

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: P183411

Luminaire Tested: **FSR-24-4-LD4-3STD-80-84**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P183411
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P26872)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FSR-24-4-LD4-3STD-80-84
Description:
Light Source: 2UT217042A8404A
Ballast/Driver: ELECTRONIC DRIVER

Summary

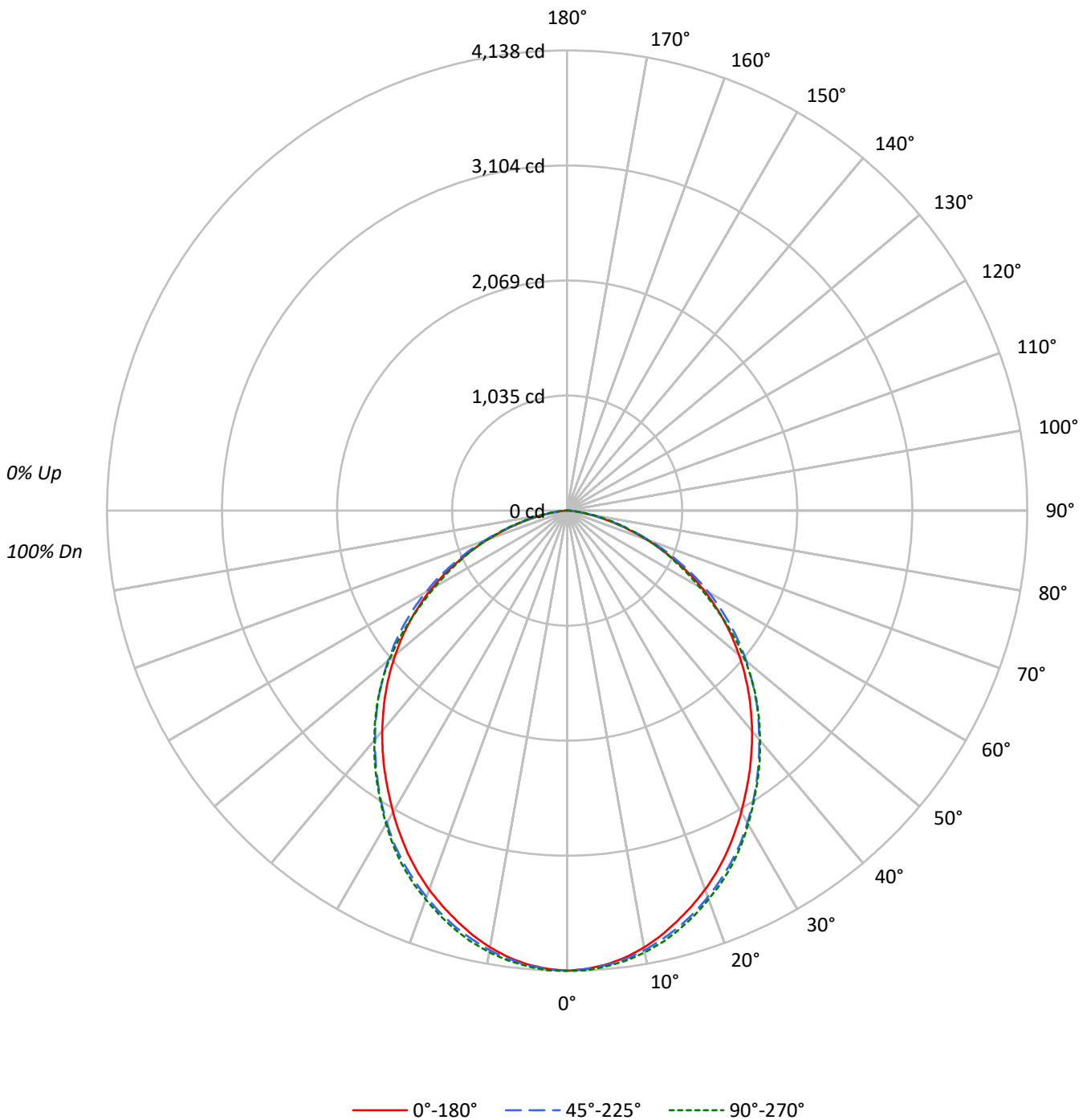
Lumens per Lamp: N/A
Luminaire Lumens: 10000.9 lumens
Efficiency: N/A
Efficacy: 96.3 lumens/watt
Spacing Criteria (0/90/45): 1.14 / 1.18 / 1.29
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 103.8
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	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102	102	102	100
1	110	105	101	98	107	103	99	96	99	96	93		95	92	90		91	89	88	86
2	100	92	86	81	98	91	85	80	87	82	78		84	80	76		81	77	74	72
3	92	82	74	68	89	80	73	67	77	71	66		74	69	65		72	68	64	62
4	84	73	64	58	82	71	64	57	69	62	57		67	61	56		65	59	55	53
5	78	65	57	50	76	64	56	50	62	55	49		60	54	49		58	53	48	46
6	72	59	50	44	70	58	50	44	56	49	43		55	48	43		53	47	43	41
7	67	54	45	39	65	53	45	39	51	44	39		50	43	38		48	43	38	36
8	62	49	41	35	61	48	40	35	47	40	35		46	39	34		45	39	34	32
9	58	45	37	32	57	44	37	32	43	36	31		42	36	31		41	35	31	29
10	55	42	34	29	53	41	34	29	40	33	29		39	33	28		38	33	28	27

