

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: P563065

Luminaire Tested: FSR-24-4-LD4-3HI-35-UNV-80-88-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563065
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-LD4-3HI-35-UNV-80-88-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12125.0 lumens
Efficiency: N/A
Efficacy: 93.6 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

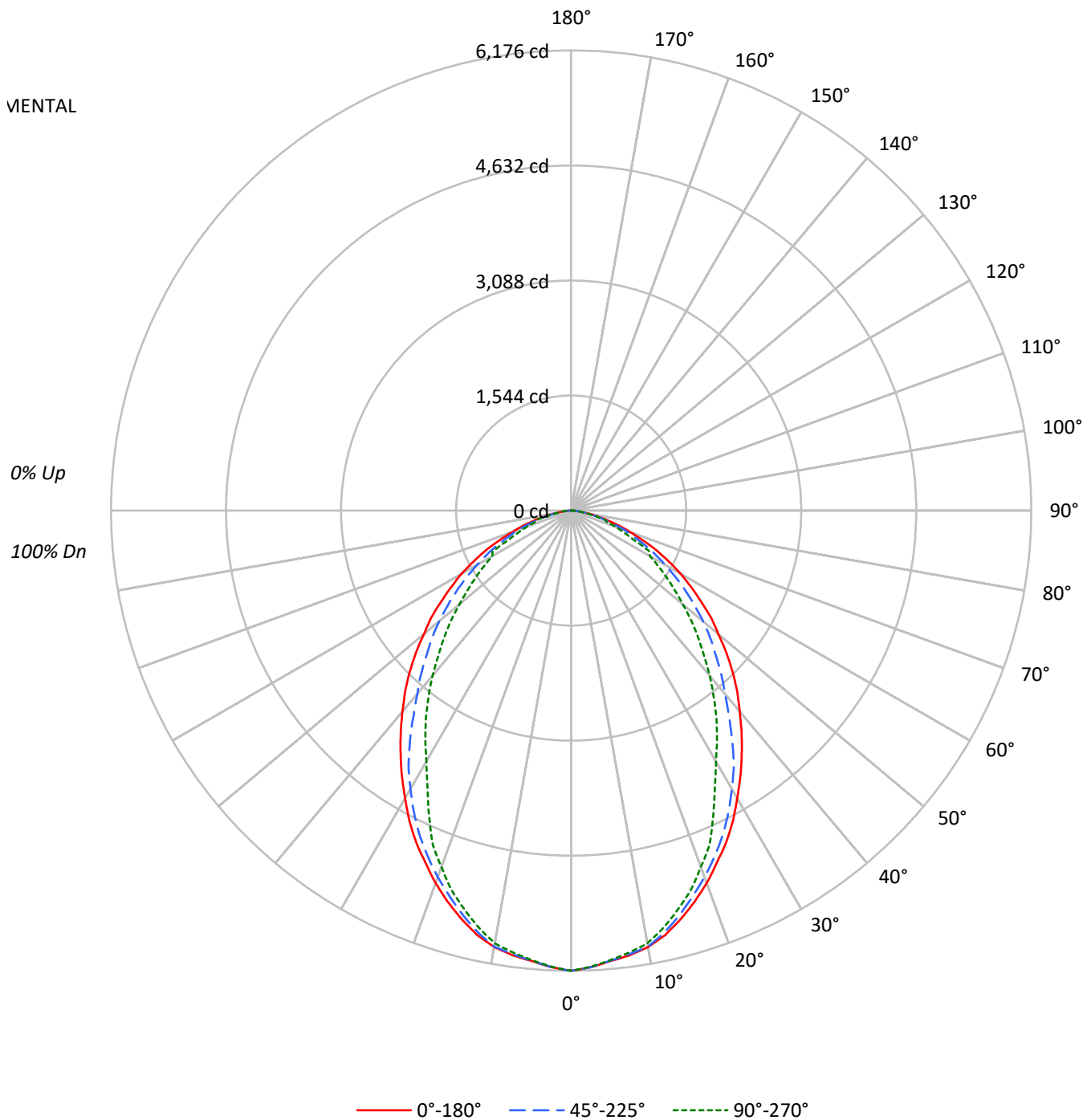
Input Watts (W): 129.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8310	8310	8310
5°	8197	8188	8178
10°	8126	8116	8058
15°	7907	7828	7718
20°	7617	7494	7289
25°	7304	7145	6699
30°	6922	6700	6035
35°	6556	6193	5583
40°	6183	5644	5079
45°	5829	5217	4592
50°	5395	4842	4095
55°	4991	4388	3668
60°	4573	3920	3286
65°	4024	3433	2910
70°	3314	3006	2472
75°	2636	2301	2413
80°	1771	1660	1549
85°	1102	1323	1544

