

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: P563725

Luminaire Tested: FSR-24-4-LD4-4HI-40-UNV-81-96-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563725
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-40-UNV-81-96-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 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: 18210.0 lumens
Efficiency: N/A
Efficacy: 105.4 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

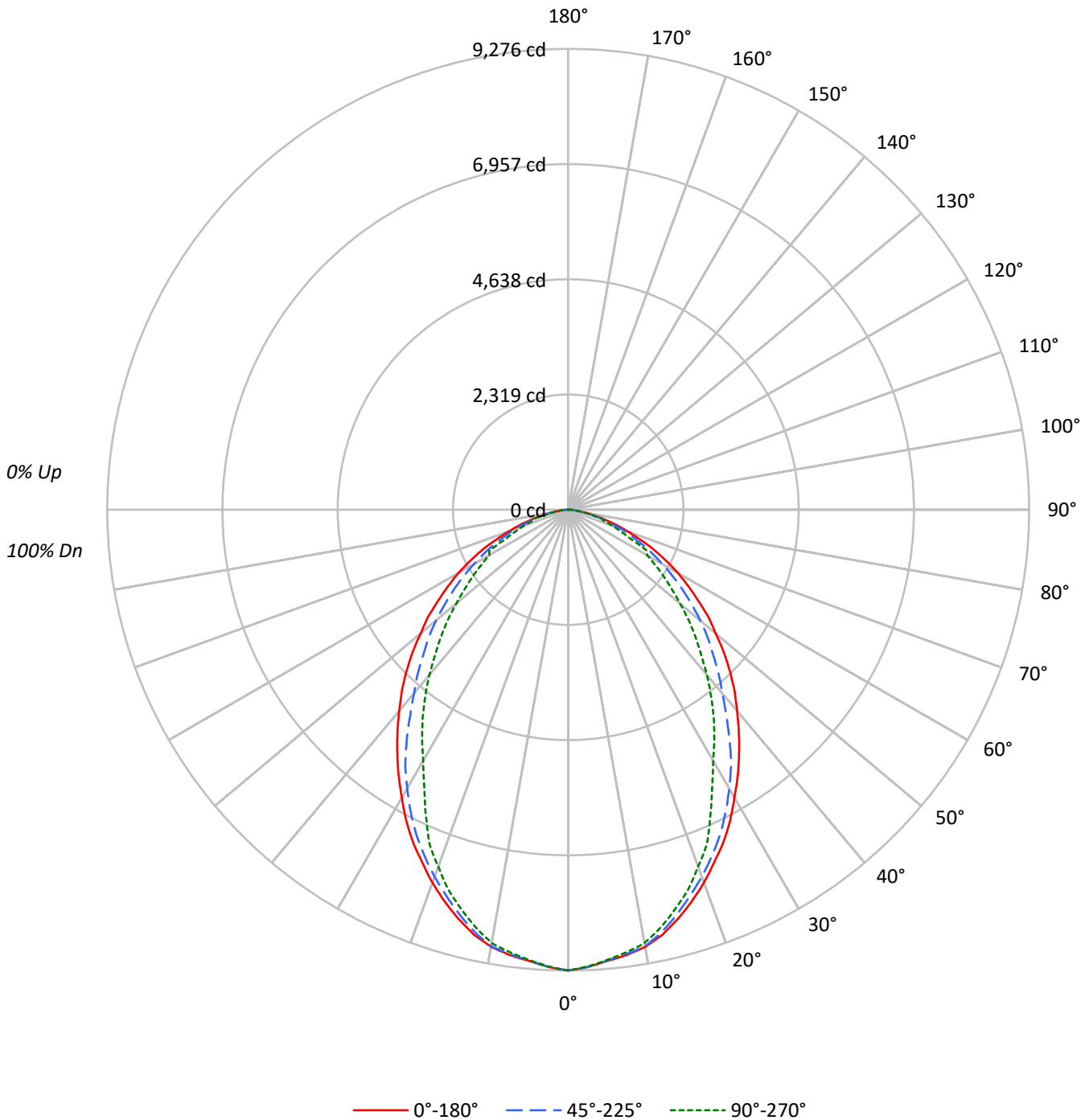
Input Watts (W): 172.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	12481	12481	12481
5°	12311	12297	12282
10°	12204	12190	12102
15°	11875	11756	11591
20°	11439	11255	10948
25°	10969	10730	10061
30°	10396	10063	9063
35°	9846	9300	8384
40°	9286	8476	7628
45°	8754	7836	6897
50°	8103	7273	6150
55°	7496	6591	5509
60°	6868	5887	4934
65°	6043	5155	4370
70°	4978	4514	3712
75°	3958	3457	3623
80°	2659	2493	2327
85°	1655	1987	2317

