

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: P183410

Luminaire Tested: **FSR-24-4-LD4-4LO-80-84**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P183410
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P26871)
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-LD4-4LO-80-84
Description:
Light Source: 2UT217042A8404A
Ballast/Driver: ELECTRONIC DRIVER

Summary

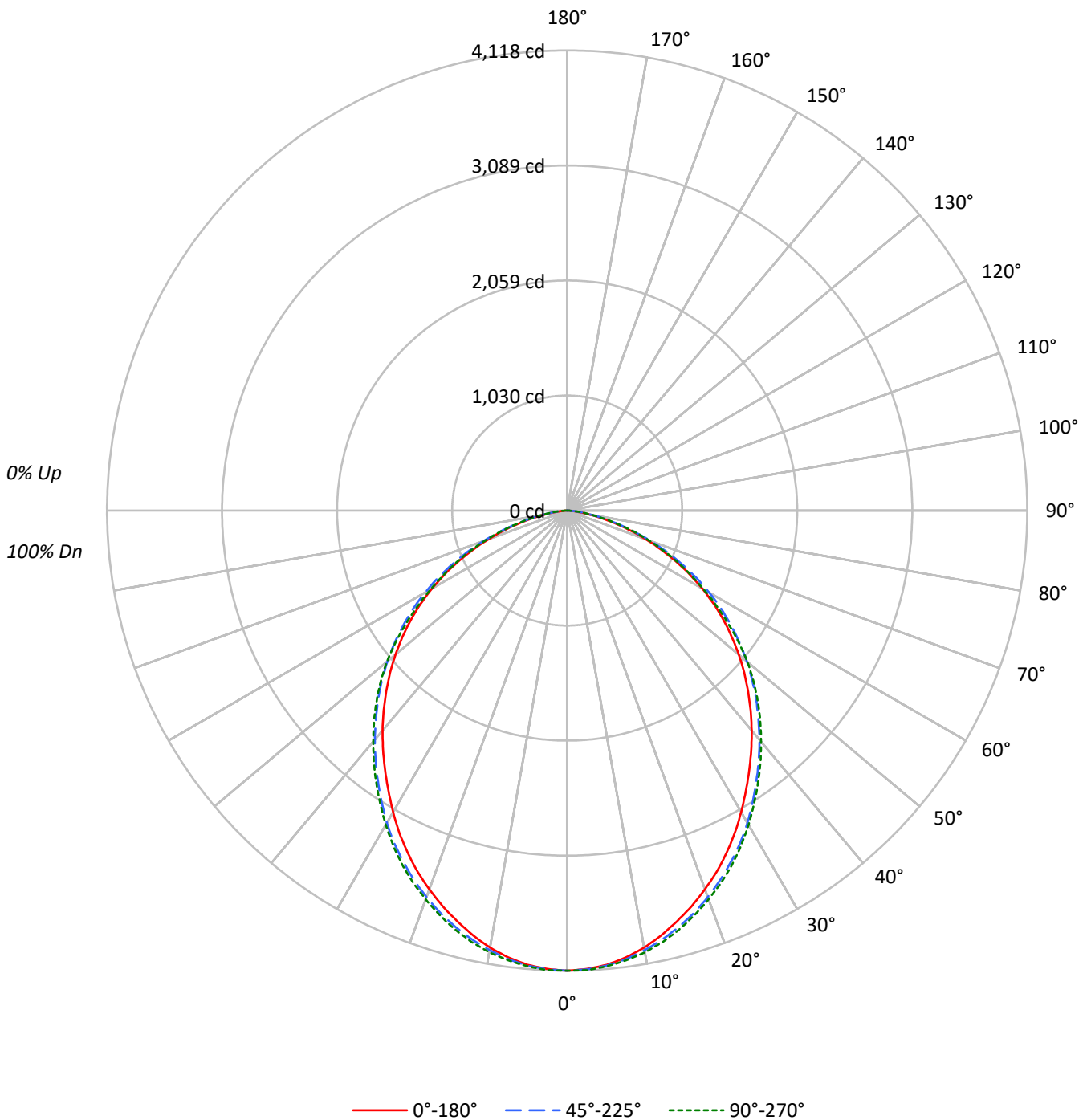
Lumens per Lamp: N/A
Luminaire Lumens: 9979.1 lumens
Efficiency: N/A
Efficacy: 101.0 lumens/watt
Spacing Criteria (0/90/45): 1.14 / 1.18 / 1.29
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 98.8
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	67	64	62
4	84	73	64	58	82	71	64	57	69	62	57		67	61	56		64	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		54	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	31	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	32	28	27

