

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: 07309

Luminaire Tested: **TRO15-C-185QL-120-BK-L**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: 07309  
Test Lab: LUMINAIRE TESTING LABORATORY, INC.  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: TRO15-C-185QL-120-BK-L  
Description: CAST ALUMINUM HOUSING, FORMED WHITE ENAMEL ALUMINUM  
REFLECTOR, CLEAR POLYCARBONATE LINEAR PRISMATIC LENS.  
Light Source: ONE VBU 85 WATT INDUCTION LAMP RATED AT 6000 LUMENS.  
PHILIPS QL85W/830  
Ballast/Driver: ONE PHILIPS QL85W/S13

**Summary**

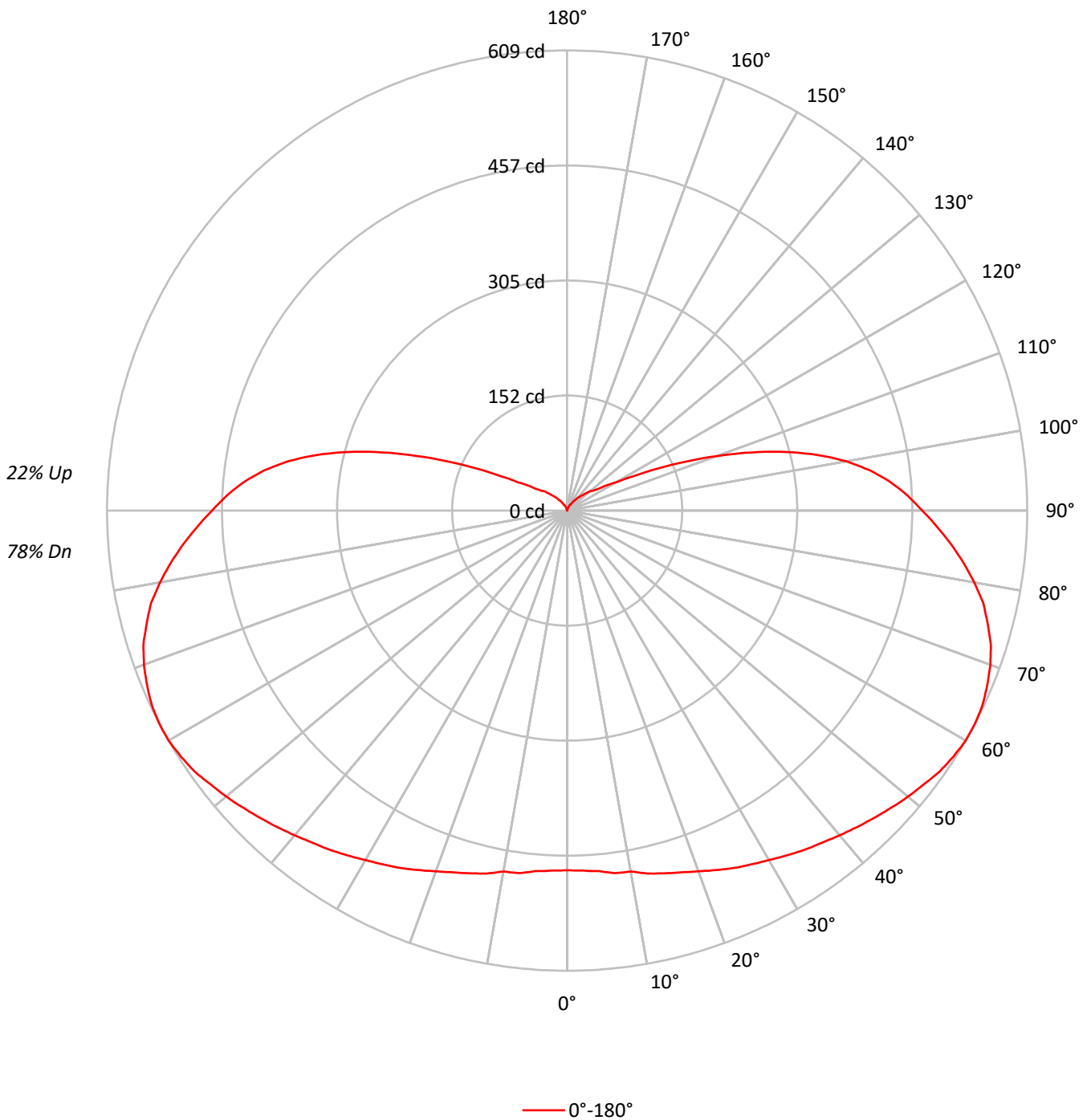
Lumens per Lamp: 6000 (1 lamp)  
Luminaire Lumens: 4522.7 lumens  
Efficiency: 75.4%  
Efficacy: 62.0 lumens/watt  
Spacing Criteria (0/90/45): 1.77 / 1.77 / 1.97  
Luminous Opening: Vertical Cylinder (Dia: 1.25' x H: 0.47')  
CIE Type: Semi-Direct

