

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: FAIL-SAFE

Report Number: P563383

Luminaire Tested: FSR-24-4-LD4-3LO-50-UNV-80-87-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563383
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)
Test Lab: INNOVATION CENTER
Issue Date: 7/20/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-24-4-LD4-3LO-50-UNV-80-87-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRONM
SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

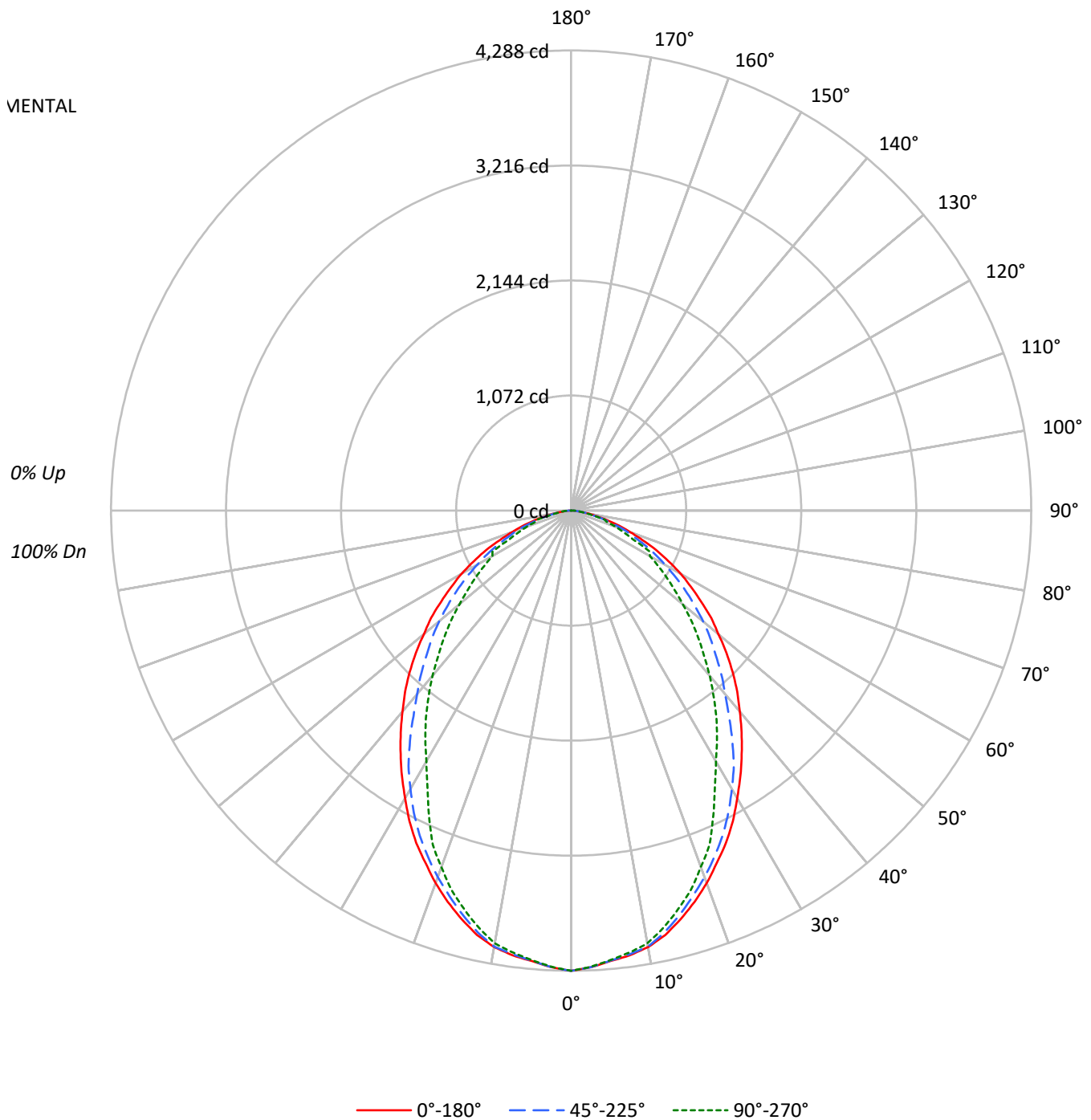
Lumens per Lamp: N/A
Luminaire Lumens: 8419.0 lumens
Efficiency: N/A
Efficacy: 119.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 70.2
Input Voltage (V):
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: 24 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	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5770	5770	5770
5°	5692	5685	5678
10°	5642	5636	5595
15°	5490	5435	5359
20°	5289	5203	5061
25°	5071	4961	4652
30°	4806	4652	4190
35°	4552	4300	3876
40°	4293	3919	3527
45°	4047	3623	3189
50°	3746	3362	2843
55°	3466	3047	2547
60°	3175	2722	2281
65°	2794	2383	2020
70°	2301	2087	1716
75°	1830	1598	1675
80°	1230	1152	1075
85°	766	919	1071

