

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: P188102

Luminaire Tested: **QDCAST1B (4PANELS 10°TILT)**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P188102
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P22243)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: QDCAST1B (4PANELS 10°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: 5118.7 lumens
Efficiency: N/A
Efficacy: 94.8 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 - U3 - G1

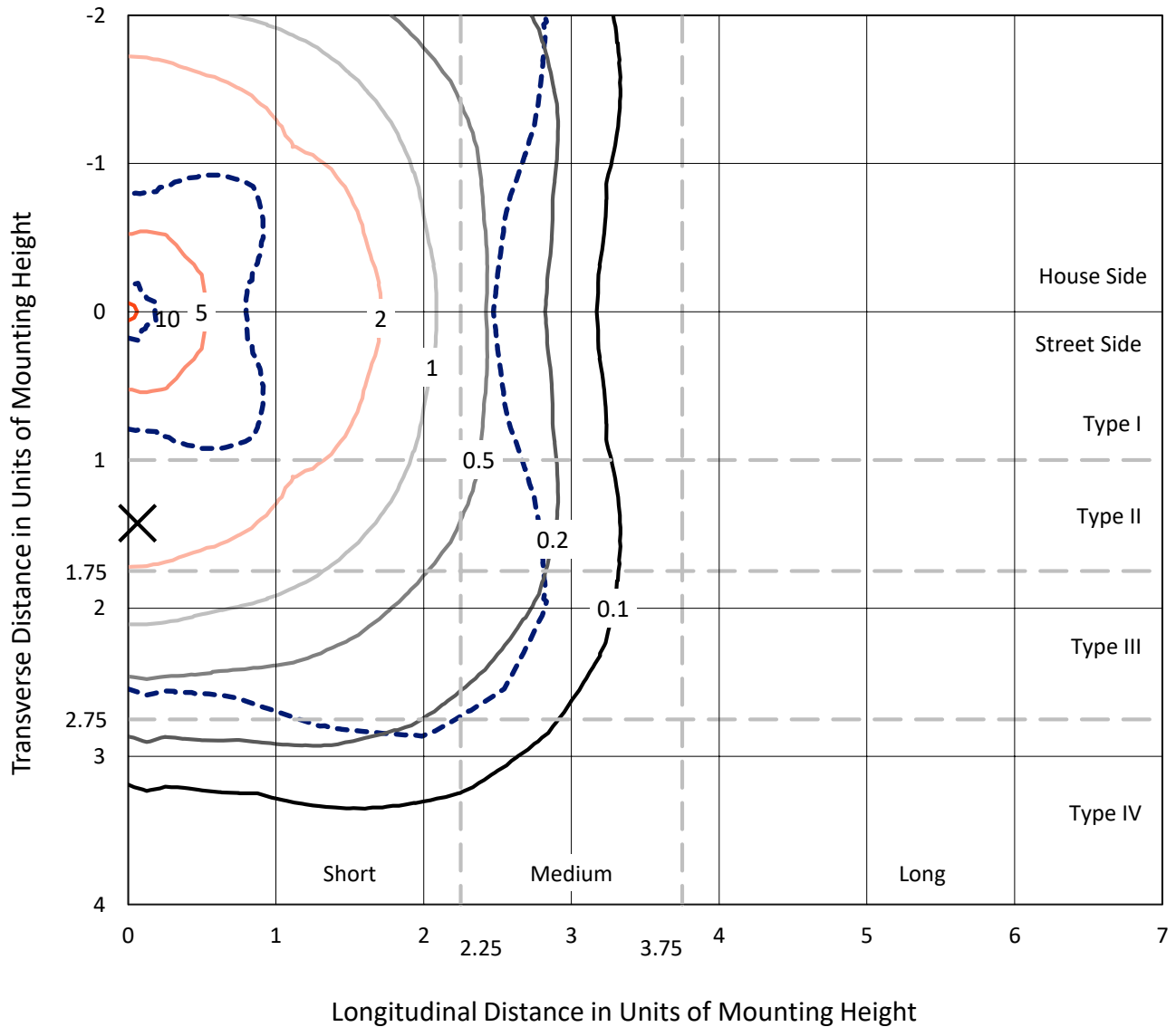
Input Watts (W): 54
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

