

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: P559119

Luminaire Tested: FSR-12-1-LD4-2HI-40-UNV-81-97-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559119
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-12-1-LD4-2HI-40-UNV-81-97-EDD
Description: 1X1 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 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: 1770.0 lumens
Efficiency: N/A
Efficacy: 81.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

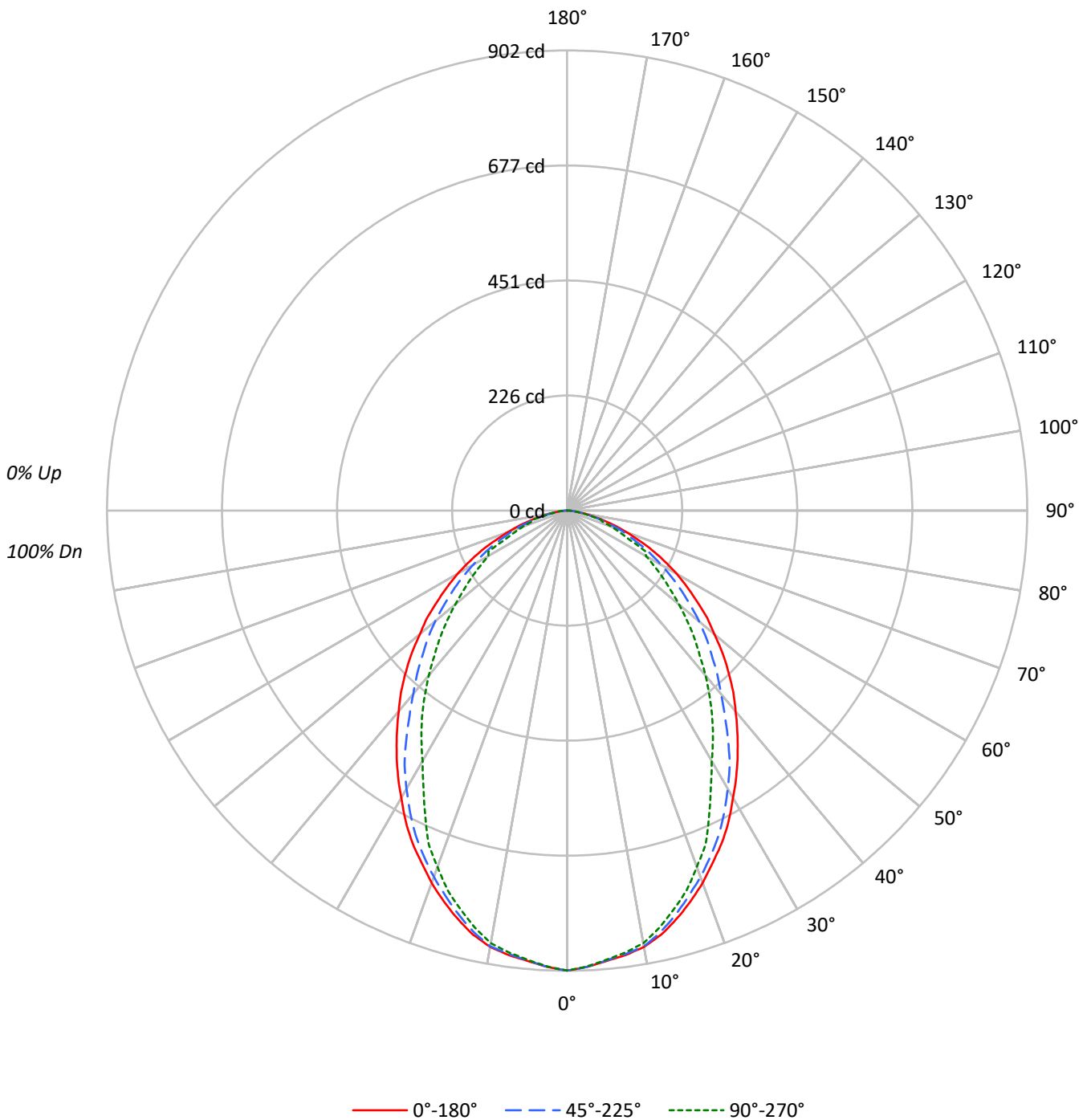
Input Watts (W): 21.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	9705	9705	9705
5°	9573	9561	9551
10°	9490	9478	9411
15°	9235	9141	9013
20°	8895	8751	8513
25°	8530	8343	7824
30°	8084	7825	7047
35°	7657	7231	6519
40°	7221	6590	5931
45°	6807	6094	5363
50°	6301	5655	4783
55°	5829	5125	4284
60°	5341	4577	3836
65°	4699	4009	3398
70°	3871	3509	2886
75°	3078	2687	2820
80°	2070	1940	1810
85°	1284	1544	1803

