

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: 766633

Luminaire Tested: **QDGC-56xxxx**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: 766633
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: QDGC-56xxxx
Description: FAIL-SAFE CLEAR 12 x 12
Light Source: #036 & #038 - PHILIPS PL-C 15mm/28W/27 3200 LUMENS
62.25 AT 120 VOLTS
Ballast/Driver: TWO QSE 486-081692

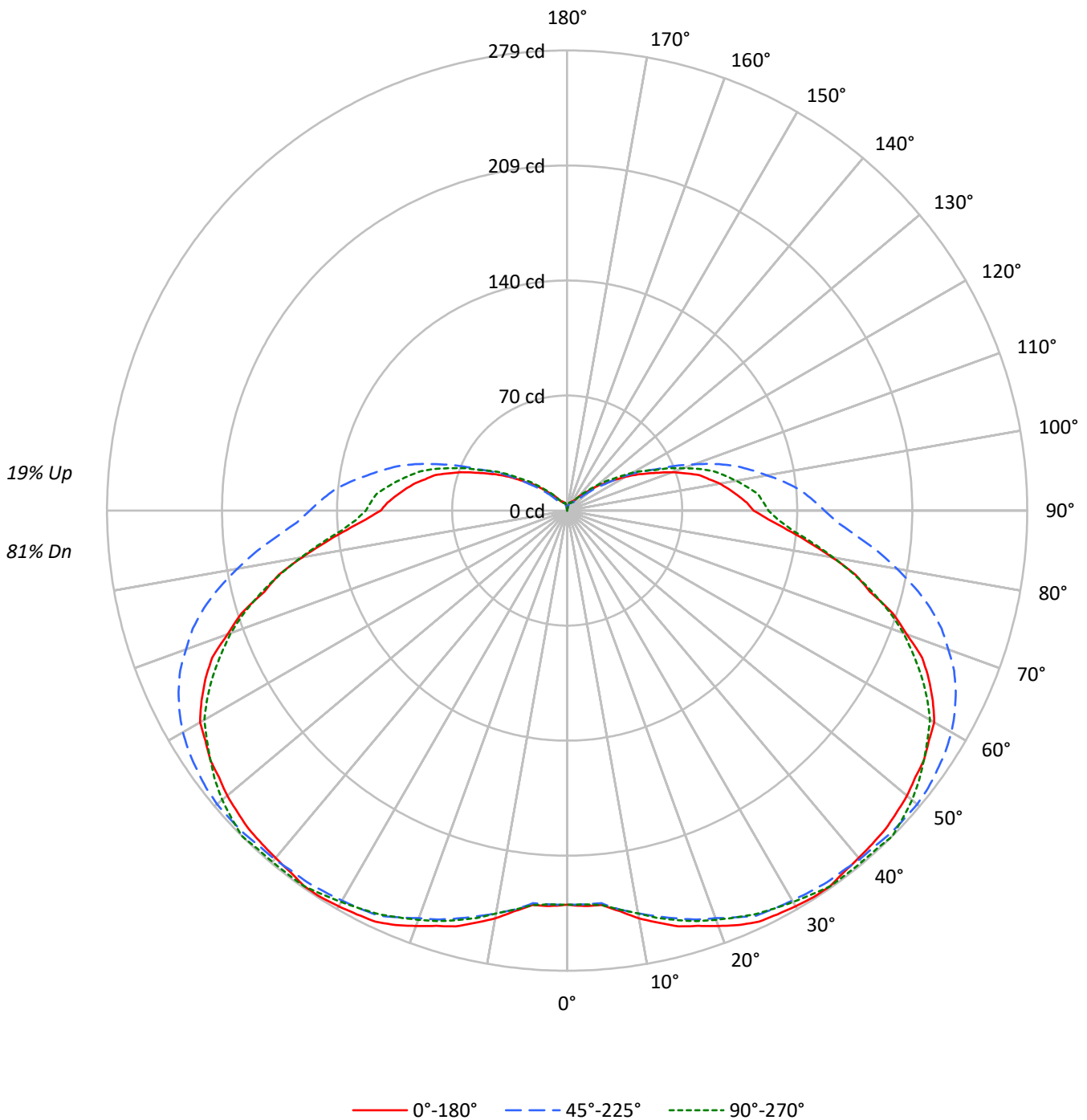
Summary

Lumens per Lamp: 1600 (2 lamps)
Luminaire Lumens: 1850.3 lumens
Efficiency: 57.8%
Efficacy: 33.0 lumens/watt
Spacing Criteria (0/90/45): 1.72 / 1.74 / 1.88
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	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	66	66	66	66	63	63	63	63	58	58	58	53	53	53	49	49	49	47
1	58	54	50	47	55	51	48	45	47	44	42	43	41	39	39	37	36	34
2	51	45	40	36	49	43	39	35	39	36	32	36	33	30	32	30	28	26
3	46	39	33	29	44	37	32	28	34	29	26	30	27	24	28	25	22	20
4	42	34	28	23	39	32	27	23	29	25	21	27	23	20	24	21	18	16
5	38	30	24	19	36	28	23	19	26	21	18	23	20	16	21	18	15	14
6	35	26	21	17	33	25	20	16	23	18	15	21	17	14	19	16	13	12
7	32	24	18	14	30	23	17	14	21	16	13	19	15	12	17	14	11	10
8	30	21	16	12	28	20	16	12	19	14	11	17	13	11	16	12	10	9
9	28	19	14	11	26	19	14	11	17	13	10	16	12	9	14	11	9	8
10	26	18	13	10	25	17	13	9	16	12	9	15	11	8	13	10	8	7

