

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: P27124

Luminaire Tested: **FUSL-N12-4-LD4-2HI-40-UNV-80/86**

Test Date: 11/22/15



Test Information

Test Method: LM-79-08
Report Number: P27124
Test Lab: INNOVATION CENTER-P2
Test Date: 11/22/15
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FUSL-N12-4-LD4-2HI-40-UNV-80/86
Description: FAILSAFE LED 4' FUSL SLOPE SIDED CLAMSHELL CORRECTIONAL
FIXTURE
Light Source: (168) NICHIA 4000K LEDS
2UT217042A8404A
Ballast/Driver: (2) OSRAM ELECTRONIC DRIVER
OSRAM OT50W

Summary

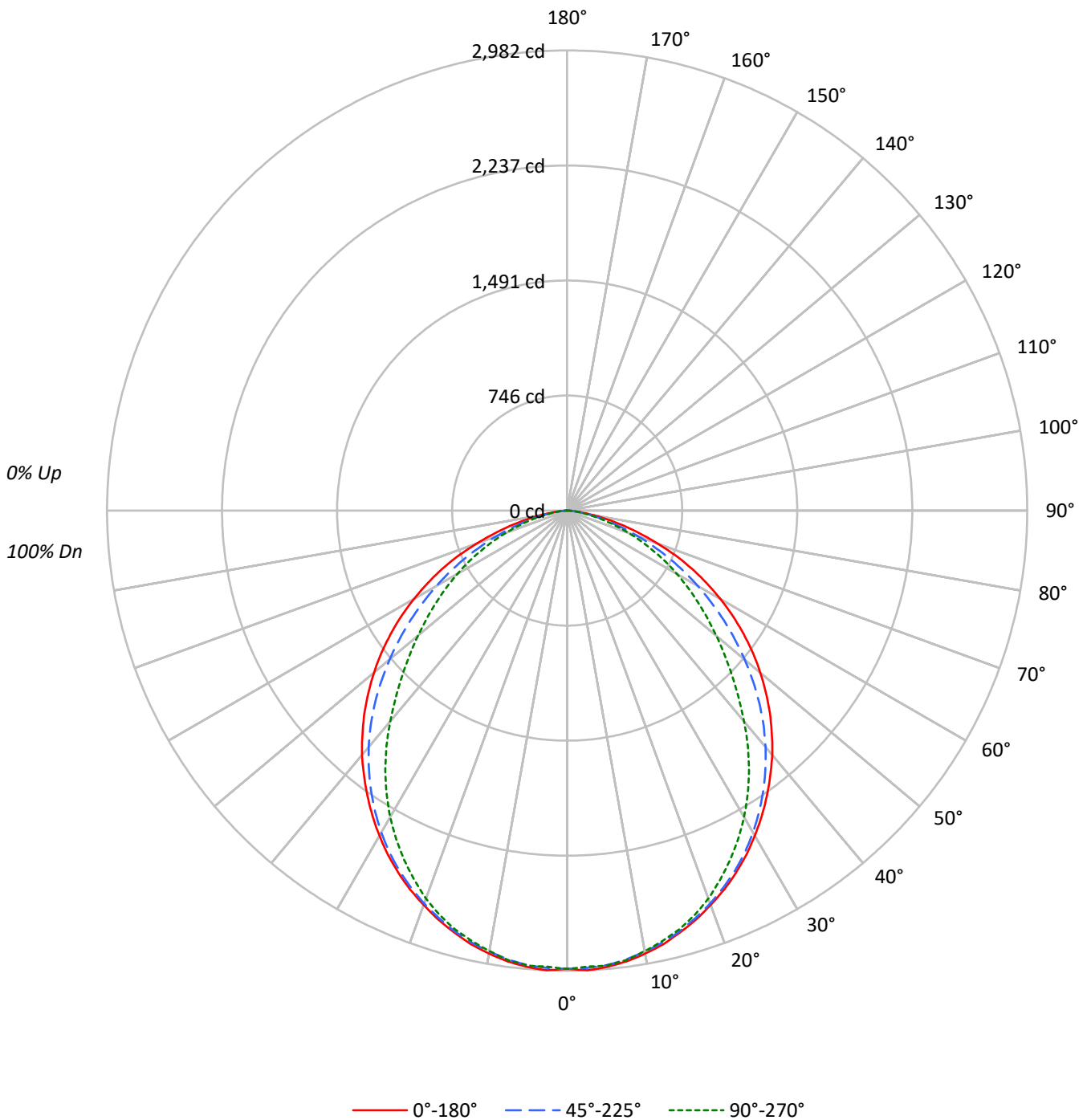
Lumens per Lamp: N/A
Luminaire Lumens: 7159.4 lumens
Efficiency: N/A
Efficacy: 79.5 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.16 / 1.3
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 90.1
Input Voltage (V): 120.01
Input Current (A_{in}): 0.75357
Voltage Rise (V): NR
Power Factor: 0.9993
Total Harmonic Distortion (THDi): 7.39%
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: 24 HR
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	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					100			
1	110	105	102	98	107	103	100	97	99	96	93	95	93	91	92	90	88					86				
2	101	93	87	81	98	91	85	80	88	83	78	84	80	77	81	78	75					73				
3	92	82	75	69	90	81	74	68	78	72	67	75	70	66	73	68	64					62				
4	85	73	65	59	82	72	64	58	70	63	57	67	61	57	65	60	56					54				
5	78	66	57	51	76	65	57	51	63	56	50	61	54	50	59	53	49					47				
6	72	60	51	45	70	59	50	45	57	50	44	55	49	44	54	48	43					41				
7	67	54	46	40	65	53	45	40	52	45	39	50	44	39	49	43	39					37				
8	63	50	41	36	61	49	41	36	48	40	35	46	40	35	45	39	35					33				
9	59	46	38	32	57	45	37	32	44	37	32	43	36	32	42	36	32					30				
10	55	42	34	29	54	42	34	29	41	34	29	40	33	29	39	33	29					27				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	15984	15984	15984
5°	16040	15975	15986
10°	15930	15859	15838
15°	15768	15718	15651
20°	15573	15521	15326
25°	15374	15285	14834
30°	15120	14971	14250
35°	14829	14559	13502
40°	14529	14051	12527
45°	14142	13396	11501
50°	13681	12568	10558
55°	13108	11616	9693
60°	12335	10538	8848
65°	11359	9245	7857
70°	9803	7726	6656
75°	7923	5947	5240
80°	5424	4060	3750
85°	2717	2655	2841