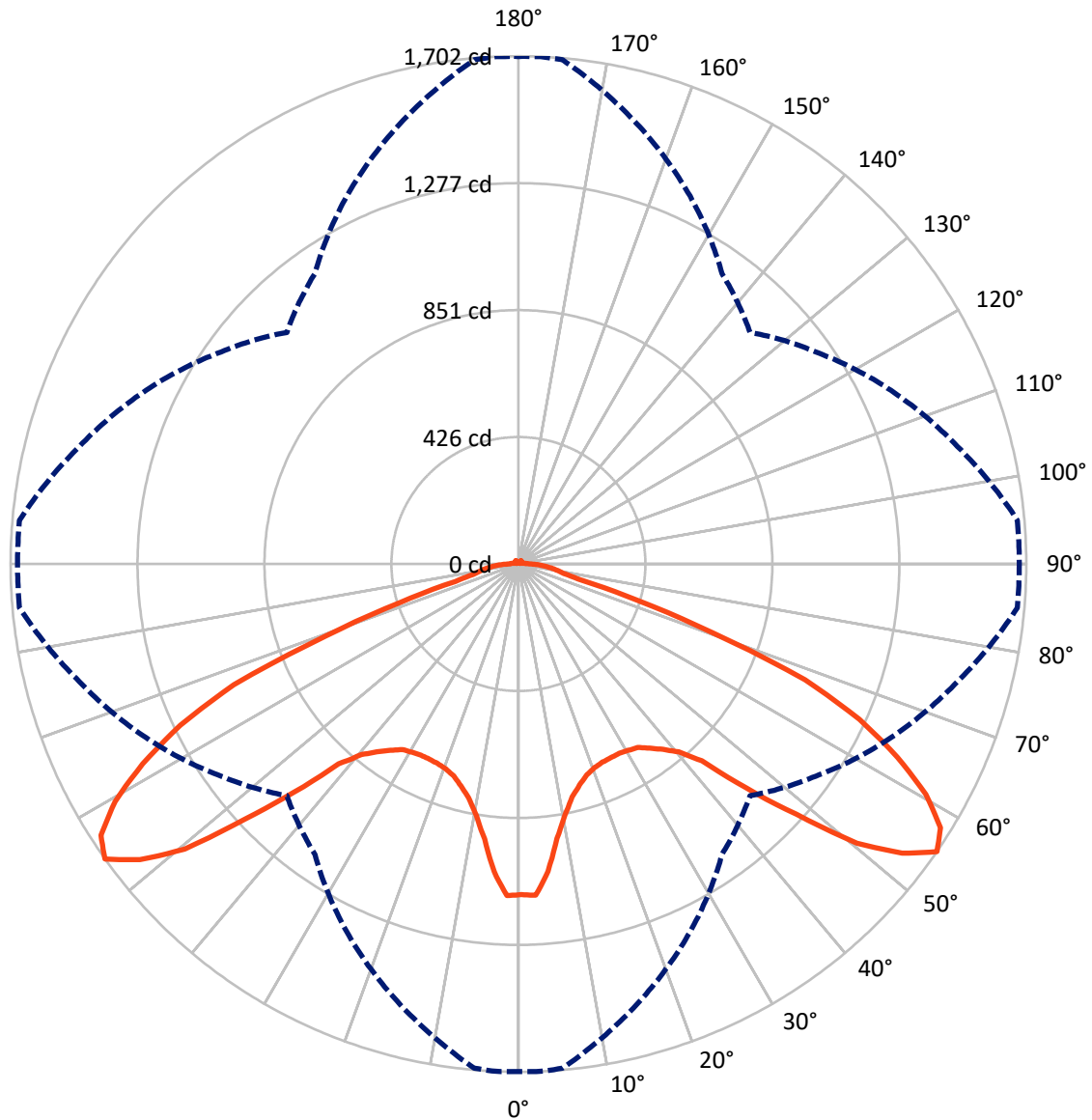
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 11.1 fc
 Type V - Short - Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 2.5-Deg Lateral - - - Horizontal Cone Through 55-Deg Vertical

