

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: P563147

Luminaire Tested: FSR-24-4-LD4-3HI-40-UNV-81-94-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563147
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-40-UNV-81-94-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 13810.0 lumens
Efficiency: N/A
Efficacy: 106.6 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

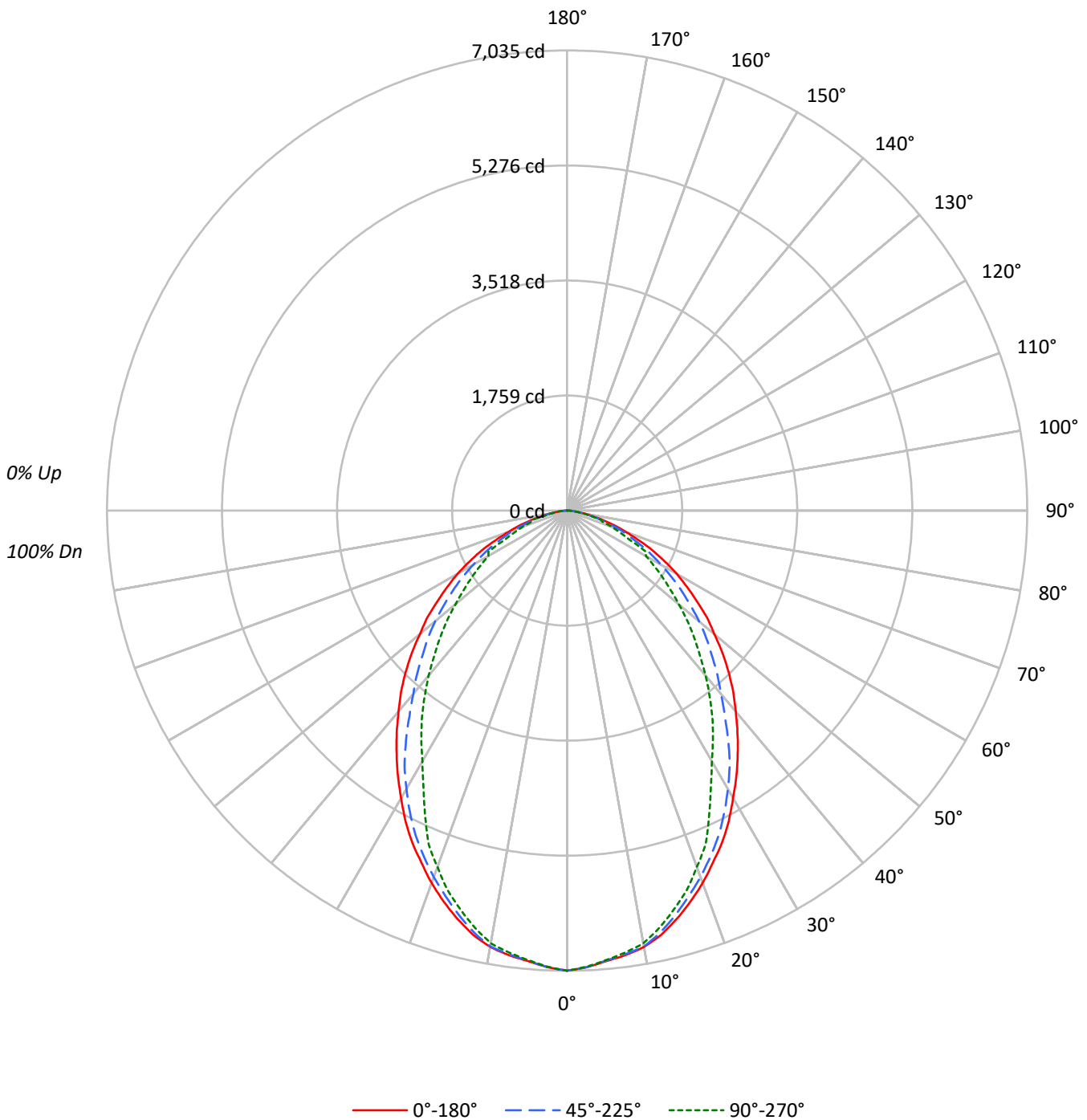
Input Watts (W): 129.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	9465	9465	9465
5°	9336	9325	9314
10°	9255	9244	9178
15°	9006	8915	8791
20°	8675	8535	8303
25°	8319	8137	7630
30°	7884	7631	6873
35°	7467	7053	6358
40°	7042	6428	5785
45°	6639	5942	5230
50°	6145	5515	4664
55°	5685	4998	4178
60°	5208	4464	3742
65°	4583	3910	3314
70°	3775	3423	2816
75°	3002	2621	2748
80°	2016	1891	1764
85°	1255	1507	1758