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
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°	45°	90°	135°	180°	Flux
0°-10°	23.2	1.3	0.7	0°	239	239	239	239	239	
10°-20°	73.1	4.0	2.3	5°	240	239	240	239	240	23
20°-30°	125.3	6.8	3.9	15°	261	256	257	256	261	74
30°-40°	173.3	9.4	5.4	25°	275	271	270	271	275	127
40°-50°	213.6	11.5	6.7	35°	278	275	278	275	278	174
50°-60°	241.3	13.0	7.5	45°	273	277	279	277	273	211
60°-70°	249.5	13.5	7.8	55°	264	274	264	274	264	236
70°-80°	226.6	12.2	7.1	65°	242	260	237	260	242	239
80°-90°	178.1	9.6	5.6	75°	190	228	192	228	190	203
90°-100°	140.6	7.6	4.4	85°	134	176	137	176	134	116
100°-110°	101.5	5.5	3.2	90°	113	156	122	156	113	63
110°-120°	57.5	3.1	1.8	95°	104	142	116	142	104	83
120°-130°	27.7	1.5	0.9	105°	83	105	92	105	83	87
130°-140°	10.9	0.6	0.3	115°	53	59	58	59	53	53
140°-150°	4.4	0.2	0.1	125°	29	28	33	28	29	27
150°-160°	2.5	0.1	0.1	135°	15	9	16	9	15	12
160°-170°	1.2	0.1	0.0	145°	7	6	7	6	7	5
170°-180°	0.1	0.0	0.0	155°	6	5	5	5	6	3
0°-30°	221.6	12.0	6.9	165°	5	4	5	4	5	1
0°-40°	394.9	21.3	12.3	175°	0	0	0	0	0	0
0°-60°	849.8	45.9	26.6	180°	0	0	0	0	0	
0°-90°	1503.9	81.3	47.0							
90°-120°	299.6	16.2	9.4							
90°-150°	342.6	18.5	10.7							
90°-180°	346.0	18.7	10.8							
0°-180°	1850.3	100.0	57.8							