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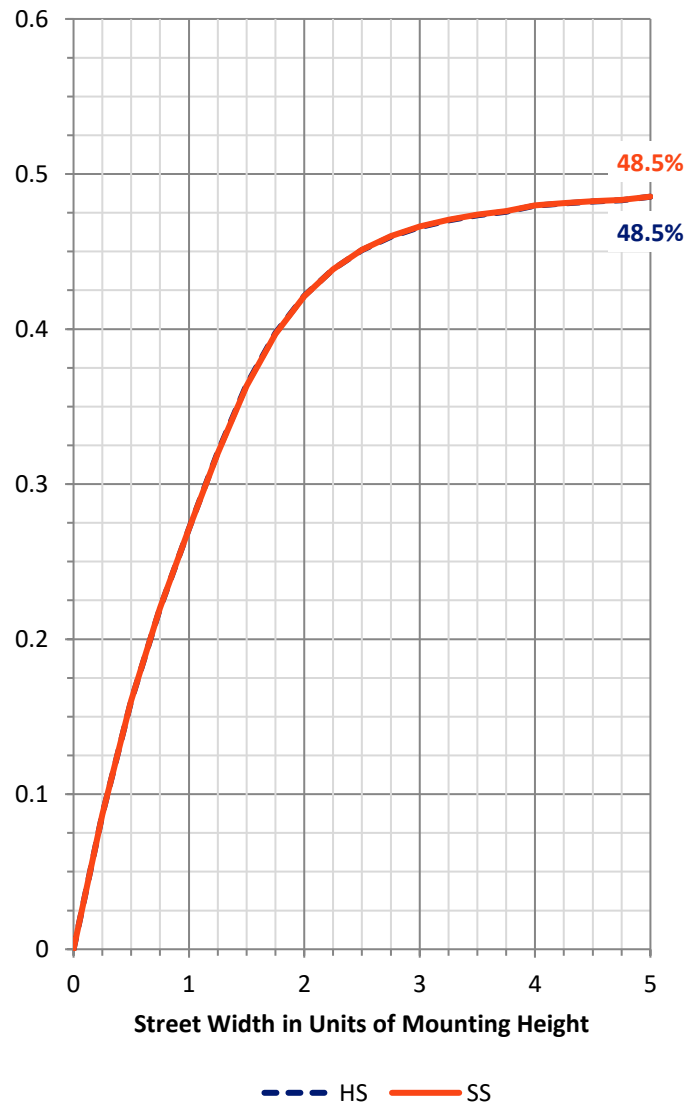
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2512.3	47.1	2559.4
	% Fixture	49.1	0.9	50.0
Street Side	Lumens	2512.3	47.1	2559.4
	% Fixture	49.1	0.9	50.0
Total	Lumens	5024.6	94.1	5118.7
	% Fixture	98.2	1.8	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.0	1.7
10°-20°	220.4	4.3
20°-30°	345.3	6.7
30°-40°	469.3	9.2
40°-50°	724.3	14.2
50°-60°	1235.7	24.1
60°-70°	1263.6	24.7
70°-80°	547.7	10.7
80°-90°	129.2	2.5
90°-100°	39.9	0.8
100°-110°	12.8	0.3
110°-120°	8.3	0.2
120°-130°	7.4	0.1
130°-140°	9.6	0.2
140°-150°	9.0	0.2
150°-160°	4.9	0.1
160°-170°	1.8	0.0
170°-180°	0.3	0.0
0°-90°	5024.6	98.2
0°-180°	5118.7	100.0



