

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: P561333

Luminaire Tested: FSR-12-4-LD4-2HI-35-UNV-80-86-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561333
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-12-4-LD4-2HI-35-UNV-80-86-EDD
Description: 1X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7896.0 lumens
Efficiency: N/A
Efficacy: 91.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

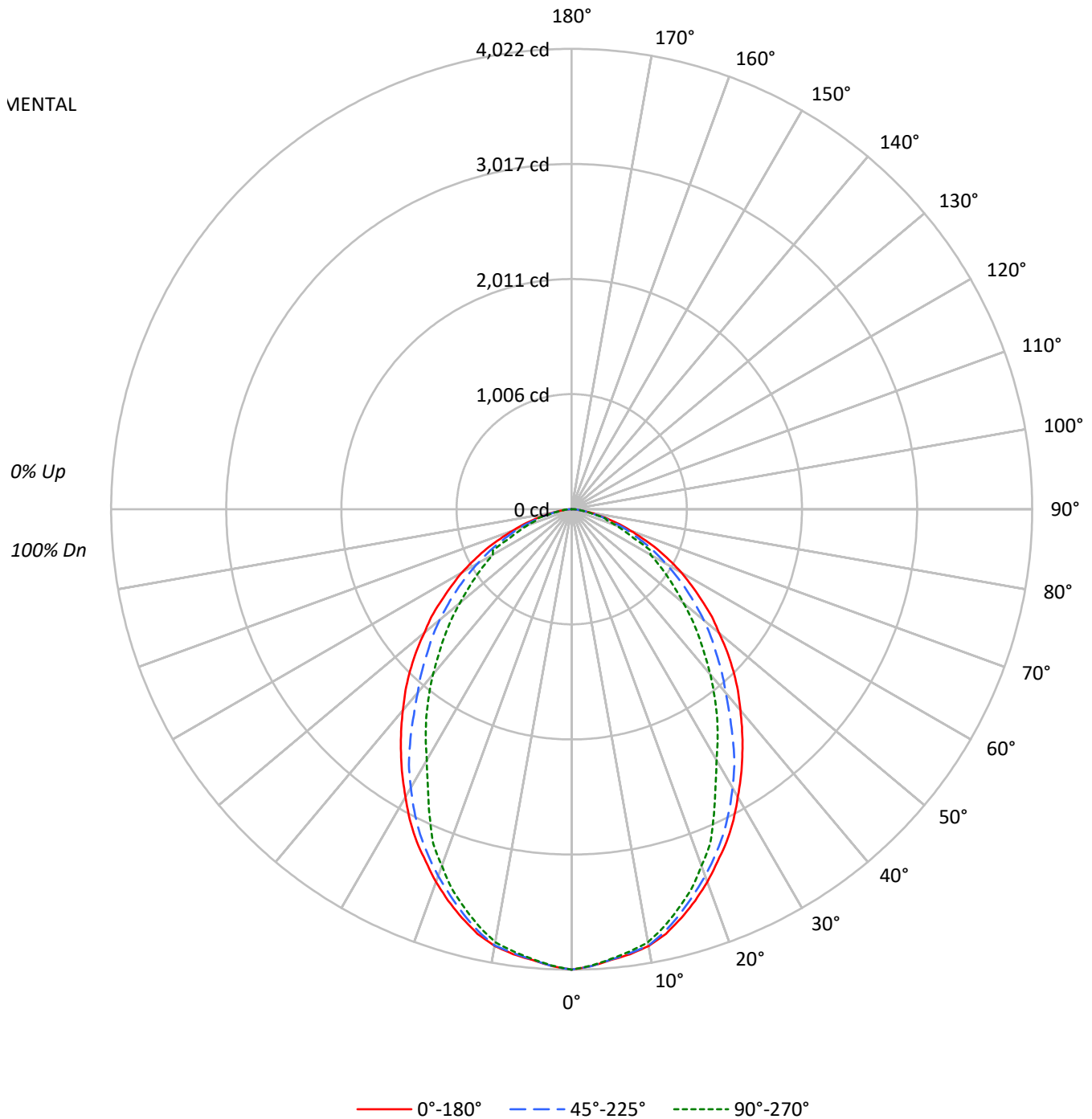
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P561333

CATALOG NUMBER: FSR-12-4-LD4-2HI-35-UNV-80-86-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P561333

