

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: P564018

Luminaire Tested: FSR-24-4-LD4-4STD-35-UNV-80-85-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P564018
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-LD4-4STD-35-UNV-80-85-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRONM
SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12802.0 lumens
Efficiency: N/A
Efficacy: 96.1 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

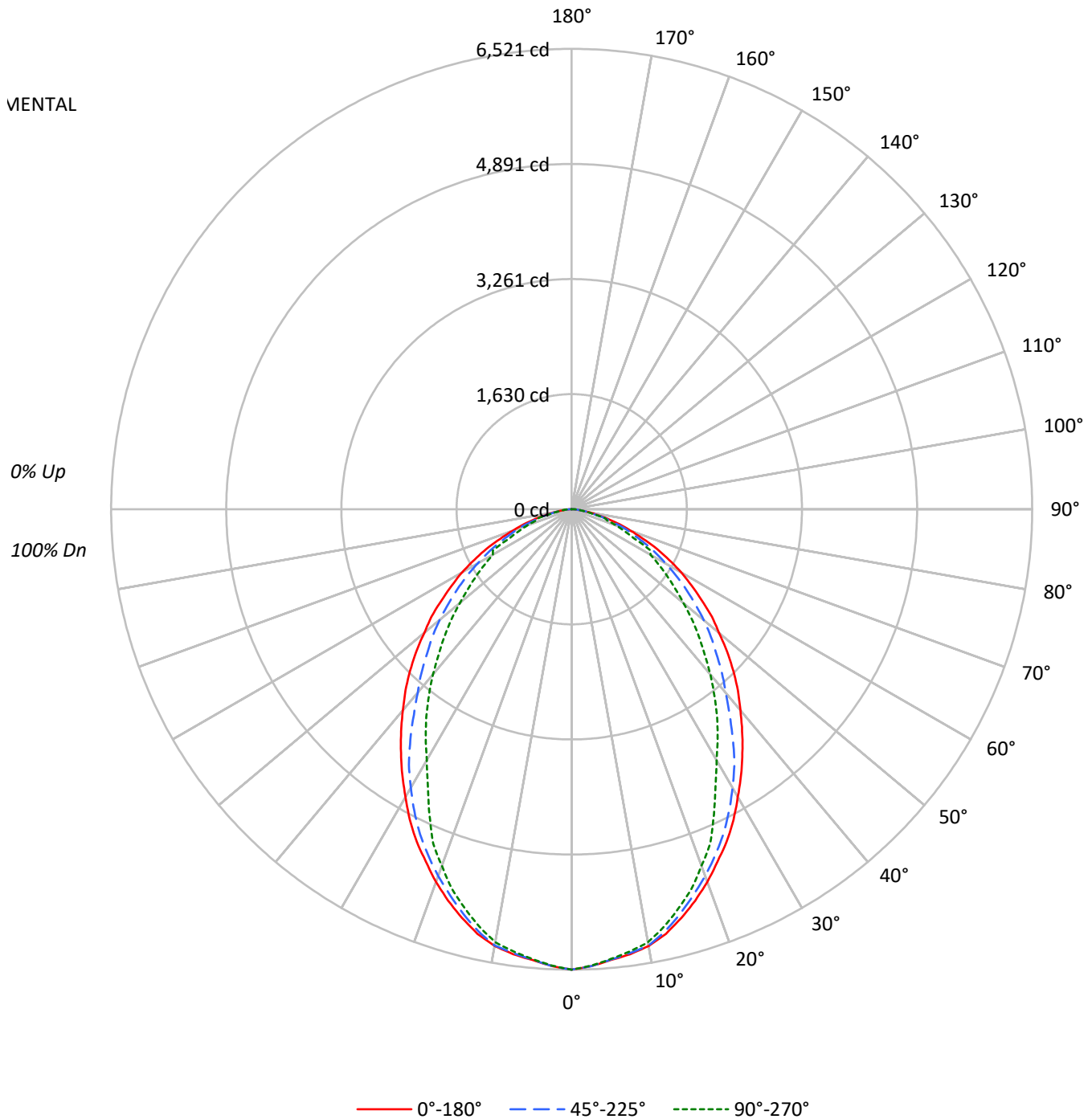
Input Watts (W): 133.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	8774	8774	8774
5°	8655	8645	8635
10°	8580	8570	8508
15°	8349	8265	8149
20°	8042	7912	7697
25°	7711	7543	7073
30°	7309	7074	6372
35°	6922	6538	5894
40°	6528	5959	5363
45°	6154	5508	4849
50°	5697	5113	4324
55°	5270	4633	3873
60°	4828	4138	3469
65°	4248	3624	3072
70°	3500	3174	2610
75°	2783	2430	2547
80°	1869	1753	1636
85°	1164	1397	1629