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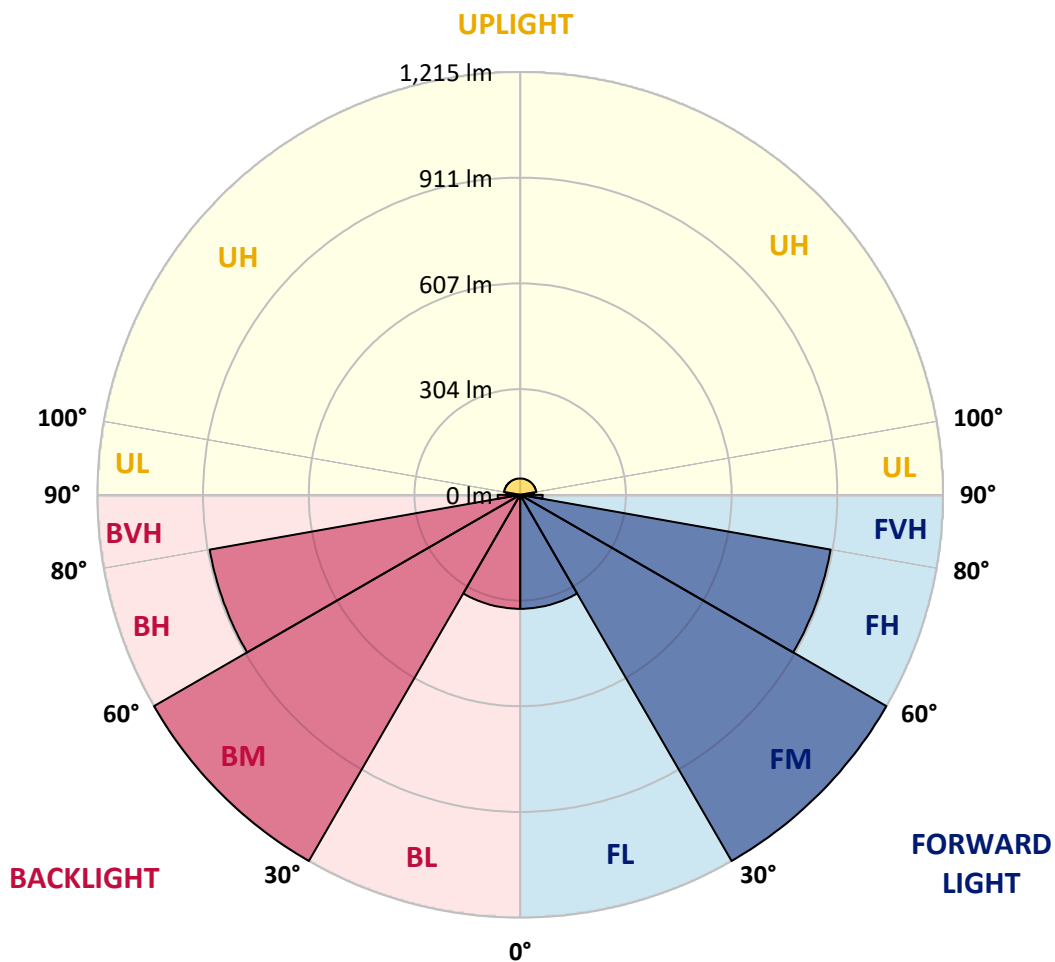
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	327.4	6.4			
FM	(30°-60°)	1214.7	23.7			
FH	(60°-80°)	905.7	17.7			G1/1800
FVH	(80°-90°)	64.6	1.3			G1/100
BL	(0°-30°)	327.4	6.4	B1/500		
BM	(30°-60°)	1214.7	23.7	B2/2500		
BH	(60°-80°)	905.7	17.7	B2/1000		G1/1800
BVH	(80°-90°)	64.6	1.3			G1/100
UL	(90°-100°)	39.9	0.8		U2/50	
UH	(100°-180°)	47.1	0.9		U2/50	

BUG Rating: B2-U3-G1

Type V Short





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CANDELA DISTRIBUTION (FULL):

