

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: P563773

Luminaire Tested: FSR-24-4-LD4-4HI-50-UNV-80-96-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563773
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-LD4-4HI-50-UNV-80-96-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 19493.0 lumens
Efficiency: N/A
Efficacy: 112.8 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

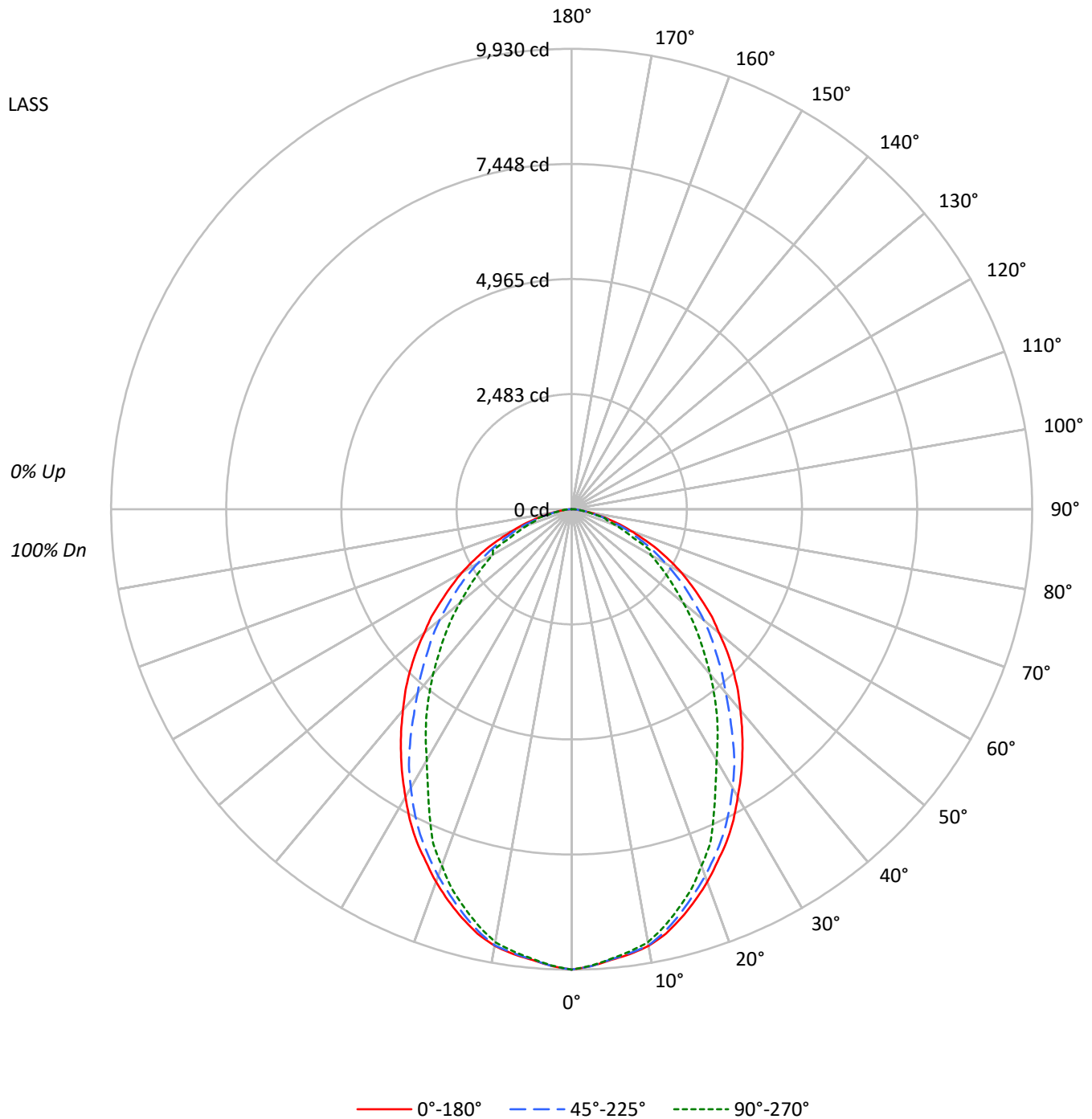
Input Watts (W): 172.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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				
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°	13360	13360	13360
5°	13178	13163	13147
10°	13064	13049	12954
15°	12712	12584	12408
20°	12245	12048	11719
25°	11742	11486	10770
30°	11129	10772	9702
35°	10540	9955	8975
40°	9940	9073	8166
45°	9371	8388	7383
50°	8674	7785	6584
55°	8024	7055	5897
60°	7352	6301	5282
65°	6469	5519	4678
70°	5329	4832	3974
75°	4237	3700	3879
80°	2846	2669	2490
85°	1772	2126	2481