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6639 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	654.8	4.7
10°-20°	1797.1	13.0
20°-30°	2488.0	18.0
30°-40°	2652.9	19.2
40°-50°	2420.2	17.5
50°-60°	1896.1	13.7
60°-70°	1235.8	8.9
70°-80°	547.5	4.0
80°-90°	117.5	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°	4939.9	35.8
0°-40°	7592.9	55.0
0°-60°	11909.2	86.2
0°-90°	13810.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13810.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7035	7035	7035	7035	7035	
5°	6913	6904	6904	6896	6896	656
15°	6465	6465	6400	6335	6311	1818
25°	5603	5571	5481	5286	5140	2572
35°	4546	4514	4294	3969	3871	2842
45°	3489	3416	3123	2863	2749	2687
55°	2424	2350	2131	1879	1781	2174
65°	1440	1358	1228	1252	1041	1419
75°	577	537	504	480	529	619
85°	81	90	98	106	114	113
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7034.6	7034.6	7034.6	7034.6	7034.6
2.5°	6985.8	6985.8	6985.8	6977.7	6977.7
5°	6912.6	6904.5	6904.5	6896.4	6896.4
7.5°	6855.7	6847.6	6839.4	6831.3	6815.1
10°	6774.4	6774.4	6766.3	6725.6	6717.5
12.5°	6644.3	6636.1	6603.6	6546.7	6530.4
15°	6465.4	6465.4	6400.3	6335.2	6310.8
17.5°	6270.2	6262.0	6180.7	6115.7	6083.1
20°	6058.7	6042.5	5961.1	5855.4	5798.5
22.5°	5822.9	5822.9	5725.3	5587.0	5530.1
25°	5603.3	5570.8	5481.3	5286.1	5139.8
27.5°	5351.2	5302.4	5204.8	4928.3	4757.5
30°	5074.7	5050.3	4912.0	4554.2	4424.1
32.5°	4814.5	4773.8	4627.4	4253.3	4147.6
35°	4546.1	4513.5	4294.0	3968.7	3871.1
37.5°	4277.7	4237.0	3960.5	3700.3	3578.3
40°	4009.3	3960.5	3659.6	3423.8	3293.7
42.5°	3757.2	3692.2	3399.4	3147.3	3000.9
45°	3488.9	3415.7	3122.9	2862.6	2748.8
47.5°	3220.5	3155.4	2887.0	2618.7	2488.6
50°	2935.8	2878.9	2634.9	2366.6	2228.3
52.5°	2700.0	2610.5	2374.7	2106.3	1992.5
55°	2423.5	2350.3	2130.7	1878.6	1781.0
57.5°	2171.4	2098.2	1894.9	1659.0	1577.7
60°	1935.5	1829.8	1659.0	1455.7	1390.7
62.5°	1675.3	1594.0	1447.6	1276.8	1358.1
65°	1439.5	1358.1	1228.0	1252.4	1041.0
67.5°	1179.2	1138.6	1024.7	910.8	878.3
70°	959.6	910.8	870.2	748.2	715.7
72.5°	764.5	715.7	658.7	593.7	569.3
75°	577.4	536.7	504.2	479.8	528.6
77.5°	398.5	382.2	357.8	333.4	325.3
80°	260.2	252.1	244.0	235.8	227.7
82.5°	154.5	154.5	154.5	154.5	154.5
85°	81.3	89.5	97.6	105.7	113.9
87.5°	48.8	48.8	56.9	65.1	73.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)