

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: P27114

Luminaire Tested: **FUSL-N12-4-LD4-1HI-40-UNV-80/86**

Test Date: 11/21/15



Test Information

Test Method: LM-79-08
Report Number: P27114
Test Lab: INNOVATION CENTER-P2
Test Date: 11/21/15
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FUSL-N12-4-LD4-1HI-40-UNV-80/86
Description: FAILSAFE LED 4' FUSL SLOPE SIDED CLAMSHELL CORRECTIONAL
FIXTURE
Light Source: (84) NICHIA 4000K LEDS
2UT217042A8404A
Ballast/Driver: (1) OSRAM ELECTRONIC DRIVER
OSRAM OT50W

Summary

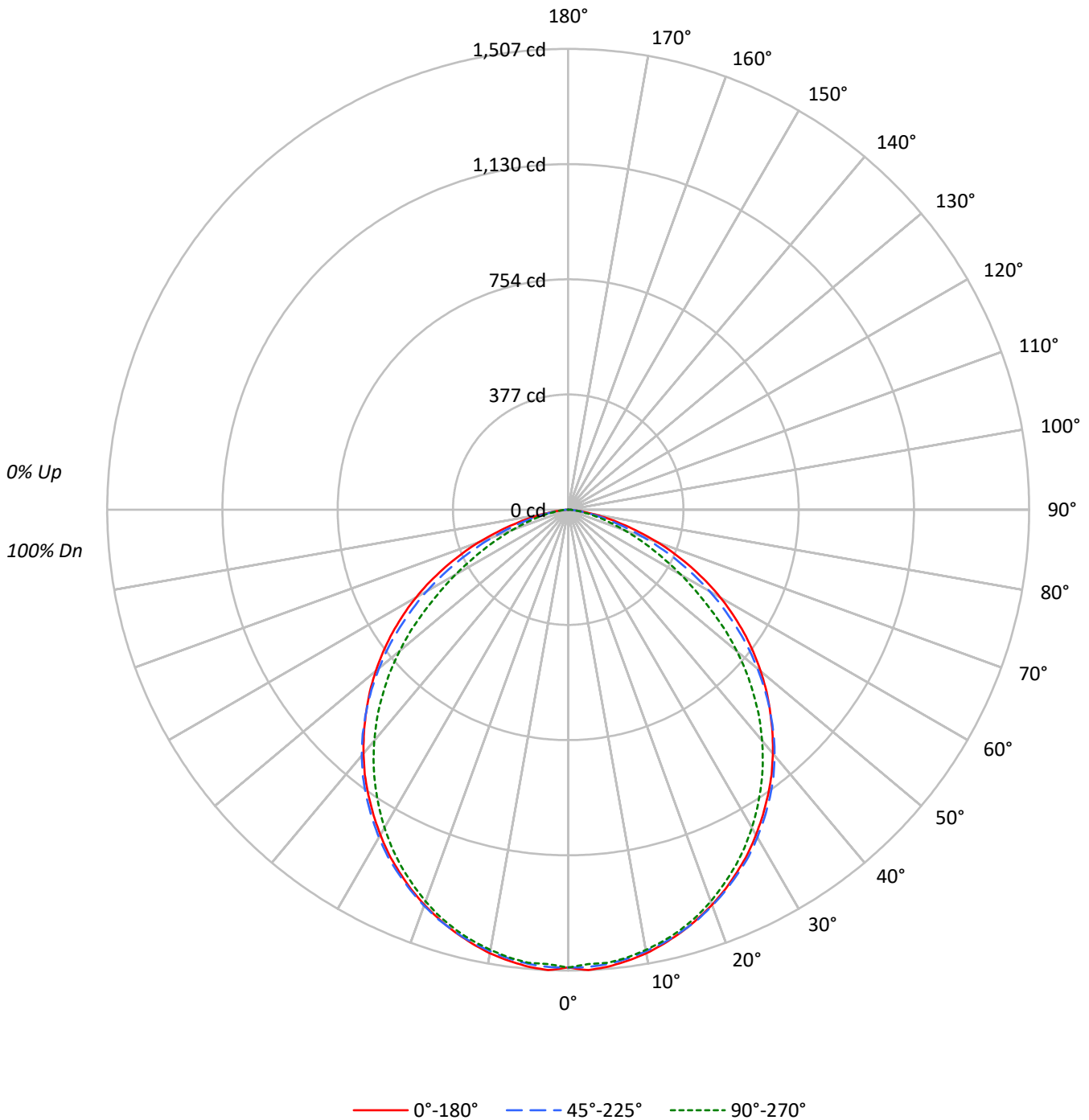
Lumens per Lamp: N/A
Luminaire Lumens: 3712.9 lumens
Efficiency: N/A
Efficacy: 82.3 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.2 / 1.33
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 45.1
Input Voltage (V): 120.05
Input Current (A_{in}): 0.37665
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	106	102	98	107	103	100	97	99	96	94	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	68	90	81	74	68	78	72	67	75	70	65	72	68	64					62				
4	85	73	65	58	82	72	64	58	69	63	57	67	61	57	65	60	56					54				
5	78	66	57	51	76	65	56	50	62	55	50	61	54	49	59	53	49					47				
6	72	59	51	44	70	58	50	44	57	49	44	55	48	44	53	48	43					41				
7	67	54	45	39	65	53	45	39	52	44	39	50	44	39	49	43	38					37				
8	62	49	41	35	61	49	41	35	47	40	35	46	40	35	45	39	35					33				
9	58	45	37	32	57	45	37	32	44	37	32	42	36	31	41	36	31					30				
10	55	42	34	29	53	41	34	29	40	33	29	39	33	29	39	33	29					27				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4028	4028	4028
5°	4052	4028	4017
10°	4025	4006	3995
15°	3984	3981	3962
20°	3938	3946	3903
25°	3881	3899	3827
30°	3816	3844	3732
35°	3742	3775	3614
40°	3657	3688	3464
45°	3554	3554	3269
50°	3437	3383	3014
55°	3289	3153	2660
60°	3095	2874	2293
65°	2814	2509	1910
70°	2439	2054	1534
75°	1913	1549	1164
80°	1286	1038	821
85°	618	618	618



