

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: P564139

Luminaire Tested: FSR-24-4-LD4-4STD-40-UNV-93-94-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P564139
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-40-UNV-93-94-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 15834.0 lumens
Efficiency: N/A
Efficacy: 118.9 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

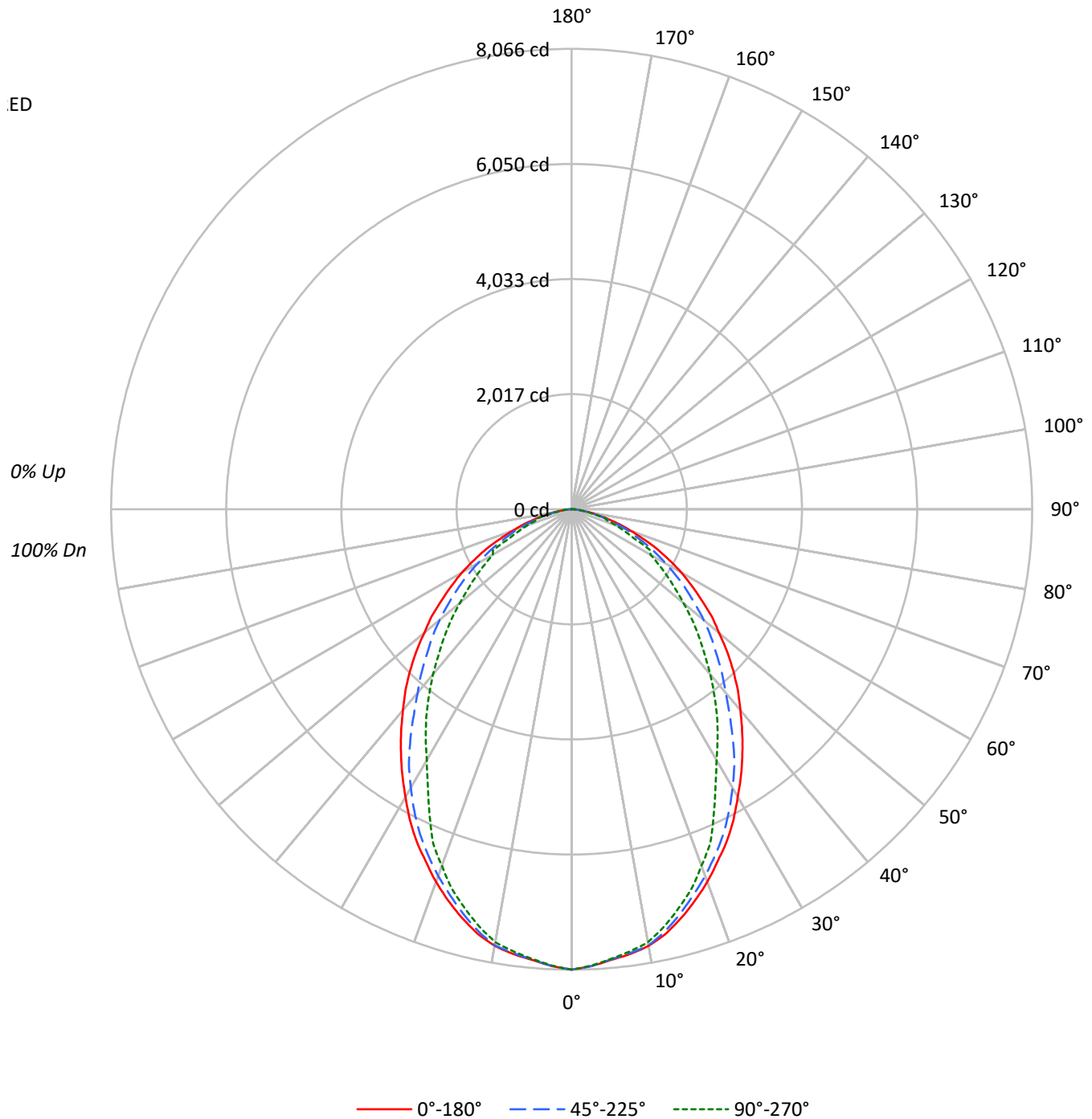
Input Watts (W): 133.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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													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°	10852	10852	10852
5°	10705	10692	10680
10°	10612	10599	10523
15°	10326	10222	10079
20°	9947	9786	9519
25°	9538	9330	8749
30°	9040	8750	7881
35°	8562	8087	7290
40°	8074	7370	6633
45°	7612	6813	5997
50°	7046	6324	5348
55°	6518	5731	4790
60°	5972	5119	4291
65°	5254	4483	3800
70°	4329	3925	3228
75°	3441	3005	3151
80°	2312	2167	2023
85°	1439	1727	2015