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5829 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	574.9	4.7
10°-20°	1577.9	13.0
20°-30°	2184.4	18.0
30°-40°	2329.2	19.2
40°-50°	2124.9	17.5
50°-60°	1664.7	13.7
60°-70°	1085.0	8.9
70°-80°	480.7	4.0
80°-90°	103.2	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°	4337.2	35.8
0°-40°	6666.4	55.0
0°-60°	10456.1	86.2
0°-90°	12125.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12125.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6176	6176	6176	6176	6176	
5°	6069	6062	6062	6055	6055	576
15°	5676	5676	5619	5562	5541	1596
25°	4920	4891	4812	4641	4513	2259
35°	3991	3963	3770	3484	3399	2495
45°	3063	2999	2742	2513	2413	2360
55°	2128	2064	1871	1649	1564	1908
65°	1264	1192	1078	1100	914	1245
75°	507	471	443	421	464	543
85°	71	78	86	93	100	99
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6176.3	6176.3	6176.3	6176.3	6176.3
2.5°	6133.5	6133.5	6133.5	6126.3	6126.3
5°	6069.2	6062.1	6062.1	6054.9	6054.9
7.5°	6019.2	6012.1	6004.9	5997.8	5983.5
10°	5947.8	5947.8	5940.7	5905.0	5897.8
12.5°	5833.6	5826.4	5797.9	5747.9	5733.6
15°	5676.5	5676.5	5619.4	5562.3	5540.8
17.5°	5505.1	5498.0	5426.6	5369.5	5340.9
20°	5319.5	5305.2	5233.8	5141.0	5091.0
22.5°	5112.4	5112.4	5026.7	4905.3	4855.4
25°	4919.6	4891.1	4812.5	4641.2	4512.6
27.5°	4698.3	4655.4	4569.8	4327.0	4177.0
30°	4455.5	4434.1	4312.7	3998.5	3884.3
32.5°	4227.0	4191.3	4062.8	3734.3	3641.5
35°	3991.4	3962.8	3770.1	3484.4	3398.8
37.5°	3755.8	3720.1	3477.3	3248.8	3141.7
40°	3520.1	3477.3	3213.1	3006.0	2891.8
42.5°	3298.8	3241.7	2984.6	2763.3	2634.8
45°	3063.2	2998.9	2741.9	2513.4	2413.4
47.5°	2827.5	2770.4	2534.8	2299.2	2184.9
50°	2577.6	2527.6	2313.4	2077.8	1956.4
52.5°	2370.6	2292.0	2085.0	1849.3	1749.4
55°	2127.8	2063.5	1870.7	1649.4	1563.7
57.5°	1906.4	1842.2	1663.7	1456.6	1385.2
60°	1699.4	1606.6	1456.6	1278.1	1221.0
62.5°	1470.9	1399.5	1271.0	1121.0	1192.4
65°	1263.8	1192.4	1078.2	1099.6	914.0
67.5°	1035.3	999.6	899.7	799.7	771.1
70°	842.5	799.7	764.0	656.9	628.3
72.5°	671.2	628.3	578.4	521.2	499.8
75°	507.0	471.3	442.7	421.3	464.1
77.5°	349.9	335.6	314.2	292.8	285.6
80°	228.5	221.3	214.2	207.1	199.9
82.5°	135.7	135.7	135.7	135.7	135.7
85°	71.4	78.5	85.7	92.8	100.0
87.5°	42.8	42.8	50.0	57.1	64.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)