

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: BALLABS TEST NO. 5602.3

Luminaire Tested: **CFS-12-232-IK12**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: BALLABS TEST NO. 5602.3
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: CFS-12-232-IK12
Description:
Light Source: FO32T8
Ballast/Driver: -

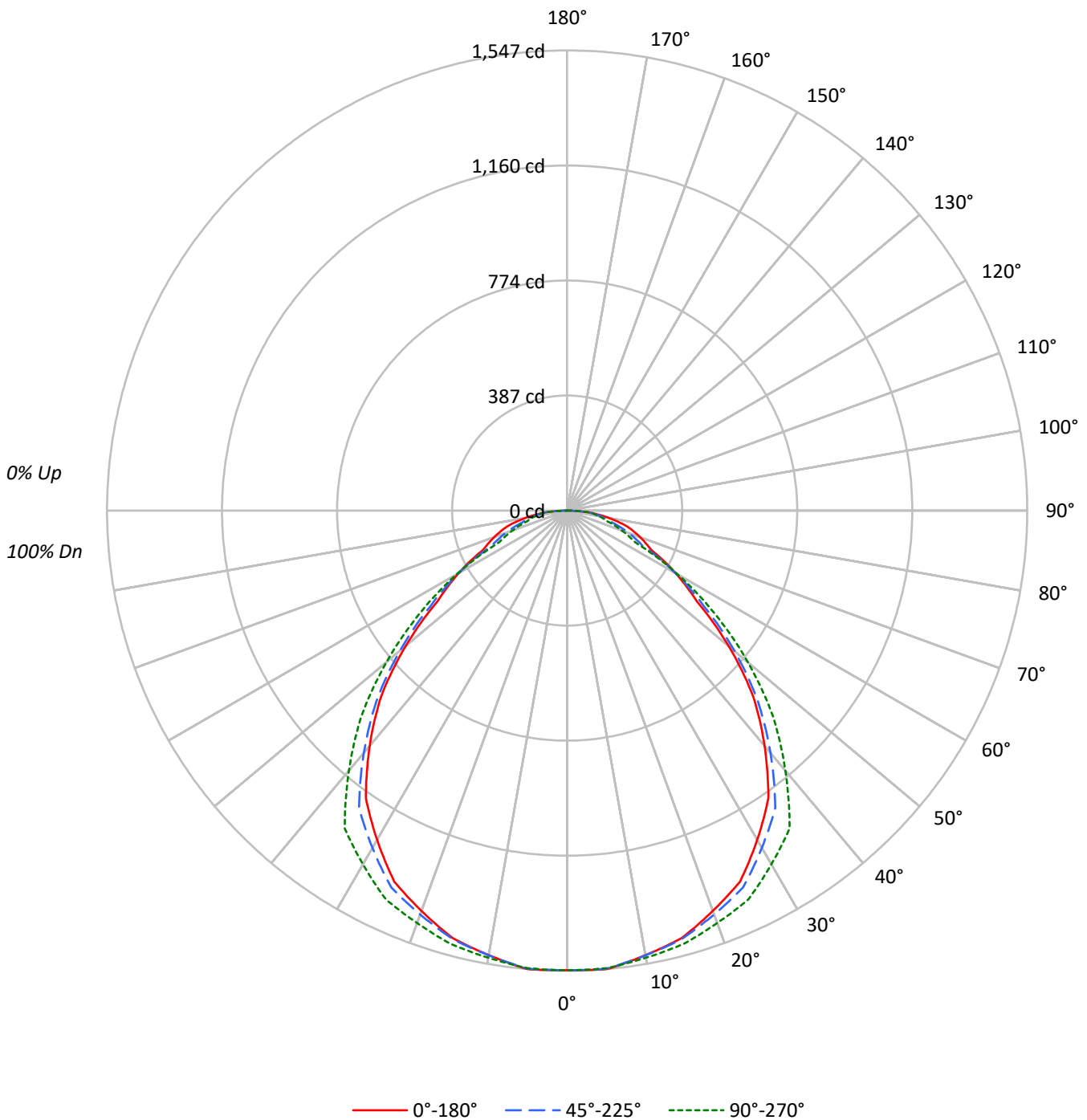
Summary

Lumens per Lamp: 2850 (2 lamps)
Luminaire Lumens: 3754.1 lumens
Efficiency: 65.9%
Efficacy: 50.7 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.32 / 1.31
Luminous Opening: Rectangular w/ Sides (W: 1' x L: 4' x H: 0.4')
CIE Type: Direct