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	280.4	3.9
10°-20°	794.0	11.1
20°-30°	1175.5	16.4
30°-40°	1362.7	19.0
40°-50°	1325.3	18.5
50°-60°	1097.5	15.3
60°-70°	735.6	10.3
70°-80°	328.1	4.6
80°-90°	60.4	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°	2249.9	31.4
0°-40°	3612.6	50.5
0°-60°	6035.3	84.3
0°-90°	7159.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7159.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2970	2970	2970	2970	2970	
5°	2969	2951	2957	2954	2959	282
15°	2830	2818	2821	2811	2809	798
25°	2589	2580	2574	2518	2498	1193
35°	2257	2253	2216	2101	2055	1412
45°	1858	1849	1760	1583	1511	1432
55°	1397	1373	1238	1084	1033	1247
65°	892	847	726	642	617	879
75°	381	347	286	261	252	407
85°	44	45	43	45	46	66
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2970	2970	2970	2970	2970
2.5°	2982	2963	2967	2969	2958
5°	2969	2951	2957	2954	2959
7.5°	2947	2929	2934	2930	2938
10°	2915	2900	2902	2898	2898
12.5°	2878	2863	2867	2859	2857
15°	2830	2818	2821	2811	2809
17.5°	2779	2767	2768	2752	2748
20°	2719	2711	2710	2681	2676
22.5°	2659	2647	2645	2602	2589
25°	2589	2580	2574	2518	2498
27.5°	2515	2506	2496	2427	2400
30°	2433	2426	2409	2326	2293
32.5°	2347	2342	2315	2219	2178
35°	2257	2253	2216	2101	2055
37.5°	2163	2160	2111	1980	1923
40°	2068	2061	2000	1850	1783
42.5°	1964	1958	1883	1717	1644
45°	1858	1849	1760	1583	1511
47.5°	1747	1736	1632	1450	1383
50°	1634	1620	1501	1325	1261
52.5°	1518	1499	1369	1203	1144
55°	1397	1373	1238	1084	1033
57.5°	1275	1243	1107	971	926
60°	1146	1113	979	858	822
62.5°	1018	981	852	749	719
65°	892	847	726	642	617
67.5°	759	714	605	541	518
70°	623	585	491	440	423
72.5°	496	463	384	347	333
75°	381	347	286	261	252
77.5°	269	249	201	188	180
80°	175	162	131	124	121
82.5°	99	93	78	77	78
85°	44	45	43	45	46
87.5°	13	18	24	28	30
90°	0	0	0	0	0

(END OF REPORT)