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	141.3	3.8
10°-20°	401.6	10.8
20°-30°	599.5	16.1
30°-40°	706.7	19.0
40°-50°	703.8	19.0
50°-60°	585.4	15.8
60°-70°	381.8	10.3
70°-80°	164.2	4.4
80°-90°	28.6	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°	1142.4	30.8
0°-40°	1849.1	49.8
0°-60°	3138.3	84.5
0°-90°	3712.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3712.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1497	1497	1497	1497	1497	
5°	1500	1484	1491	1486	1487	142
15°	1430	1418	1429	1424	1422	403
25°	1307	1300	1313	1294	1289	602
35°	1139	1143	1149	1112	1100	712
45°	934	942	934	881	859	720
55°	701	708	672	607	567	626
65°	442	444	394	331	300	437
75°	184	183	149	123	112	199
85°	20	22	20	20	20	31
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1497	1497	1497	1497	1497
2.5°	1507	1490	1497	1493	1487
5°	1500	1484	1491	1486	1487
7.5°	1488	1474	1481	1476	1477
10°	1473	1459	1466	1462	1462
12.5°	1453	1440	1450	1444	1444
15°	1430	1418	1429	1424	1422
17.5°	1404	1393	1406	1398	1395
20°	1375	1365	1378	1366	1363
22.5°	1343	1334	1347	1331	1327
25°	1307	1300	1313	1294	1289
27.5°	1270	1265	1278	1255	1247
30°	1228	1226	1237	1211	1201
32.5°	1184	1186	1194	1163	1152
35°	1139	1143	1149	1112	1100
37.5°	1092	1096	1102	1059	1045
40°	1041	1047	1050	1002	986
42.5°	988	996	994	944	925
45°	934	942	934	881	859
47.5°	879	889	872	817	792
50°	821	829	808	750	720
52.5°	762	770	742	680	647
55°	701	708	672	607	567
57.5°	638	645	603	533	494
60°	575	580	534	462	426
62.5°	509	512	463	394	360
65°	442	444	394	331	300
67.5°	376	375	325	271	244
70°	310	307	261	216	195
72.5°	243	245	201	167	151
75°	184	183	149	123	112
77.5°	132	130	104	86	79
80°	83	84	67	56	53
82.5°	47	47	38	34	33
85°	20	22	20	20	20
87.5°	5	9	11	13	13
90°	0	0	0	0	0

(END OF REPORT)