

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: FAIL-SAFE

Report Number: 766706

Luminaire Tested: **QDGW-56xxxx**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: 766706  
Test Lab:  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: QDGW-56xxxx  
Description: FAIL-SAFE WHITE 12 x 12  
Light Source: #036, #038 - (2) PHILIPS PL-C 15mm/28W/27 3200 LUMENS  
TOTAL INPUT WATTS = 61.5 AT 120 VOLTS  
Ballast/Driver: TWO QSE #486 081692

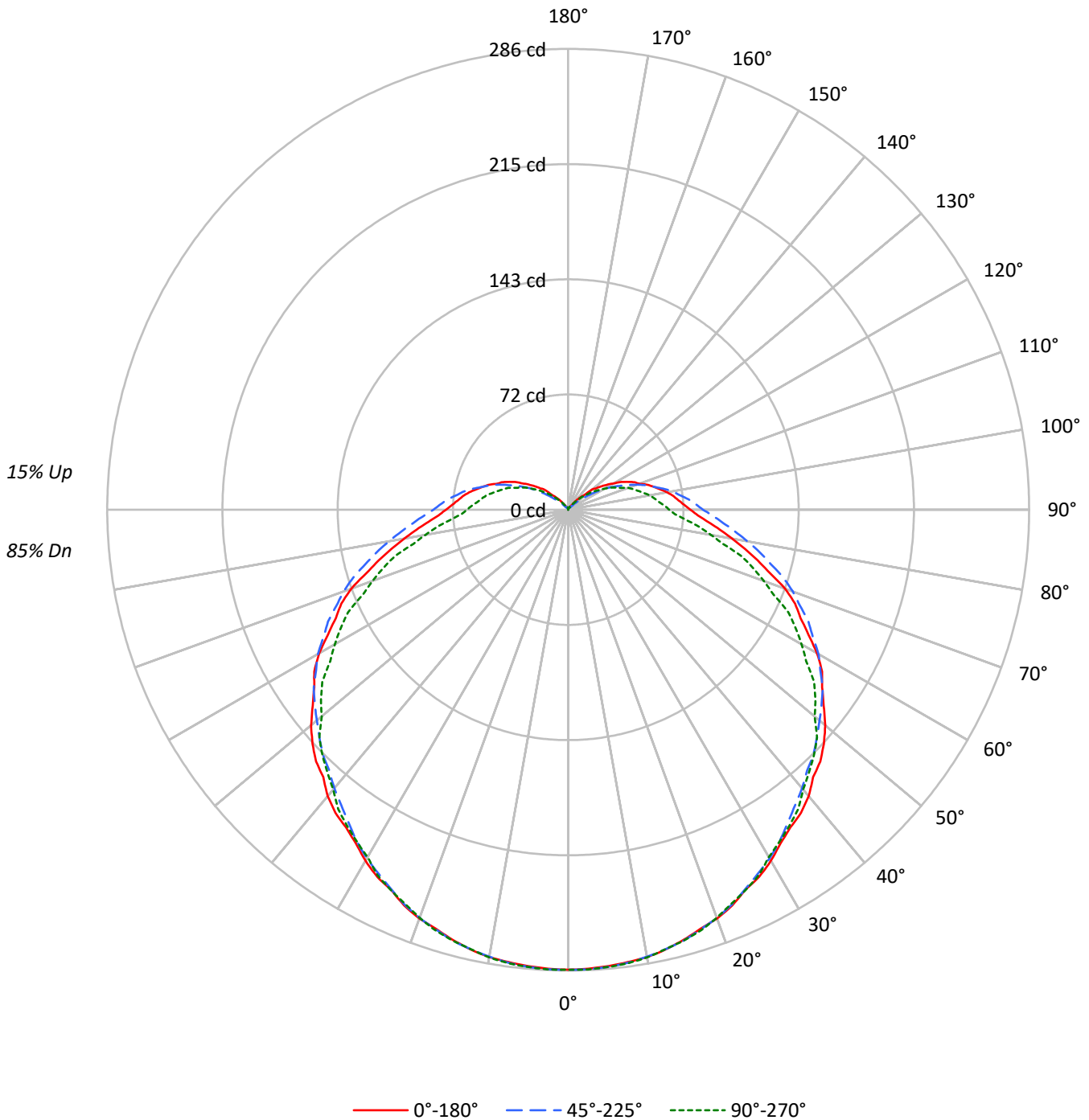
**Summary**

Lumens per Lamp: 1600 (2 lamps)  
Luminaire Lumens: 1292.1 lumens  
Efficiency: 40.4%  
Efficacy: 23.1 lumens/watt  
Spacing Criteria (0/90/45): 1.31 / 1.3 / 1.46  
Luminous Opening: Point Source (0' x 0' x 0')  
CIE Type: Semi-Direct

Input Watts (W): 56  
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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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20				20				20			
RC	80				70				50				30				10			
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
RCR																				
0	47	47	47	47	45	45	45	45	42	42	42	38	38	38	36	36	36	34	34	34
1	41	39	37	35	39	37	35	33	34	33	31	32	30	29	29	28	27	26	26	26
2	37	33	30	27	35	32	29	26	29	27	25	27	25	23	25	23	22	21	21	21
3	33	29	25	22	32	28	24	21	25	23	20	23	21	19	22	20	18	17	17	17
4	30	25	21	18	29	24	21	18	22	19	17	21	18	16	19	17	15	14	14	14
5	28	22	18	15	27	21	18	15	20	17	14	18	16	14	17	15	13	12	12	12
6	26	20	16	13	24	19	16	13	18	15	12	17	14	12	15	13	11	10	10	10
7	24	18	14	12	23	17	14	11	16	13	11	15	12	10	14	12	10	9	9	9
8	22	16	13	10	21	16	12	10	15	12	10	14	11	9	13	11	9	8	8	8