	0°	2.5°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	1108.2	1108.2	1108.2	1108.2	1108.2	1108.2	1108.2	1108.2	1108.2	1108.2	1108.2
2.5°	1075.5	1111.7	1075.5	1079.0	1079.0	1081.3	1081.3	1080.1	1083.6	1082.5	1075.5
5°	981.9	1034.5	984.3	987.8	989.0	992.5	994.8	992.5	992.5	989.0	984.3
7.5°	890.8	928.2	891.9	894.3	893.1	890.8	891.9	889.6	894.3	894.3	889.6
10°	817.1	854.5	819.5	826.5	826.5	821.8	817.1	818.3	825.3	827.6	820.6
12.5°	770.4	800.8	772.7	784.4	794.9	801.9	797.2	792.6	791.4	790.2	780.9
15°	740.0	768.0	744.6	763.3	784.4	797.2	798.4	787.9	776.2	768.0	754.0
17.5°	717.8	742.3	724.8	749.3	783.2	792.6	798.4	784.4	771.5	752.8	731.8
20°	710.7	728.3	714.2	742.3	779.7	785.6	790.2	777.4	766.9	741.1	717.8
22.5°	708.4	721.3	713.1	743.5	775.0	772.7	777.4	770.4	762.2	737.6	714.2
25°	713.1	718.9	718.9	745.8	773.9	762.2	757.5	757.5	759.8	734.1	710.7
27.5°	717.8	718.9	724.8	751.7	773.9	752.8	736.5	743.5	757.5	729.4	706.1
30°	725.9	724.8	733.0	752.8	775.0	744.6	714.2	733.0	749.3	727.1	707.2
32.5°	741.1	733.0	744.6	755.2	768.0	737.6	700.2	721.3	744.6	725.9	713.1
35°	768.0	757.5	768.0	763.3	764.5	729.4	700.2	716.6	740.0	734.1	738.8
37.5°	805.4	787.9	803.1	778.5	765.7	725.9	699.1	713.1	745.8	763.3	790.2
40°	869.7	827.6	861.5	811.3	771.5	725.9	701.4	714.2	758.7	810.1	874.4
42.5°	996.0	901.3	978.4	874.4	785.6	735.3	702.6	728.3	780.9	884.9	1014.7
45°	1190.0	1070.8	1165.5	978.4	814.8	758.7	725.9	757.5	821.8	998.3	1215.7
47.5°	1339.7	1253.1	1330.3	1125.7	895.4	805.4	765.7	811.3	911.8	1158.5	1379.4
50°	1518.5	1470.6	1497.5	1259.0	1031.0	884.9	827.6	898.9	1073.1	1283.5	1478.8
52.5°	1610.9	1609.7	1606.2	1415.6	1170.1	1014.7	924.7	1048.6	1227.4	1387.6	1571.1
55°	1700.9	1702.0	1696.2	1529.0	1360.7	1188.9	1097.7	1230.9	1377.1	1523.2	1678.7
57.5°	1663.5	1668.1	1658.8	1550.1	1502.1	1366.5	1298.7	1405.1	1524.4	1533.7	1642.4
60°	1573.4	1568.8	1565.3	1470.6	1511.5	1515.0	1458.9	1531.4	1519.7	1462.4	1544.2
62.5°	1419.1	1426.2	1425.0	1366.5	1441.4	1513.8	1515.0	1509.2	1443.7	1354.8	1393.4
65°	1240.3	1255.5	1248.5	1227.4	1331.5	1419.1	1441.4	1414.5	1324.5	1201.7	1197.0
67.5°	987.8	1035.7	1010.0	1054.4	1198.2	1277.7	1298.7	1278.9	1190.0	1027.5	938.7
70°	637.1	688.5	657.0	793.7	1040.4	1137.4	1136.2	1135.1	1017.0	766.9	607.9
72.5°	374.1	417.3	385.8	516.7	799.6	980.8	984.3	964.4	776.2	499.2	376.4
75°	209.2	219.8	211.6	292.2	549.4	754.0	801.9	737.6	530.7	291.1	228.0
77.5°	152.0	155.5	147.3	169.5	351.9	524.9	575.1	508.5	336.7	163.7	148.5
80°	130.9	133.3	126.2	118.1	213.9	344.8	385.8	327.3	196.4	113.4	123.9
82.5°	111.1	111.1	106.4	98.2	141.4	216.3	239.6	199.9	127.4	94.7	101.7
85°	90.0	87.7	85.3	86.5	106.4	139.1	147.3	128.6	98.2	83.0	79.5
87.5°	65.5	64.3	65.5	76.0	85.3	98.2	101.7	92.3	83.0	72.5	60.8
90°	37.4	38.6	43.3	57.3	69.0	71.3	76.0	67.8	66.6	56.1	40.9
92.5°	28.1	25.7	29.2	44.4	52.6	53.8	62.0	51.4	49.1	42.1	26.9
95°	28.1	24.5	29.2	37.4	40.9	39.7	45.6	38.6	40.9	36.2	26.9
97.5°	21.0	19.9	22.2	24.5	26.9	25.7	28.1	25.7	25.7	23.4	19.9
100°	16.4	14.0	16.4	17.5	18.7	18.7	18.7	17.5	17.5	16.4	15.2
102.5°	12.9	11.7	12.9	12.9	12.9	14.0	16.4	14.0	12.9	12.9	11.7
105°	10.5	10.5	11.7	11.7	10.5	11.7	12.9	11.7	10.5	11.7	10.5
107.5°	9.4	9.4	10.5	10.5	10.5	10.5	11.7	10.5	9.4	10.5	10.5
110°	8.2	8.2	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	8.2



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CATALOG NUMBER: QDCAST1B (4PANELS 10°TILT)

CANDELA DISTRIBUTION (continued):