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5541	5541	5541
5°	5510	5519	5529
10°	5426	5459	5483
15°	5299	5373	5405
20°	5164	5270	5301
25°	5015	5149	5188
30°	4839	5014	5045
35°	4666	4851	4890
40°	4514	4703	4741
45°	4358	4553	4590
50°	4198	4396	4410
55°	4008	4198	4121
60°	3758	3955	3807
65°	3409	3597	3469
70°	2937	3118	3048
75°	2341	2501	2481
80°	1601	1745	1757
85°	852	979	1048



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	387.2	3.9
10°-20°	1084.8	10.9
20°-30°	1589.3	15.9
30°-40°	1833.7	18.4
40°-50°	1827.4	18.3
50°-60°	1570.9	15.7
60°-70°	1088.8	10.9
70°-80°	508.2	5.1
80°-90°	88.8	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°	3061.3	30.7
0°-40°	4895.0	49.1
0°-60°	8293.3	83.1
0°-90°	9979.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9979.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4118	4118	4118	4118	4118	
5°	4080	4079	4087	4096	4093	386
15°	3804	3824	3858	3878	3880	1072
25°	3378	3409	3468	3500	3494	1554
35°	2840	2874	2953	2981	2977	1778
45°	2290	2316	2393	2418	2412	1767
55°	1708	1723	1790	1792	1757	1525
65°	1071	1084	1130	1104	1090	1059
75°	450	462	481	488	477	484
85°	55	60	63	68	68	80
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4117.9	4117.9	4117.9	4117.9	4117.9
2.5°	4106.7	4105.2	4109.7	4117.2	4116.4
5°	4079.9	4079.1	4086.6	4096.3	4093.3
7.5°	4033.6	4037.4	4048.5	4060.5	4059.0
10°	3971.7	3977.7	3995.6	4012.0	4013.5
12.5°	3893.4	3907.6	3931.5	3950.9	3953.1
15°	3803.9	3824.1	3857.6	3878.5	3880.0
17.5°	3710.7	3733.8	3775.6	3794.3	3795.0
20°	3606.3	3633.9	3680.9	3703.3	3702.5
22.5°	3497.5	3527.3	3578.7	3606.3	3603.3
25°	3378.1	3408.7	3468.4	3500.4	3494.5
27.5°	3251.4	3284.2	3354.3	3384.1	3375.2
30°	3114.9	3149.9	3227.5	3256.6	3246.9
32.5°	2975.4	3012.0	3091.0	3121.6	3112.7
35°	2840.5	2874.0	2953.1	2981.4	2976.9
37.5°	2705.5	2735.3	2817.4	2846.4	2841.2
40°	2569.8	2596.6	2677.9	2707.0	2699.5
42.5°	2430.3	2456.4	2533.2	2565.3	2557.8
45°	2290.1	2316.2	2393.0	2417.6	2412.4
47.5°	2149.2	2173.0	2246.9	2270.0	2262.5
50°	2005.3	2023.2	2100.0	2117.9	2106.7
52.5°	1857.6	1876.2	1945.6	1959.0	1933.7
55°	1708.5	1722.6	1789.7	1792.0	1756.9
57.5°	1554.1	1569.8	1633.1	1621.2	1583.2
60°	1396.7	1404.9	1469.8	1438.5	1414.6
62.5°	1235.7	1247.6	1304.3	1269.2	1247.6
65°	1070.9	1084.3	1129.8	1103.7	1089.5
67.5°	907.5	919.5	965.7	942.6	930.7
70°	746.5	762.1	792.7	784.5	774.8
72.5°	593.6	606.3	629.4	633.1	623.4
75°	450.4	461.6	481.0	488.5	477.3
77.5°	318.4	329.6	340.1	351.2	343.0
80°	206.6	216.3	225.2	232.7	226.7
82.5°	118.6	125.3	130.5	137.2	137.2
85°	55.2	59.7	63.4	67.9	67.9
87.5°	18.6	20.9	23.1	23.9	22.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)