

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: P183412

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

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P183412
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-LD4-3LO-80-84
Description:
Light Source: 2UT217042A8404A
Ballast/Driver: ELECTRONIC DRIVER

Summary

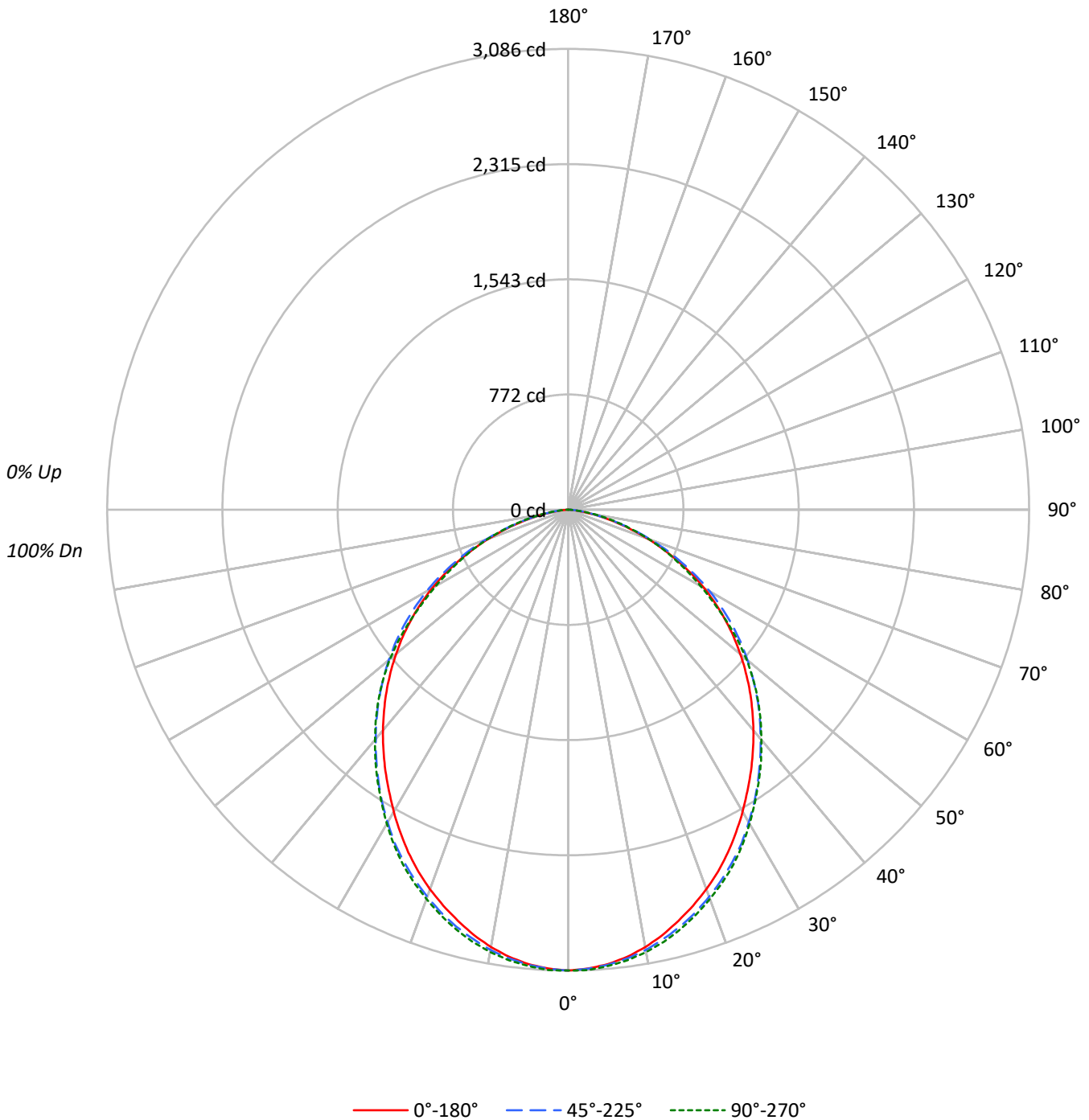
Lumens per Lamp: N/A
Luminaire Lumens: 7457.9 lumens
Efficiency: N/A
Efficacy: 100.6 lumens/watt
Spacing Criteria (0/90/45): 1.14 / 1.18 / 1.29
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 74.1
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	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	101	98	107	103	99	96	99	96	93	95	92	90	91	89	88	86					86			
2	100	92	86	81	98	91	85	80	87	82	78	84	80	76	81	77	74	72					72			
3	92	82	74	68	89	80	73	67	77	71	66	74	69	65	72	68	64	62					62			
4	84	73	64	58	82	71	64	57	69	62	57	67	61	56	65	59	55	53					53			
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46					46			
6	72	59	50	44	70	58	50	44	56	49	43	55	48	43	53	47	43	41					41			
7	67	54	45	39	65	53	45	39	51	44	39	50	43	38	48	43	38	36					36			
8	62	49	41	35	61	48	40	35	47	40	35	46	39	34	45	39	34	32					32			
9	58	45	37	32	57	44	37	32	43	36	31	42	36	31	41	35	31	29					29			
10	55	42	34	29	53	41	34	29	40	33	29	39	33	28	38	33	28	27					27			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4152	4152	4152
5°	4125	4133	4142
10°	4064	4090	4109
15°	3971	4027	4050
20°	3873	3949	3972
25°	3759	3862	3889
30°	3628	3756	3773
35°	3504	3639	3652
40°	3389	3520	3534
45°	3273	3407	3416
50°	3148	3282	3260
55°	3009	3133	3021
60°	2829	2943	2756
65°	2569	2673	2509
70°	2216	2321	2244
75°	1756	1850	1875
80°	1212	1310	1405
85°	645	767	880