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	239	239	239	239	239	239	239	239	239
2.5°	240	239	239	239	239	239	239	239	240
5°	240	240	239	240	240	240	239	240	240
7.5°	245	244	244	244	244	244	244	244	245
10°	251	248	248	249	248	249	248	248	251
12.5°	256	253	252	253	253	253	252	253	256
15°	261	257	256	258	257	258	256	257	261
17.5°	264	261	260	261	261	261	260	261	264
20°	268	264	263	264	264	264	263	264	268
22.5°	272	268	267	268	267	268	267	268	272
25°	275	271	271	271	270	271	271	271	275
27.5°	276	273	272	272	272	272	272	273	276
30°	277	274	273	274	274	274	273	274	277
32.5°	278	276	274	275	276	275	274	276	278
35°	278	277	275	276	278	276	275	277	278
37.5°	276	276	275	276	278	276	275	276	276
40°	275	276	276	277	278	277	276	276	275
42.5°	274	276	276	277	278	277	276	276	274
45°	273	276	277	277	279	277	277	276	273
47.5°	271	275	277	276	276	276	277	275	271
50°	269	274	277	275	273	275	277	274	269
52.5°	266	272	276	272	269	272	276	272	266
55°	264	270	274	270	264	270	274	270	264
57.5°	260	268	272	266	259	266	272	268	260
60°	257	266	269	262	254	262	269	266	257
62.5°	250	263	265	257	246	257	265	263	250
65°	242	259	260	251	237	251	260	259	242
67.5°	233	253	254	245	227	245	254	253	233
70°	219	245	246	237	217	237	246	245	219
72.5°	207	235	238	229	205	229	238	235	207
75°	190	222	228	219	192	219	228	222	190
77.5°	179	208	216	208	178	208	216	208	179
80°	163	194	203	195	164	195	203	194	163
82.5°	148	180	190	182	150	182	190	180	148
85°	134	167	176	168	137	168	176	167	134
87.5°	122	156	164	158	128	158	164	156	122
90°	113	146	156	148	122	148	156	146	113
92.5°	109	139	149	142	119	142	149	139	109
95°	104	132	142	136	116	136	142	132	104
97.5°	99	122	133	127	110	127	133	122	99
100°	94	113	123	118	104	118	123	113	94
102.5°	88	104	114	109	98	109	114	104	88
105°	83	95	105	100	92	100	105	95	83
107.5°	75	84	94	89	84	89	94	84	75
110°	68	73	82	79	75	79	82	73	68



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	60	62	71	68	67	68	71	62	60
115°	53	52	59	57	58	57	59	52	53
117.5°	47	46	51	51	52	51	51	46	47
120°	41	40	44	44	46	44	44	40	41
122.5°	35	34	36	38	39	38	36	34	35
125°	29	27	28	31	33	31	28	27	29
127.5°	26	24	23	27	29	27	23	24	26
130°	22	20	18	22	24	22	18	20	22
132.5°	18	16	14	18	20	18	14	16	18
135°	15	13	9	13	16	13	9	13	15
137.5°	13	11	8	12	14	12	8	11	13
140°	11	9	7	10	11	10	7	9	11
142.5°	9	8	7	8	9	8	7	8	9
145°	7	6	6	6	7	6	6	6	7
147.5°	7	6	6	6	6	6	6	6	7
150°	6	6	6	6	6	6	6	6	6
152.5°	6	6	5	6	6	6	5	6	6
155°	6	5	5	5	5	5	5	5	6
157.5°	5	5	5	5	5	5	5	5	5
160°	5	5	5	5	5	5	5	5	5
162.5°	5	5	5	5	5	5	5	5	5
165°	5	4	4	5	5	5	4	4	5
167.5°	4	3	3	3	4	3	3	3	4
170°	2	2	2	2	2	2	2	2	2
172.5°	1	1	1	1	1	1	1	1	1
175°	0	0	0	0	0	0	0	0	0
177.5°	0	0	0	0	0	0	0	0	0
180°	0	0	0	0	0	0	0	0	0

(END OF REPORT)