Input Watts (W): 73  
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	86	86	86	86	82	82	82	82	74	74	74	68	68	68	62	62	62	59
1	74	68	63	59	70	65	60	56	58	55	52	52	50	47	47	45	43	40
2	65	57	50	44	61	54	48	42	48	43	39	43	39	35	39	35	32	29
3	58	48	41	35	55	46	39	33	41	35	31	37	32	28	33	29	25	23
4	53	42	34	28	49	40	33	27	36	30	25	32	27	23	28	24	21	18
5	48	37	29	23	45	35	28	22	31	25	21	28	23	19	25	21	17	15
6	44	33	25	20	41	31	24	19	28	22	17	25	20	16	22	18	15	12
7	41	29	22	17	38	28	21	16	25	19	15	23	18	14	20	16	13	11
8	38	26	20	15	35	25	19	14	23	17	13	21	16	12	18	14	11	9
9	35	24	17	13	33	23	17	12	21	15	12	19	14	11	17	13	10	8
10	33	22	16	11	31	21	15	11	19	14	10	17	13	9	16	12	9	7

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

	0°
0°	4175
5°	4048
10°	3983
15°	4000
20°	4038
25°	4130
30°	4237
35°	4395
40°	4583
45°	4823
50°	5118
55°	5468
60°	5840
65°	6216
70°	6602
75°	7005
80°	7437
85°	7930



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**ZONAL LUMENS:**

**CANDELA DISTRIBUTION:**

Zone	Lumens	% Fixture	% Lamp	0°	Flux	
0°-10°	46.0	1.0	0.8	0°	476	
10°-20°	141.2	3.1	2.4	5°	479	46
20°-30°	241.7	5.3	4.0	15°	497	141
30°-40°	344.3	7.6	5.7	25°	522	242
40°-50°	445.6	9.9	7.4	35°	548	344
50°-60°	538.9	11.9	9.0	45°	575	446
60°-70°	600.6	13.3	10.0	55°	602	539
70°-80°	608.0	13.4	10.1	65°	607	601
80°-90°	555.7	12.3	9.3	75°	576	608
90°-100°	466.1	10.3	7.8	85°	510	424
100°-110°	315.1	7.0	5.3	90°	470	258
110°-120°	134.9	3.0	2.2	95°	430	340
120°-130°	48.0	1.1	0.8	105°	300	315
130°-140°	23.2	0.5	0.4	115°	130	135
140°-150°	9.6	0.2	0.2	125°	50	48
150°-160°	3.4	0.1	0.1	135°	29	23
160°-170°	0.3	0.0	0.0	145°	16	10
170°-180°	0.0	0.0	0.0	155°	8	3
0°-30°	428.9	9.5	7.1	165°	1	0
0°-40°	773.2	17.1	12.9	175°	0	0
0°-60°	1757.8	38.9	29.3	180°	0	0
0°-90°	3522.0	77.9	58.7			
90°-120°	916.1	20.3	15.3			
90°-150°	997.0	22.0	16.6			
90°-180°	1001.0	22.1	16.7			
0°-180°	4522.7	100.0	75.4			



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**CANDELA DISTRIBUTION (FULL):**

	0°
0°	476
2.5°	477
5°	479
7.5°	484
10°	485
12.5°	492
15°	497
17.5°	502
20°	508
22.5°	515
25°	522
27.5°	528
30°	534
32.5°	541
35°	548
37.5°	554
40°	561
42.5°	568
45°	575
47.5°	582
50°	589
52.5°	595
55°	602
57.5°	606
60°	609
62.5°	609
65°	607
67.5°	602
70°	596
72.5°	588
75°	576
77.5°	564
80°	547
82.5°	529
85°	510
87.5°	490
90°	470
92.5°	451
95°	430
97.5°	405
100°	375
102.5°	340
105°	300
107.5°	256
110°	211



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**CANDELA DISTRIBUTION (continued):**

	0°
112.5°	169
115°	130
117.5°	98
120°	75
122.5°	62
125°	50
127.5°	43
130°	40
132.5°	34
135°	29
137.5°	25
140°	22
142.5°	17
145°	16
147.5°	12
150°	9
152.5°	9
155°	8
157.5°	6
160°	2
162.5°	2
165°	1
167.5°	0
170°	0
172.5°	0
175°	0
177.5°	0
180°	0

(END OF REPORT)