CATALOG NUMBER: FSR-12-4-LD4-2HI-35-UNV-80-86-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°	10823	10823	10823
5°	10676	10664	10651
10°	10584	10571	10495
15°	10298	10195	10052
20°	9920	9760	9494
25°	9512	9305	8725
30°	9016	8727	7860
35°	8539	8065	7271
40°	8053	7350	6615
45°	7591	6795	5981
50°	7027	6307	5334
55°	6501	5716	4777
60°	5956	5105	4279
65°	5240	4471	3790
70°	4317	3914	3220
75°	3432	2997	3142
80°	2306	2162	2018
85°	1436	1723	2010

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7591 cd/sqm



TEST NUMBER: P561333

CATALOG NUMBER: FSR-12-4-LD4-2HI-35-UNV-80-86-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	374.4	4.7
10°-20°	1027.5	13.0
20°-30°	1422.5	18.0
30°-40°	1516.8	19.2
40°-50°	1383.8	17.5
50°-60°	1084.1	13.7
60°-70°	706.6	8.9
70°-80°	313.0	4.0
80°-90°	67.2	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°	2824.5	35.8
0°-40°	4341.3	55.0
0°-60°	6809.2	86.2
0°-90°	7896.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7896.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4022	4022	4022	4022	4022	
5°	3952	3948	3948	3943	3943	375
15°	3697	3697	3659	3622	3608	1039
25°	3204	3185	3134	3022	2939	1471
35°	2599	2581	2455	2269	2213	1625
45°	1995	1953	1786	1637	1572	1537
55°	1386	1344	1218	1074	1018	1243
65°	823	776	702	716	595	811
75°	330	307	288	274	302	354
85°	46	51	56	60	65	64
90°	0	0	0	0	0	



TEST NUMBER: P561333

CATALOG NUMBER: FSR-12-4-LD4-2HI-35-UNV-80-86-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4022.1	4022.1	4022.1	4022.1	4022.1
2.5°	3994.2	3994.2	3994.2	3989.6	3989.6
5°	3952.4	3947.7	3947.7	3943.1	3943.1
7.5°	3919.8	3915.2	3910.5	3905.9	3896.6
10°	3873.3	3873.3	3868.7	3845.4	3840.8
12.5°	3798.9	3794.3	3775.7	3743.1	3733.8
15°	3696.6	3696.6	3659.4	3622.2	3608.3
17.5°	3585.0	3580.4	3533.9	3496.7	3478.1
20°	3464.1	3454.8	3408.3	3347.9	3315.3
22.5°	3329.3	3329.3	3273.5	3194.4	3161.9
25°	3203.7	3185.1	3134.0	3022.4	2938.7
27.5°	3059.6	3031.7	2975.9	2817.8	2720.2
30°	2901.5	2887.6	2808.5	2603.9	2529.5
32.5°	2752.7	2729.5	2645.8	2431.9	2371.4
35°	2599.3	2580.7	2455.1	2269.1	2213.3
37.5°	2445.8	2422.6	2264.5	2115.7	2045.9
40°	2292.4	2264.5	2092.4	1957.6	1883.2
42.5°	2148.2	2111.0	1943.6	1799.5	1715.8
45°	1994.8	1952.9	1785.5	1636.7	1571.6
47.5°	1841.3	1804.1	1650.7	1497.3	1422.9
50°	1678.6	1646.0	1506.6	1353.1	1274.1
52.5°	1543.7	1492.6	1357.8	1204.3	1139.2
55°	1385.7	1343.8	1218.3	1074.1	1018.3
57.5°	1241.5	1199.7	1083.4	948.6	902.1
60°	1106.7	1046.2	948.6	832.3	795.1
62.5°	957.9	911.4	827.7	730.0	776.5
65°	823.0	776.5	702.1	716.1	595.2
67.5°	674.2	651.0	585.9	520.8	502.2
70°	548.7	520.8	497.5	427.8	409.2
72.5°	437.1	409.2	376.6	339.4	325.5
75°	330.1	306.9	288.3	274.3	302.2
77.5°	227.8	218.5	204.6	190.6	186.0
80°	148.8	144.1	139.5	134.8	130.2
82.5°	88.3	88.3	88.3	88.3	88.3
85°	46.5	51.1	55.8	60.4	65.1
87.5°	27.9	27.9	32.5	37.2	41.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)