Input Watts (W): 74
Input Voltage (V): NR
Input Current (A_{in}): 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	78	78	78	78	77	77	77	77	73	73	73		70	70	70		67	67	67	66
1	72	69	67	64	70	68	65	63	65	63	61		63	61	59		60	59	58	56
2	66	61	57	54	65	60	56	53	58	54	52		56	53	51		54	51	49	48
3	61	54	49	45	59	53	49	45	51	47	44		50	46	43		48	45	43	41
4	56	49	43	39	55	48	43	39	46	42	38		45	41	38		43	40	37	36
5	52	44	38	34	50	43	38	34	42	37	33		40	36	33		39	36	33	31
6	48	40	34	30	47	39	34	30	38	33	30		37	33	29		36	32	29	28
7	45	36	31	27	43	36	30	27	35	30	26		34	29	26		33	29	26	25
8	42	33	28	24	41	33	27	24	32	27	24		31	27	24		30	26	23	22
9	39	30	25	22	38	30	25	22	29	25	21		29	24	21		28	24	21	20
10	37	28	23	20	36	28	23	20	27	23	20		27	22	19		26	22	19	18

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4159	4159	4159
5°	4143	4049	4030
10°	4075	3905	3896
15°	4037	3795	3796
20°	3957	3666	3689
25°	3903	3565	3609
30°	3754	3378	3466
35°	3622	3212	3346
40°	3347	2881	3002
45°	3064	2549	2660
50°	2651	2163	2248
55°	2184	1751	1814
60°	1935	1405	1367
65°	1633	1015	864
70°	1610	877	735
75°	1592	713	584
80°	1419	600	518
85°	1107	451	436



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ZONAL LUMENS:

CANDELA DISTRIBUTION:

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	146.6	3.9	2.6	0°	1545	1545	1545	1545	1545	
10°-20°	420.9	11.2	7.4	5°	1547	1546	1545	1545	1544	147
20°-30°	640.3	17.1	11.2	15°	1488	1490	1491	1500	1509	418
30°-40°	751.5	20.0	13.2	25°	1376	1387	1398	1420	1442	627
40°-50°	703.9	18.7	12.3	35°	1180	1200	1220	1262	1304	726
50°-60°	523.0	13.9	9.2	45°	886	896	907	943	979	674
60°-70°	321.3	8.6	5.6	55°	532	547	562	585	608	507
70°-80°	182.7	4.9	3.2	65°	311	296	280	266	252	339
80°-90°	66.2	1.8	1.2	75°	210	185	159	150	140	214
90°-100°	0.0	0.0	0.0	85°	77	75	74	76	79	78
100°-110°	0.0	0.0	0.0	90°	0	0	0	0	0	
110°-120°	0.0	0.0	0.0							
120°-130°	0.0	0.0	0.0							
130°-140°	0.0	0.0	0.0							
140°-150°	0.0	0.0	0.0							
150°-160°	0.0	0.0	0.0							
160°-170°	0.0	0.0	0.0							
170°-180°	0.0	0.0	0.0							
0°-30°	1207.8	32.2	21.2							
0°-40°	1959.2	52.2	34.4							
0°-60°	3186.1	84.9	55.9							
0°-90°	3756.4	100.1	65.9							
90°-120°	0.0	0.0	0.0							
90°-150°	0.0	0.0	0.0							
90°-180°	0.0	0.0	0.0							
0°-180°	3754.1	100.0	65.9							



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CANDELA DISTRIBUTION (FULL):

	0°	45°	90°
0°	1545.4	1545.4	1545.4
5°	1547.2	1545.4	1544.0
15°	1488.0	1491.1	1508.8
25°	1375.9	1398.5	1442.3
35°	1179.7	1219.9	1304.0
45°	885.5	906.7	978.6
55°	532.0	561.8	607.5
65°	311.4	280.2	252.2
75°	210.2	159.1	140.1
85°	76.8	73.7	78.6
90°	0.0	0.0	0.0

(END OF REPORT)