9	21	15	11	9	20	14	11	9	14	11	9	13	10	8	12	10	8	7	7	7
10	19	14	10	8	18	13	10	8	12	10	8	12	9	7	11	9	7	6	6	6

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	Luminaire represents a point source (luminous area is zero).		
5°	No luminance values can be calculated.		
10°			
15°			
20°			
25°			
30°			
35°			
40°			
45°			
50°			
55°			
60°			
65°			
70°			
75°			
80°			
85°			



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**ZONAL LUMENS:**

**CANDELA DISTRIBUTION:**

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	27.1	2.1	0.8	0°	286	286	286	286	286	
10°-20°	78.1	6.0	2.4	5°	284	285	285	285	285	27
20°-30°	120.1	9.3	3.8	15°	276	277	277	276	277	78
30°-40°	149.7	11.6	4.7	25°	260	261	260	260	260	121
40°-50°	167.0	12.9	5.2	35°	240	240	237	237	239	151
50°-60°	170.0	13.2	5.3	45°	221	219	215	214	216	170
60°-70°	157.8	12.2	4.9	55°	192	193	193	186	186	173
70°-80°	131.3	10.2	4.1	65°	159	163	164	156	151	159
80°-90°	98.9	7.7	3.1	75°	122	129	130	122	111	129
90°-100°	75.5	5.8	2.4	85°	87	96	97	88	74	75
100°-110°	55.1	4.3	1.7	90°	76	82	84	74	63	42
110°-120°	35.2	2.7	1.1	95°	68	74	75	66	56	55
120°-130°	17.6	1.4	0.5	105°	55	55	55	48	45	58
130°-140°	6.1	0.5	0.2	115°	41	37	35	39	32	40
140°-150°	1.5	0.1	0.0	125°	25	21	16	18	20	23
150°-160°	0.7	0.1	0.0	135°	11	9	4	7	9	9
160°-170°	0.3	0.0	0.0	145°	3	2	2	2	2	2
170°-180°	0.0	0.0	0.0	155°	2	2	2	2	2	1
0°-30°	225.3	17.4	7.0	165°	1	1	1	1	1	0
0°-40°	375.1	29.0	11.7	175°	0	0	0	0	0	0
0°-60°	712.2	55.1	22.3	180°	0	0	0	0	0	
0°-90°	1100.1	85.1	34.4							
90°-120°	165.7	12.8	5.2							
90°-150°	191.0	14.8	6.0							
90°-180°	192.0	14.9	6.0							
0°-180°	1292.1	100.0	40.4							



