

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: G3-1708-221-2

Luminaire Tested: **FUSL-N12-4-LD4-3STD-40-UNV-80/86-EDC1**

Test Date: 11/16/17



Test Information

Test Method: LM-79-08
Report Number: G3-1708-221-2
Test Lab: INNOVATION CENTER(G3)
Test Date: 11/16/17
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FUSL-N12-4-LD4-3STD-40-UNV-80/86-EDC1
Description: FUSL CONFINEMENT/CORRECTIONAL LED LUMINAIRE
Light Source: (336) NICHIA 4000K LEDS
757-GV1
Ballast/Driver: (3) OSRAM ELECTRONIC DRIVER @ 700 mA
OTi50/120-277/1A4 DIM L

Summary

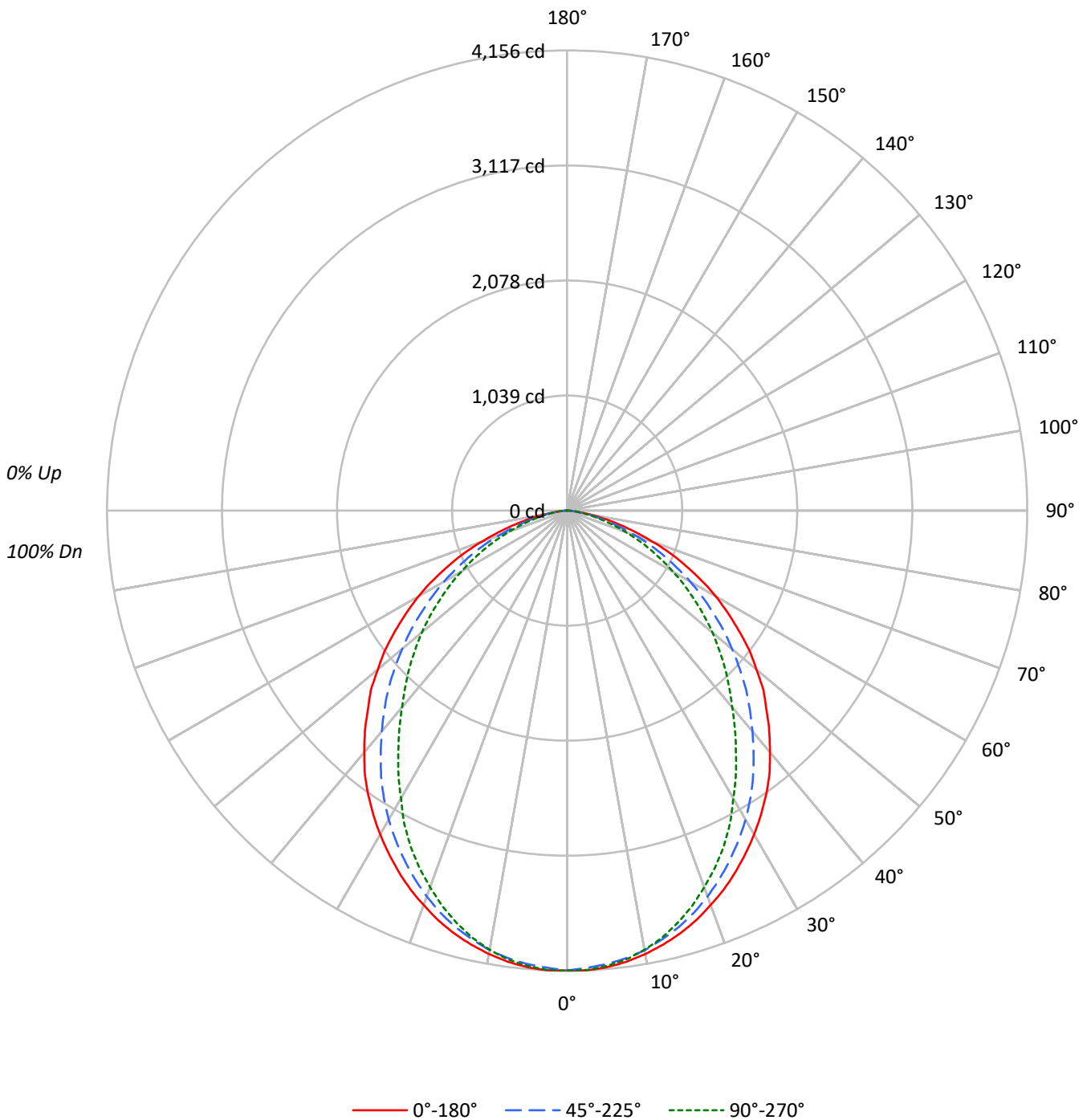
Lumens per Lamp: N/A
Luminaire Lumens: 9619.6 lumens
Efficiency: N/A
Efficacy: 98.9 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.1 / 1.25
Luminous Opening: Rectangular (W 0.46' x L: 3.58' x H: 0')
CIE Type: Direct

