

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: P563751

Luminaire Tested: FSR-24-4-LD4-4HI-40-UNV-93-87-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563751
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-93-87-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 18168.0 lumens
Efficiency: N/A
Efficacy: 105.1 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

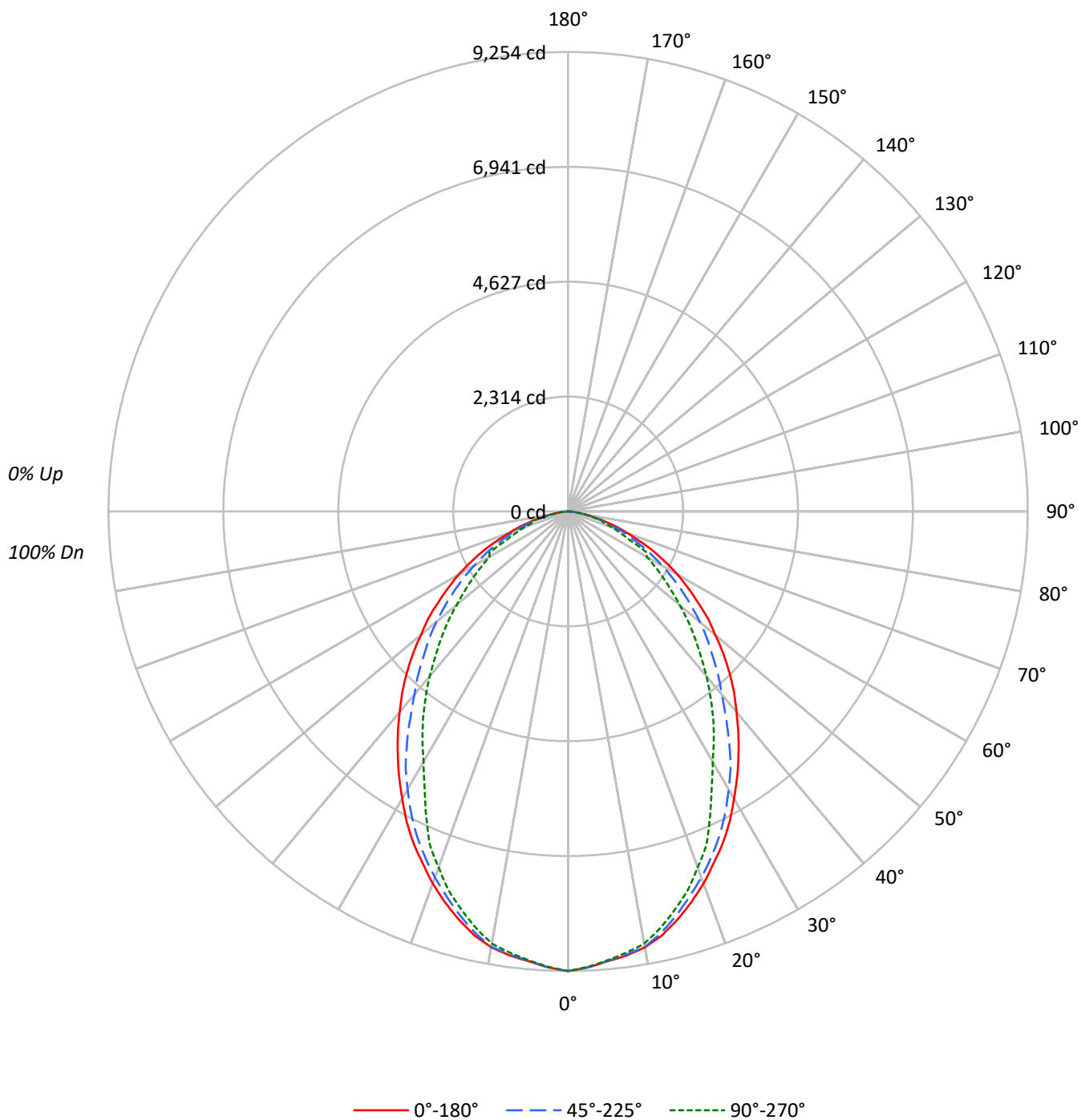
Input Watts (W): 172.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P563751