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5568	5568	5568
5°	5532	5542	5555
10°	5449	5485	5510
15°	5325	5400	5431
20°	5194	5295	5327
25°	5040	5179	5215
30°	4865	5037	5060
35°	4699	4879	4897
40°	4545	4721	4739
45°	4389	4568	4580
50°	4222	4401	4372
55°	4035	4201	4050
60°	3793	3947	3695
65°	3445	3585	3365
70°	2971	3112	3009
75°	2354	2481	2515
80°	1625	1757	1884
85°	866	1030	1179



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	389.0	3.9
10°-20°	1090.6	10.9
20°-30°	1598.4	16.0
30°-40°	1842.2	18.4
40°-50°	1831.8	18.3
50°-60°	1568.1	15.7
60°-70°	1081.4	10.8
70°-80°	507.4	5.1
80°-90°	92.0	0.9
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°	3077.9	30.8
0°-40°	4920.2	49.2
0°-60°	8320.1	83.2
0°-90°	10000.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10000.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4138	4138	4138	4138	4138	
5°	4096	4099	4103	4113	4113	388
15°	3823	3844	3877	3902	3899	1077
25°	3395	3429	3488	3524	3513	1562
35°	2861	2889	2971	2996	2981	1790
45°	2306	2327	2401	2418	2407	1779
55°	1720	1734	1791	1778	1727	1536
65°	1082	1090	1126	1076	1057	1070
75°	453	463	477	477	484	488
85°	56	63	67	74	76	81
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4138.0	4138.0	4138.0	4138.0	4138.0
2.5°	4124.2	4125.8	4125.8	4135.6	4138.0
5°	4095.7	4099.0	4103.0	4112.8	4112.8
7.5°	4050.2	4055.9	4064.8	4079.5	4080.3
10°	3988.4	3998.2	4014.4	4032.3	4033.1
12.5°	3912.0	3926.6	3948.6	3974.6	3973.8
15°	3822.6	3844.5	3877.0	3902.2	3899.0
17.5°	3727.4	3754.3	3794.1	3820.1	3814.4
20°	3627.5	3654.3	3698.2	3730.7	3720.1
22.5°	3515.3	3547.0	3598.2	3631.5	3622.6
25°	3394.9	3429.1	3488.4	3524.2	3512.8
27.5°	3264.9	3303.1	3373.0	3406.3	3390.1
30°	3131.5	3169.8	3242.1	3276.2	3256.7
32.5°	2993.3	3029.1	3110.4	3137.2	3118.5
35°	2860.8	2889.3	2970.6	2995.8	2981.1
37.5°	2725.1	2750.3	2829.9	2854.3	2842.9
40°	2587.7	2610.4	2687.7	2711.2	2698.2
42.5°	2446.2	2469.0	2545.4	2564.9	2555.1
45°	2306.4	2326.7	2400.7	2417.8	2407.2
47.5°	2162.5	2186.1	2252.7	2266.5	2252.7
50°	2017.0	2038.1	2102.3	2112.1	2088.5
52.5°	1870.6	1892.6	1948.7	1948.7	1912.9
55°	1720.2	1734.1	1791.0	1778.0	1726.7
57.5°	1566.6	1580.4	1630.0	1596.7	1540.6
60°	1409.7	1420.3	1466.6	1409.7	1373.1
62.5°	1247.9	1255.2	1301.6	1243.8	1212.1
65°	1082.1	1090.2	1126.0	1075.6	1056.9
67.5°	917.8	925.2	961.7	919.5	913.0
70°	755.2	763.4	791.0	765.8	765.0
72.5°	598.3	608.1	627.6	617.9	621.1
75°	452.8	462.6	477.2	477.2	483.7
77.5°	321.1	331.7	342.3	351.2	356.1
80°	209.7	217.1	226.8	237.4	243.1
82.5°	120.3	126.8	131.7	143.9	143.9
85°	56.1	62.6	66.7	74.0	76.4
87.5°	17.9	22.0	23.6	26.8	27.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)