Input Watts (W): 97.3
Input Voltage (V): 120.0
Input Current (Ain): 0.813
Voltage Rise (V): NR
Power Factor: 0.9992
Total Harmonic Distortion (THDi): 7.44%
Frequency (hertz): 60
Stabilization Time: 0.5 HR
Operation Time: 7 HR
Ambient Temperature (°C): 25.9
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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75	73
3	92	83	75	69	90	81	74	68	78	72	67	75	70	66	73	69	65	63
4	85	74	65	59	83	72	65	59	70	63	58	68	62	57	65	60	56	54
5	78	66	58	51	76	65	57	51	63	56	51	61	55	50	59	54	49	47
6	73	60	51	45	71	59	51	45	57	50	45	56	49	44	54	48	44	42
7	67	54	46	40	66	54	46	40	52	45	40	51	44	39	49	44	39	37
8	63	50	42	36	61	49	41	36	48	41	36	47	40	36	46	40	35	33
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	30
10	55	42	35	30	54	42	35	30	41	34	30	40	34	29	39	33	29	28

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	27225	27225	27225
5°	27230	27053	27151
10°	27066	26833	26806
15°	26815	26421	26157
20°	26441	25862	25241
25°	26033	25165	24196
30°	25564	24399	22719
35°	25067	23435	21266
40°	24375	22279	19849
45°	23589	21179	18695
50°	22758	19821	17466
55°	21653	18374	16008
60°	20317	16830	14458
65°	18330	14919	12732
70°	15694	12513	10654
75°	12459	9724	8382
80°	8303	6529	5926
85°	3760	4361	4963



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	391.4	4.1
10°-20°	1099.1	11.4
20°-30°	1601.6	16.6
30°-40°	1820.8	18.9
40°-50°	1763.2	18.3
50°-60°	1463.4	15.2
60°-70°	972.9	10.1
70°-80°	429.1	4.5
80°-90°	78.2	0.8
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	3092.1	32.1
0°-40°	4912.8	51.1
0°-60°	8139.4	84.6
0°-90°	9619.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9619.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4154	4154	4154	4154	4154	
5°	4139	4135	4112	4131	4127	393
15°	3952	3941	3894	3879	3855	1114
25°	3600	3582	3480	3395	3346	1658
35°	3133	3090	2929	2732	2658	1957
45°	2545	2497	2285	2085	2017	1967
55°	1895	1820	1608	1470	1401	1694
65°	1182	1100	962	861	821	1174
75°	492	447	384	347	331	528
85°	50	56	58	63	66	79
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4154	4154	4154	4154	4154
2.5°	4156	4152	4133	4153	4152
5°	4139	4135	4112	4131	4127
7.5°	4109	4103	4077	4095	4089
10°	4067	4060	4032	4037	4028
12.5°	4014	4006	3966	3965	3952
15°	3952	3941	3894	3879	3855
17.5°	3878	3864	3808	3774	3747
20°	3791	3779	3708	3656	3619
22.5°	3702	3685	3599	3531	3490
25°	3600	3582	3480	3395	3346
27.5°	3491	3472	3354	3246	3186
30°	3378	3349	3224	3079	3002
32.5°	3257	3230	3080	2909	2835
35°	3133	3090	2929	2732	2658
37.5°	3001	2950	2767	2571	2489
40°	2849	2804	2604	2407	2320
42.5°	2703	2659	2443	2244	2165
45°	2545	2497	2285	2085	2017
47.5°	2405	2336	2113	1926	1863
50°	2232	2165	1944	1778	1713
52.5°	2074	1991	1783	1623	1559
55°	1895	1820	1608	1470	1401
57.5°	1720	1648	1447	1314	1257
60°	1550	1461	1284	1153	1103
62.5°	1370	1279	1119	1002	961
65°	1182	1100	962	861	821
67.5°	1011	931	808	717	687
70°	819	753	653	584	556
72.5°	648	595	513	457	435
75°	492	447	384	347	331
77.5°	346	314	268	246	239
80°	220	203	173	163	157
82.5°	119	115	104	104	103
85°	50	56	58	63	66
87.5°	13	25	33	35	35
90°	0	0	0	0	0

(END OF REPORT)