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7612 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	750.8	4.7
10°-20°	2060.5	13.0
20°-30°	2852.6	18.0
30°-40°	3041.7	19.2
40°-50°	2775.0	17.5
50°-60°	2173.9	13.7
60°-70°	1416.9	8.9
70°-80°	627.7	4.0
80°-90°	134.8	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°	5664.0	35.8
0°-40°	8705.7	55.0
0°-60°	13654.6	86.2
0°-90°	15834.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	15834.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	8066	8066	8066	8066	8066	
5°	7926	7916	7916	7907	7907	752
15°	7413	7413	7338	7264	7236	2084
25°	6424	6387	6285	6061	5893	2949
35°	5212	5175	4923	4550	4438	3259
45°	4000	3916	3581	3282	3152	3081
55°	2779	2695	2443	2154	2042	2492
65°	1650	1557	1408	1436	1194	1626
75°	662	615	578	550	606	710
85°	93	103	112	121	130	129
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	8065.6	8065.6	8065.6	8065.6	8065.6
2.5°	8009.7	8009.7	8009.7	8000.4	8000.4
5°	7925.8	7916.4	7916.4	7907.1	7907.1
7.5°	7860.5	7851.2	7841.8	7832.5	7813.9
10°	7767.2	7767.2	7757.9	7711.3	7702.0
12.5°	7618.1	7608.7	7571.4	7506.2	7487.5
15°	7412.9	7412.9	7338.3	7263.7	7235.8
17.5°	7189.1	7179.8	7086.6	7012.0	6974.7
20°	6946.7	6928.0	6834.8	6713.6	6648.3
22.5°	6676.3	6676.3	6564.4	6405.9	6340.6
25°	6424.5	6387.2	6284.7	6060.9	5893.0
27.5°	6135.5	6079.5	5967.6	5650.6	5454.8
30°	5818.4	5790.5	5632.0	5221.7	5072.5
32.5°	5520.1	5473.4	5305.6	4876.7	4755.5
35°	5212.4	5175.1	4923.3	4550.3	4438.4
37.5°	4904.6	4858.0	4541.0	4242.6	4102.7
40°	4596.9	4541.0	4196.0	3925.6	3776.4
42.5°	4307.9	4233.3	3897.6	3608.6	3440.7
45°	4000.2	3916.3	3580.6	3282.2	3151.7
47.5°	3692.5	3617.9	3310.2	3002.5	2853.3
50°	3366.1	3300.8	3021.1	2713.4	2554.9
52.5°	3095.7	2993.1	2722.7	2415.0	2284.5
55°	2778.7	2694.8	2443.0	2153.9	2042.0
57.5°	2489.6	2405.7	2172.6	1902.2	1808.9
60°	2219.2	2098.0	1902.2	1669.1	1594.5
62.5°	1920.8	1827.6	1659.7	1463.9	1557.2
65°	1650.4	1557.2	1408.0	1436.0	1193.5
67.5°	1352.0	1305.4	1174.9	1044.3	1007.0
70°	1100.3	1044.3	997.7	857.8	820.5
72.5°	876.5	820.5	755.3	680.7	652.7
75°	662.0	615.4	578.1	550.1	606.1
77.5°	456.9	438.2	410.3	382.3	373.0
80°	298.4	289.1	279.7	270.4	261.1
82.5°	177.2	177.2	177.2	177.2	177.2
85°	93.2	102.6	111.9	121.2	130.5
87.5°	55.9	55.9	65.3	74.6	83.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)