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	285.5	285.5	285.5	285.5	285.5
2.5°	285.1	285.4	285.5	285.6	285.6
5°	284.4	284.8	284.9	284.8	284.9
7.5°	283.2	283.7	283.7	283.4	283.9
10°	282.0	282.0	281.7	281.8	282.2
12.5°	279.6	279.5	279.4	279.5	279.3
15°	276.4	276.6	276.9	276.2	276.9
17.5°	272.8	273.4	273.1	272.8	273.8
20°	270.0	269.9	269.6	269.3	269.5
22.5°	265.9	265.1	265.3	264.9	264.7
25°	260.2	260.8	259.9	259.5	260.4
27.5°	256.8	255.7	254.8	254.4	255.9
30°	251.6	250.3	249.8	249.5	248.9
32.5°	245.3	244.7	244.1	244.6	244.1
35°	240.5	239.6	237.4	237.4	239.3
37.5°	237.2	234.5	231.2	231.6	234.3
40°	232.1	229.2	225.7	226.5	226.8
42.5°	225.0	223.2	219.5	220.2	221.1
45°	221.1	219.1	215.2	213.6	215.6
47.5°	215.1	213.0	209.3	207.0	209.4
50°	208.2	206.1	203.5	200.7	199.6
52.5°	199.8	199.8	198.2	192.9	193.3
55°	192.3	192.6	192.7	185.7	186.2
57.5°	186.8	186.1	185.4	178.2	175.1
60°	178.3	178.6	179.4	171.6	167.2
62.5°	168.0	170.9	171.1	163.1	159.1
65°	159.0	162.9	164.4	155.9	150.7
67.5°	152.3	155.3	155.6	147.8	138.0
70°	143.2	146.9	148.2	139.5	129.1
72.5°	131.3	137.2	139.8	129.9	120.2
75°	121.7	129.2	130.1	122.0	111.2
77.5°	112.3	120.1	121.6	112.1	98.4
80°	103.2	111.1	112.9	104.3	89.9
82.5°	94.9	102.5	104.5	94.8	82.1
85°	87.0	96.2	96.8	87.9	73.5
87.5°	80.5	88.8	89.9	80.1	66.4
90°	75.7	82.5	83.6	74.0	62.7
92.5°	71.8	78.3	79.0	70.0	59.7
95°	68.5	73.6	74.8	66.1	56.3
97.5°	65.6	69.1	69.6	61.7	53.9
100°	62.3	64.5	65.6	56.3	51.3
102.5°	58.4	60.2	60.3	52.3	48.1
105°	54.9	55.4	54.9	47.7	45.0
107.5°	51.5	50.0	50.5	42.8	42.2
110°	47.0	45.7	45.5	38.5	39.5



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	44.5	41.0	39.8	34.7	35.4
115°	40.9	36.6	34.8	39.2	32.4
117.5°	37.2	32.3	30.5	26.5	29.7
120°	32.6	28.7	25.5	23.2	26.3
122.5°	29.0	24.9	20.8	20.3	22.7
125°	25.4	21.0	15.9	17.7	19.9
127.5°	21.8	17.4	11.8	14.5	17.2
130°	19.6	14.4	8.7	11.8	14.1
132.5°	13.7	10.7	6.2	9.2	11.7
135°	11.0	8.7	3.9	7.0	8.9
137.5°	8.8	6.4	2.7	5.4	7.0
140°	6.4	4.5	2.3	3.9	5.3
142.5°	3.8	2.8	1.9	2.3	3.4
145°	2.6	2.0	1.9	1.9	2.2
147.5°	1.7	1.7	1.8	1.7	1.7
150°	1.7	1.7	1.7	1.6	1.7
152.5°	1.7	1.6	1.5	1.6	1.7
155°	1.5	1.5	1.5	1.5	1.7
157.5°	1.5	1.4	1.5	1.5	1.5
160°	1.4	1.4	1.5	1.5	1.5
162.5°	1.2	1.4	1.3	1.4	1.5
165°	1.2	1.2	1.4	1.4	1.4
167.5°	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)