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6807 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	83.9	4.7
10°-20°	230.3	13.0
20°-30°	318.9	18.0
30°-40°	340.0	19.2
40°-50°	310.2	17.5
50°-60°	243.0	13.7
60°-70°	158.4	8.9
70°-80°	70.2	4.0
80°-90°	15.1	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°	633.2	35.8
0°-40°	973.2	55.0
0°-60°	1526.4	86.2
0°-90°	1770.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1770.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	902	902	902	902	902	
5°	886	885	885	884	884	84
15°	829	829	820	812	809	233
25°	718	714	702	678	659	330
35°	583	578	550	509	496	364
45°	447	438	400	367	352	344
55°	311	301	273	241	228	279
65°	184	174	157	160	133	182
75°	74	69	65	62	68	79
85°	10	12	12	14	15	14
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	901.6	901.6	901.6	901.6	901.6
2.5°	895.4	895.4	895.4	894.3	894.3
5°	886.0	884.9	884.9	883.9	883.9
7.5°	878.7	877.6	876.6	875.6	873.5
10°	868.3	868.3	867.2	862.0	861.0
12.5°	851.6	850.5	846.4	839.1	837.0
15°	828.7	828.7	820.3	812.0	808.8
17.5°	803.6	802.6	792.2	783.8	779.7
20°	776.5	774.5	764.0	750.5	743.2
22.5°	746.3	746.3	733.8	716.1	708.8
25°	718.2	714.0	702.5	677.5	658.8
27.5°	685.9	679.6	667.1	631.7	609.8
30°	650.4	647.3	629.6	583.7	567.0
32.5°	617.1	611.8	593.1	545.1	531.6
35°	582.7	578.5	550.3	508.7	496.1
37.5°	548.3	543.1	507.6	474.3	458.6
40°	513.9	507.6	469.0	438.8	422.1
42.5°	481.6	473.2	435.7	403.4	384.6
45°	447.2	437.8	400.3	366.9	352.3
47.5°	412.8	404.4	370.0	335.6	319.0
50°	376.3	369.0	337.7	303.3	285.6
52.5°	346.1	334.6	304.4	270.0	255.4
55°	310.6	301.2	273.1	240.8	228.3
57.5°	278.3	268.9	242.9	212.6	202.2
60°	248.1	234.5	212.6	186.6	178.2
62.5°	214.7	204.3	185.5	163.6	174.1
65°	184.5	174.1	157.4	160.5	133.4
67.5°	151.1	145.9	131.3	116.7	112.6
70°	123.0	116.7	111.5	95.9	91.7
72.5°	98.0	91.7	84.4	76.1	73.0
75°	74.0	68.8	64.6	61.5	67.8
77.5°	51.1	49.0	45.9	42.7	41.7
80°	33.4	32.3	31.3	30.2	29.2
82.5°	19.8	19.8	19.8	19.8	19.8
85°	10.4	11.5	12.5	13.6	14.6
87.5°	6.3	6.3	7.3	8.3	9.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)