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 9371 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	924.3	4.7
10°-20°	2536.7	13.0
20°-30°	3511.8	18.0
30°-40°	3744.6	19.2
40°-50°	3416.2	17.5
50°-60°	2676.3	13.7
60°-70°	1744.3	8.9
70°-80°	772.8	4.0
80°-90°	165.9	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°	6972.8	35.8
0°-40°	10717.5	55.0
0°-60°	16810.0	86.2
0°-90°	19493.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	19493.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	9930	9930	9930	9930	9930	
5°	9757	9746	9746	9734	9734	926
15°	9126	9126	9034	8942	8908	2566
25°	7909	7863	7737	7462	7255	3631
35°	6417	6371	6061	5602	5464	4012
45°	4925	4821	4408	4041	3880	3793
55°	3421	3318	3008	2652	2514	3068
65°	2032	1917	1733	1768	1469	2002
75°	815	758	712	677	746	873
85°	115	126	138	149	161	159
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	9929.5	9929.5	9929.5	9929.5	9929.5
2.5°	9860.6	9860.6	9860.6	9849.1	9849.1
5°	9757.3	9745.8	9745.8	9734.3	9734.3
7.5°	9676.9	9665.5	9654.0	9642.5	9619.5
10°	9562.1	9562.1	9550.7	9493.3	9481.8
12.5°	9378.5	9367.0	9321.1	9240.7	9217.8
15°	9125.9	9125.9	9034.1	8942.3	8907.8
17.5°	8850.4	8839.0	8724.2	8632.3	8586.4
20°	8552.0	8529.0	8414.2	8265.0	8184.6
22.5°	8219.1	8219.1	8081.3	7886.2	7805.8
25°	7909.1	7863.2	7737.0	7461.5	7254.8
27.5°	7553.3	7484.4	7346.7	6956.4	6715.3
30°	7163.0	7128.6	6933.4	6428.3	6244.7
32.5°	6795.7	6738.3	6531.6	6003.6	5854.4
35°	6416.9	6370.9	6061.0	5601.8	5464.1
37.5°	6038.0	5980.6	5590.4	5223.0	5050.8
40°	5659.2	5590.4	5165.6	4832.7	4649.1
42.5°	5303.4	5211.5	4798.3	4442.4	4235.8
45°	4924.6	4821.2	4408.0	4040.7	3880.0
47.5°	4545.7	4453.9	4075.1	3696.3	3512.6
50°	4144.0	4063.6	3719.2	3340.4	3145.3
52.5°	3811.1	3684.8	3351.9	2973.1	2812.4
55°	3420.8	3317.5	3007.5	2651.7	2513.9
57.5°	3064.9	2961.6	2674.6	2341.7	2227.0
60°	2732.0	2582.8	2341.7	2054.8	1962.9
62.5°	2364.7	2249.9	2043.3	1802.2	1917.0
65°	2031.8	1917.0	1733.4	1767.8	1469.3
67.5°	1664.5	1607.1	1446.4	1285.7	1239.7
70°	1354.5	1285.7	1228.3	1056.1	1010.2
72.5°	1079.0	1010.2	929.8	838.0	803.5
75°	815.0	757.6	711.7	677.3	746.1
77.5°	562.5	539.5	505.1	470.6	459.2
80°	367.3	355.9	344.4	332.9	321.4
82.5°	218.1	218.1	218.1	218.1	218.1
85°	114.8	126.3	137.7	149.2	160.7
87.5°	68.9	68.9	80.4	91.8	103.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)