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6154 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	607.0	4.7
10°-20°	1665.9	13.0
20°-30°	2306.4	18.0
30°-40°	2459.3	19.2
40°-50°	2243.6	17.5
50°-60°	1757.7	13.7
60°-70°	1145.6	8.9
70°-80°	507.5	4.0
80°-90°	109.0	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°	4579.4	35.8
0°-40°	7038.7	55.0
0°-60°	11039.9	86.2
0°-90°	12802.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12802.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6521	6521	6521	6521	6521	
5°	6408	6400	6400	6393	6393	608
15°	5993	5993	5933	5873	5850	1685
25°	5194	5164	5081	4900	4765	2385
35°	4214	4184	3981	3679	3588	2635
45°	3234	3166	2895	2654	2548	2491
55°	2247	2179	1975	1742	1651	2015
65°	1334	1259	1138	1161	965	1315
75°	535	498	467	445	490	574
85°	75	83	90	98	106	105
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6521.2	6521.2	6521.2	6521.2	6521.2
2.5°	6475.9	6475.9	6475.9	6468.4	6468.4
5°	6408.1	6400.5	6400.5	6393.0	6393.0
7.5°	6355.3	6347.8	6340.2	6332.7	6317.6
10°	6279.9	6279.9	6272.4	6234.7	6227.1
12.5°	6159.3	6151.8	6121.6	6068.8	6053.8
15°	5993.4	5993.4	5933.1	5872.8	5850.2
17.5°	5812.5	5805.0	5729.6	5669.3	5639.1
20°	5616.5	5601.4	5526.0	5428.0	5375.3
22.5°	5397.9	5397.9	5307.4	5179.2	5126.5
25°	5194.3	5164.2	5081.2	4900.3	4764.6
27.5°	4960.6	4915.4	4824.9	4568.6	4410.3
30°	4704.3	4681.7	4553.5	4221.8	4101.2
32.5°	4463.0	4425.3	4289.6	3942.9	3844.9
35°	4214.3	4184.1	3980.6	3679.0	3588.5
37.5°	3965.5	3927.8	3671.5	3430.2	3317.1
40°	3716.7	3671.5	3392.5	3173.9	3053.3
42.5°	3483.0	3422.7	3151.3	2917.6	2781.9
45°	3234.2	3166.3	2894.9	2653.7	2548.2
47.5°	2985.4	2925.1	2676.3	2427.5	2306.9
50°	2721.6	2668.8	2442.6	2193.8	2065.7
52.5°	2502.9	2420.0	2201.4	1952.6	1847.0
55°	2246.6	2178.7	1975.2	1741.5	1651.0
57.5°	2012.9	1945.0	1756.6	1537.9	1462.6
60°	1794.3	1696.3	1537.9	1349.5	1289.2
62.5°	1553.0	1477.6	1341.9	1183.6	1259.0
65°	1334.4	1259.0	1138.4	1161.0	965.0
67.5°	1093.1	1055.4	949.9	844.4	814.2
70°	889.6	844.4	806.7	693.6	663.4
72.5°	708.7	663.4	610.7	550.3	527.7
75°	535.3	497.6	467.4	444.8	490.0
77.5°	369.4	354.3	331.7	309.1	301.6
80°	241.2	233.7	226.2	218.6	211.1
82.5°	143.2	143.2	143.2	143.2	143.2
85°	75.4	82.9	90.5	98.0	105.5
87.5°	45.2	45.2	52.8	60.3	67.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)