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4047 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	399.2	4.7
10°-20°	1095.6	13.0
20°-30°	1516.8	18.0
30°-40°	1617.3	19.2
40°-50°	1475.5	17.5
50°-60°	1155.9	13.7
60°-70°	753.4	8.9
70°-80°	333.8	4.0
80°-90°	71.7	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°	3011.5	35.8
0°-40°	4628.8	55.0
0°-60°	7260.2	86.2
0°-90°	8419.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8419.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4288	4288	4288	4288	4288	
5°	4214	4209	4209	4204	4204	400
15°	3942	3942	3902	3862	3847	1108
25°	3416	3396	3342	3223	3133	1568
35°	2771	2752	2618	2419	2360	1733
45°	2127	2082	1904	1745	1676	1638
55°	1477	1433	1299	1145	1086	1325
65°	878	828	749	764	635	865
75°	352	327	307	292	322	377
85°	50	54	60	64	69	69
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4288.5	4288.5	4288.5	4288.5	4288.5
2.5°	4258.8	4258.8	4258.8	4253.8	4253.8
5°	4214.2	4209.2	4209.2	4204.2	4204.2
7.5°	4179.5	4174.5	4169.5	4164.6	4154.7
10°	4129.9	4129.9	4124.9	4100.1	4095.2
12.5°	4050.6	4045.6	4025.8	3991.1	3981.1
15°	3941.5	3941.5	3901.8	3862.2	3847.3
17.5°	3822.5	3817.5	3768.0	3728.3	3708.5
20°	3693.6	3683.7	3634.1	3569.6	3534.9
22.5°	3549.8	3549.8	3490.3	3406.0	3371.3
25°	3415.9	3396.1	3341.6	3222.6	3133.4
27.5°	3262.3	3232.5	3173.0	3004.4	2900.3
30°	3093.7	3078.8	2994.5	2776.4	2697.1
32.5°	2935.0	2910.2	2821.0	2592.9	2528.5
35°	2771.4	2751.6	2617.7	2419.4	2359.9
37.5°	2607.8	2583.0	2414.5	2255.8	2181.4
40°	2444.2	2414.5	2231.0	2087.2	2007.9
42.5°	2290.5	2250.9	2072.4	1918.7	1829.4
45°	2126.9	2082.3	1903.8	1745.2	1675.7
47.5°	1963.3	1923.6	1760.0	1596.4	1517.1
50°	1789.8	1755.1	1606.3	1442.7	1358.4
52.5°	1646.0	1591.5	1447.7	1284.1	1214.7
55°	1477.4	1432.8	1299.0	1145.3	1085.8
57.5°	1323.7	1279.1	1155.2	1011.4	961.8
60°	1180.0	1115.5	1011.4	887.5	847.8
62.5°	1021.3	971.7	882.5	778.4	828.0
65°	877.5	828.0	748.6	763.5	634.6
67.5°	718.9	694.1	624.7	555.3	535.4
70°	585.0	555.3	530.5	456.1	436.3
72.5°	466.0	436.3	401.6	361.9	347.0
75°	352.0	327.2	307.4	292.5	322.3
77.5°	242.9	233.0	218.1	203.3	198.3
80°	158.7	153.7	148.7	143.8	138.8
82.5°	94.2	94.2	94.2	94.2	94.2
85°	49.6	54.5	59.5	64.5	69.4
87.5°	29.7	29.7	34.7	39.7	44.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)