CATALOG NUMBER: FSR-24-4-LD4-4HI-40-UNV-93-87-EDD

Luminous Intensity Polar Plot



TEST NUMBER: P563751

CATALOG NUMBER: FSR-24-4-LD4-4HI-40-UNV-93-87-EDD

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	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°	12452	12452	12452
5°	12283	12268	12254
10°	12176	12162	12074
15°	11848	11729	11565
20°	11413	11229	10923
25°	10944	10705	10038
30°	10372	10040	9042
35°	9824	9279	8365
40°	9264	8456	7611
45°	8734	7818	6881
50°	8085	7256	6136
55°	7479	6575	5496
60°	6852	5873	4923
65°	6029	5143	4360
70°	4967	4504	3704
75°	3949	3448	3615
80°	2653	2487	2321
85°	1652	1982	2313

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 8734 cd/sqm

TEST NUMBER: P563751

CATALOG NUMBER: FSR-24-4-LD4-4HI-40-UNV-93-87-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	861.5	4.7
10°-20°	2364.2	13.0
20°-30°	3273.1	18.0
30°-40°	3490.1	19.2
40°-50°	3184.0	17.5
50°-60°	2494.4	13.7
60°-70°	1625.7	8.9
70°-80°	720.3	4.0
80°-90°	154.7	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°	6498.8	35.8
0°-40°	9989.0	55.0
0°-60°	15667.4	86.2
0°-90°	18168.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	18168.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	9254	9254	9254	9254	9254	
5°	9094	9083	9083	9073	9073	863
15°	8506	8506	8420	8334	8302	2391
25°	7372	7329	7211	6954	6762	3384
35°	5981	5938	5649	5221	5093	3739
45°	4590	4494	4108	3766	3616	3536
55°	3188	3092	2803	2471	2343	2860
65°	1894	1787	1616	1648	1370	1866
75°	760	706	663	631	695	814
85°	107	118	128	139	150	148
90°	0	0	0	0	0	

TEST NUMBER: P563751

CATALOG NUMBER: FSR-24-4-LD4-4HI-40-UNV-93-87-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	9254.5	9254.5	9254.5	9254.5	9254.5
2.5°	9190.3	9190.3	9190.3	9179.6	9179.6
5°	9094.1	9083.4	9083.4	9072.7	9072.7
7.5°	9019.2	9008.5	8997.8	8987.1	8965.7
10°	8912.2	8912.2	8901.5	8848.0	8837.3
12.5°	8741.0	8730.3	8687.5	8612.6	8591.2
15°	8505.6	8505.6	8420.0	8334.4	8302.3
17.5°	8248.8	8238.1	8131.2	8045.6	8002.8
20°	7970.7	7949.3	7842.3	7703.2	7628.3
22.5°	7660.4	7660.4	7532.0	7350.1	7275.2
25°	7371.5	7328.7	7211.0	6954.3	6761.7
27.5°	7039.9	6975.7	6847.3	6483.5	6258.8
30°	6676.1	6644.0	6462.1	5991.4	5820.2
32.5°	6333.7	6280.2	6087.7	5595.5	5456.4
35°	5980.7	5937.9	5649.0	5221.1	5092.7
37.5°	5627.6	5574.1	5210.4	4868.0	4707.5
40°	5274.6	5210.4	4814.5	4504.2	4333.0
42.5°	4942.9	4857.3	4472.1	4140.5	3947.9
45°	4589.8	4493.5	4108.4	3766.0	3616.2
47.5°	4236.8	4151.2	3798.1	3445.0	3273.9
50°	3862.3	3787.4	3466.4	3113.4	2931.5
52.5°	3552.0	3434.3	3124.1	2771.0	2621.2
55°	3188.3	3092.0	2803.1	2471.4	2343.1
57.5°	2856.6	2760.3	2492.8	2182.6	2075.6
60°	2546.3	2407.2	2182.6	1915.1	1829.5
62.5°	2204.0	2097.0	1904.4	1679.7	1786.7
65°	1893.7	1786.7	1615.5	1647.6	1369.5
67.5°	1551.3	1497.8	1348.1	1198.3	1155.5
70°	1262.5	1198.3	1144.8	984.3	941.5
72.5°	1005.7	941.5	866.6	781.0	748.9
75°	759.6	706.1	663.3	631.2	695.4
77.5°	524.2	502.8	470.8	438.7	428.0
80°	342.4	331.7	321.0	310.3	299.6
82.5°	203.3	203.3	203.3	203.3	203.3
85°	107.0	117.7	128.4	139.1	149.8
87.5°	64.2	64.2	74.9	85.6	96.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)