0	7.0	7.0	7.0	7.0



REPORT NUMBER: P188100  
 CATALOG NUMBER: QDCAST1B (4PANELS 0°TILT)

REPORT N  
 CATALOG

**CANDELA DISTRIBUTION (continued):**

**CANDELA**

	55°	57.5°	60°	62.5°	65°	67.5°	70°	72.5°	75°	77.5°	80°	
112.5°	8.2	8.2	8.2	8.2	8.2	8.2	8.2	7.0	7.0	5.8	5.8	0°
115°	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	7.0	7.0	2.5°
117.5°	9.4	9.4	9.4	9.4	9.4	9.4	8.2	8.2	9.4	8.2	8.2	5°
120°	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	7.5°
122.5°	11.7	10.5	10.5	10.5	10.5	10.5	10.5	9.4	9.4	9.4	9.4	10°
125°	11.7	11.7	11.7	10.5	10.5	10.5	10.5	9.4	9.4	9.4	9.4	12.5°
127.5°	12.9	12.9	11.7	11.7	11.7	11.7	11.7	10.5	11.7	11.7	12.9	15°
130°	12.9	12.9	12.9	12.9	12.9	12.9	14.0	15.2	15.2	15.2	14.0	17.5°
132.5°	12.9	12.9	12.9	15.2	15.2	15.2	15.2	14.0	14.0	14.0	14.0	20°
135°	14.0	14.0	14.0	14.0	14.0	14.0	12.9	12.9	12.9	11.7	11.7	22.5°
137.5°	15.2	14.0	14.0	14.0	12.9	12.9	12.9	11.7	11.7	11.7	11.7	25°
140°	12.9	12.9	12.9	12.9	12.9	11.7	11.7	11.7	10.5	10.5	10.5	27.5°
142.5°	12.9	11.7	11.7	11.7	10.5	10.5	10.5	9.4	9.4	9.4	9.4	30°
145°	10.5	10.5	10.5	10.5	9.4	9.4	9.4	8.2	8.2	8.2	8.2	32.5°
147.5°	10.5	10.5	9.4	9.4	9.4	8.2	8.2	8.2	7.0	7.0	7.0	35°
150°	10.5	9.4	9.4	9.4	8.2	8.2	8.2	7.0	7.0	7.0	7.0	37.5°
152.5°	9.4	9.4	9.4	8.2	8.2	8.2	7.0	7.0	7.0	7.0	7.0	40°
155°	7.0	8.2	7.0	7.0	7.0	7.0	5.8	5.8	5.8	5.8	5.8	42.5°
157.5°	5.8	5.8	5.8	5.8	5.8	5.8	4.7	4.7	4.7	4.7	4.7	45°
160°	4.7	4.7	4.7	4.7	4.7	3.5	3.5	3.5	3.5	3.5	3.5	47.5°
162.5°	3.5	3.5	3.5	3.5	3.5	2.3	3.5	3.5	2.3	2.3	2.3	50°
165°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	52.5°
167.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	55°
170°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	57.5°
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.2	60°
175°	0.0	0.0	0.0	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	62.5°
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65°
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	67.5°
												70°
												72.5°
												75°
												77.5°
												80°
												82.5°
												85°
												87.5°
												90°
												92.5°
												95°
												97.5°
												100°
												102.5°
												105°
												107.5°
												110°

NUMBER: P188100  
 NUMBER: QDCAST1B (4PANELS 0°TILT)

REPORT NUMBER: P  
 CATALOG NUMBER:

**DISTRIBUTION (continued):**

82.5°	85°	87.5°	90°
437.2	437.2	437.2	437.2
451.2	451.2	451.2	451.2
491.0	491.0	491.0	491.0
540.1	540.1	541.2	541.2
586.8	588.0	589.2	588.0
619.6	619.6	620.7	619.6
638.3	638.3	639.4	638.3
650.0	648.8	651.1	650.0
665.2	664.0	666.3	664.0
682.7	682.7	683.9	681.5
706.1	704.9	706.1	704.9
735.3	731.8	729.5	727.1
773.9	769.2	768.0	764.5
834.7	831.2	828.8	826.5
924.7	925.8	925.8	924.7
1046.3	1052.1	1056.8	1055.6
1209.9	1225.1	1233.3	1234.5
1483.5	1515.0	1531.4	1532.6
1844.7	1876.2	1885.6	1889.1
2050.4	2080.8	2090.2	2092.5
2092.5	2132.2	2143.9	2147.4
2023.5	2064.4	2079.6	2085.5
1904.3	1945.2	1975.6	1985.0
1743.0	1780.4	1813.1	1829.5
1524.4	1562.9	1605.0	1626.1
1309.3	1332.7	1377.1	1401.6
993.6	1018.2	1054.4	1080.2
672.2	674.5	696.7	711.9
389.3	376.4	381.1	384.6
210.4	205.7	204.6	205.7
146.1	146.1	147.3	147.3
128.6	130.9	132.1	133.3
114.6	116.9	119.2	120.4
94.7	97.0	99.4	101.7
78.3	78.3	79.5	81.8
53.8	52.6	53.8	54.9
28.1	24.5	22.2	22.2
16.4	14.0	12.9	12.9
14.0	11.7	10.5	10.5
11.7	10.5	10.5	10.5
10.5	9.4	9.4	9.4
9.4	9.4	9.4	9.4
9.4	9.4	8.2	8.2
7.0	7.0	7.0	5.8
5.8	5.8	5.8	4.7

**CANDELA DISTRIBUTION:**

	82.5°
112.5°	5.8
115°	5.8
117.5°	7.0
120°	9.4
122.5°	9.4
125°	10.5
127.5°	14.0
130°	14.0
132.5°	14.0
135°	11.7
137.5°	10.5
140°	10.5
142.5°	9.4
145°	8.2
147.5°	7.0
150°	7.0
152.5°	7.0
155°	5.8
157.5°	4.7
160°	3.5
162.5°	2.3
165°	2.3
167.5°	1.2
170°	1.2
172.5°	1.2
175°	1.2
177.5°	0.0
180°	0.0

'188100  
QDCAST1B (4PANELS 0°TILT)

**TION (continued):**

85°	87.5°	90°
5.8	4.7	4.7
5.8	4.7	4.7
5.8	5.8	4.7
8.2	7.0	7.0
9.4	10.5	10.5
11.7	14.0	14.0
14.0	12.9	12.9
12.9	11.7	11.7
12.9	12.9	12.9
11.7	10.5	10.5
10.5	10.5	10.5
10.5	9.4	9.4
9.4	8.2	8.2
8.2	7.0	7.0
7.0	7.0	7.0
7.0	5.8	5.8
7.0	7.0	5.8
5.8	5.8	5.8
4.7	4.7	3.5
3.5	3.5	3.5
2.3	2.3	2.3
2.3	2.3	2.3
1.2	1.2	1.2
1.2	1.2	1.2
0.0	0.0	0.0
1.2	1.2	1.2
0.0	0.0	0.0
0.0	0.0	0.0

(END OF REPORT)