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 8754 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	863.5	4.7
10°-20°	2369.7	13.0
20°-30°	3280.7	18.0
30°-40°	3498.2	19.2
40°-50°	3191.4	17.5
50°-60°	2500.2	13.7
60°-70°	1629.5	8.9
70°-80°	721.9	4.0
80°-90°	155.0	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°	6513.9	35.8
0°-40°	10012.0	55.0
0°-60°	15703.6	86.2
0°-90°	18210.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	18210.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	9276	9276	9276	9276	9276	
5°	9115	9104	9104	9094	9094	865
15°	8525	8525	8440	8354	8322	2397
25°	7389	7346	7228	6970	6777	3392
35°	5994	5952	5662	5233	5104	3748
45°	4600	4504	4118	3775	3625	3544
55°	3196	3099	2810	2477	2348	2866
65°	1898	1791	1619	1651	1373	1871
75°	761	708	665	633	697	816
85°	107	118	129	139	150	149
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	9275.9	9275.9	9275.9	9275.9	9275.9
2.5°	9211.6	9211.6	9211.6	9200.9	9200.9
5°	9115.1	9104.4	9104.4	9093.6	9093.6
7.5°	9040.0	9029.3	9018.6	9007.8	8986.4
10°	8932.8	8932.8	8922.1	8868.4	8857.7
12.5°	8761.2	8750.5	8707.6	8632.5	8611.1
15°	8525.3	8525.3	8439.5	8353.7	8321.5
17.5°	8267.9	8257.2	8150.0	8064.2	8021.3
20°	7989.1	7967.6	7860.4	7721.0	7645.9
22.5°	7678.1	7678.1	7549.4	7367.1	7292.1
25°	7388.6	7345.7	7227.7	6970.4	6777.3
27.5°	7056.1	6991.8	6863.1	6498.5	6273.3
30°	6691.5	6659.4	6477.1	6005.2	5833.6
32.5°	6348.4	6294.8	6101.7	5608.5	5469.0
35°	5994.5	5951.6	5662.1	5233.1	5104.4
37.5°	5640.6	5587.0	5222.4	4879.2	4718.4
40°	5286.7	5222.4	4825.6	4514.6	4343.1
42.5°	4954.3	4868.5	4482.5	4150.0	3957.0
45°	4600.4	4503.9	4117.9	3774.7	3624.6
47.5°	4246.6	4160.8	3806.9	3453.0	3281.4
50°	3871.2	3796.2	3474.5	3120.6	2938.3
52.5°	3560.2	3442.3	3131.3	2777.4	2627.3
55°	3195.6	3099.1	2809.6	2477.2	2348.5
57.5°	2863.2	2766.7	2498.6	2187.6	2080.4
60°	2552.2	2412.8	2187.6	1919.5	1833.7
62.5°	2209.1	2101.8	1908.8	1683.6	1790.8
65°	1898.1	1790.8	1619.3	1651.4	1372.6
67.5°	1554.9	1501.3	1351.2	1201.0	1158.2
70°	1265.4	1201.0	1147.4	986.6	943.7
72.5°	1008.0	943.7	868.6	782.8	750.7
75°	761.4	707.8	664.9	632.7	697.0
77.5°	525.5	504.0	471.8	439.7	428.9
80°	343.2	332.4	321.7	311.0	300.3
82.5°	203.7	203.7	203.7	203.7	203.7
85°	107.2	118.0	128.7	139.4	150.1
87.5°	64.3	64.3	75.1	85.8	96.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)