	0°	2.5°	5°	15°	25°	35°	45°	55°	65°	75°	85°
112.5°	7.0	7.0	7.0	9.4	10.5	9.4	8.2	9.4	10.5	9.4	7.0
115°	7.0	7.0	7.0	9.4	9.4	8.2	9.4	8.2	9.4	9.4	7.0
117.5°	5.8	4.7	5.8	7.0	8.2	8.2	8.2	8.2	8.2	8.2	7.0
120°	5.8	5.8	5.8	7.0	8.2	8.2	8.2	8.2	8.2	7.0	5.8
122.5°	5.8	4.7	5.8	7.0	8.2	8.2	8.2	8.2	9.4	7.0	5.8
125°	5.8	4.7	5.8	8.2	9.4	8.2	8.2	8.2	9.4	8.2	5.8
127.5°	5.8	4.7	5.8	9.4	10.5	9.4	9.4	9.4	10.5	10.5	7.0
130°	7.0	7.0	8.2	10.5	11.7	10.5	10.5	10.5	11.7	10.5	9.4
132.5°	10.5	10.5	10.5	10.5	11.7	11.7	11.7	11.7	11.7	11.7	10.5
135°	14.0	14.0	12.9	10.5	11.7	12.9	12.9	12.9	11.7	11.7	12.9
137.5°	14.0	14.0	15.2	12.9	11.7	12.9	12.9	14.0	12.9	12.9	15.2
140°	12.9	12.9	12.9	15.2	15.2	15.2	15.2	14.0	16.4	16.4	14.0
142.5°	12.9	11.7	14.0	15.2	15.2	15.2	16.4	15.2	15.2	15.2	14.0
145°	11.7	11.7	12.9	12.9	14.0	15.2	15.2	16.4	15.2	14.0	12.9
147.5°	11.7	11.7	11.7	12.9	14.0	15.2	15.2	15.2	15.2	12.9	12.9
150°	11.7	10.5	11.7	11.7	12.9	14.0	14.0	14.0	14.0	12.9	12.9
152.5°	10.5	9.4	10.5	10.5	11.7	12.9	12.9	12.9	11.7	11.7	11.7
155°	10.5	9.4	9.4	10.5	10.5	10.5	10.5	10.5	10.5	10.5	9.4
157.5°	8.2	8.2	8.2	9.4	9.4	9.4	9.4	9.4	9.4	9.4	8.2
160°	7.0	7.0	7.0	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2
162.5°	7.0	5.8	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
165°	5.8	5.8	5.8	5.8	5.8	5.8	7.0	7.0	5.8	5.8	5.8
167.5°	5.8	4.7	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
170°	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7
172.5°	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
175°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
177.5°	2.3	2.3	2.3	2.3	2.3	1.2	1.2	1.2	2.3	2.3	2.3
180°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3



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CATALOG NUMBER: QDCAST1B (4PANELS 10°TILT)

CANDELA DISTRIBUTION (continued):

	90°
0°	1108.2
2.5°	1073.1
5°	979.6
7.5°	891.9
10°	821.8
12.5°	779.7
15°	750.5
17.5°	728.3
20°	713.1
22.5°	706.1
25°	700.2
27.5°	695.5
30°	697.9
32.5°	704.9
35°	733.0
37.5°	786.7
40°	880.2
42.5°	1031.0
45°	1238.0
47.5°	1399.3
50°	1490.5
52.5°	1579.3
55°	1678.7
57.5°	1638.9
60°	1533.7
62.5°	1380.6
65°	1178.3
67.5°	903.6
70°	575.1
72.5°	361.2
75°	226.8
77.5°	152.0
80°	129.8
82.5°	107.5
85°	83.0
87.5°	62.0
90°	36.2
92.5°	25.7
95°	25.7
97.5°	19.9
100°	15.2
102.5°	11.7
105°	10.5
107.5°	9.4
110°	8.2

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CATALOG NUMBER: QDCAST1B (4PANELS 10°TILT)

CANDELA DISTRIBUTION (continued):

	90°
112.5°	7.0
115°	7.0
117.5°	7.0
120°	5.8
122.5°	5.8
125°	5.8
127.5°	5.8
130°	8.2
132.5°	11.7
135°	14.0
137.5°	15.2
140°	12.9
142.5°	14.0
145°	12.9
147.5°	11.7
150°	12.9
152.5°	10.5
155°	9.4
157.5°	8.2
160°	8.2
162.5°	7.0
165°	5.8
167.5°	5.8
170°	4.7
172.5°	3.5
175°	2.3
177.5°	2.3
180°	2.3

(END OF REPORT)