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	290.1	3.9
10°-20°	813.3	10.9
20°-30°	1192.0	16.0
30°-40°	1373.8	18.4
40°-50°	1366.1	18.3
50°-60°	1169.3	15.7
60°-70°	806.4	10.8
70°-80°	378.4	5.1
80°-90°	68.6	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°	2295.3	30.8
0°-40°	3669.1	49.2
0°-60°	6204.5	83.2
0°-90°	7457.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7457.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3086	3086	3086	3086	3086	
5°	3054	3057	3060	3067	3067	289
15°	2851	2867	2891	2910	2908	803
25°	2532	2557	2601	2628	2620	1165
35°	2133	2155	2215	2234	2223	1335
45°	1720	1735	1790	1803	1795	1326
55°	1283	1293	1336	1326	1288	1145
65°	807	813	840	802	788	798
75°	338	345	356	356	361	364
85°	42	47	50	55	57	61
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3085.8	3085.8	3085.8	3085.8	3085.8
2.5°	3075.5	3076.7	3076.7	3084.0	3085.8
5°	3054.3	3056.7	3059.7	3067.0	3067.0
7.5°	3020.3	3024.6	3031.2	3042.2	3042.8
10°	2974.3	2981.5	2993.7	3007.0	3007.6
12.5°	2917.3	2928.2	2944.6	2964.0	2963.3
15°	2850.6	2867.0	2891.2	2910.0	2907.6
17.5°	2779.7	2799.7	2829.4	2848.8	2844.5
20°	2705.1	2725.1	2757.8	2782.1	2774.2
22.5°	2621.4	2645.1	2683.3	2708.1	2701.4
25°	2531.7	2557.2	2601.4	2628.1	2619.6
27.5°	2434.7	2463.2	2515.3	2540.2	2528.1
30°	2335.3	2363.8	2417.7	2443.2	2428.6
32.5°	2232.2	2258.9	2319.5	2339.5	2325.6
35°	2133.4	2154.6	2215.2	2234.0	2223.1
37.5°	2032.1	2050.9	2110.4	2128.5	2120.1
40°	1929.7	1946.7	2004.3	2021.8	2012.1
42.5°	1824.2	1841.2	1898.2	1912.7	1905.4
45°	1719.9	1735.1	1790.3	1803.0	1795.1
47.5°	1612.6	1630.2	1679.9	1690.2	1679.9
50°	1504.1	1519.9	1567.8	1575.0	1557.5
52.5°	1395.0	1411.3	1453.2	1453.2	1426.5
55°	1282.8	1293.1	1335.6	1325.9	1287.7
57.5°	1168.2	1178.5	1215.5	1190.7	1148.8
60°	1051.2	1059.1	1093.7	1051.2	1024.0
62.5°	930.6	936.0	970.6	927.6	903.9
65°	806.9	813.0	839.7	802.1	788.1
67.5°	684.5	689.9	717.2	685.7	680.8
70°	563.2	569.3	589.9	571.1	570.5
72.5°	446.2	453.5	468.0	460.7	463.2
75°	337.7	345.0	355.9	355.9	360.7
77.5°	239.5	247.3	255.2	261.9	265.5
80°	156.4	161.9	169.1	177.0	181.3
82.5°	89.7	94.6	98.2	107.3	107.3
85°	41.8	46.7	49.7	55.2	57.0
87.5°	13.3	16.4	17.6	20.0	20.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)