

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: P559689

Luminaire Tested: FSR-12-2-LD4-1HI-40-UNV-81-88-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559689
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-12-2-LD4-1HI-40-UNV-81-88-EDD
Description: 1X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

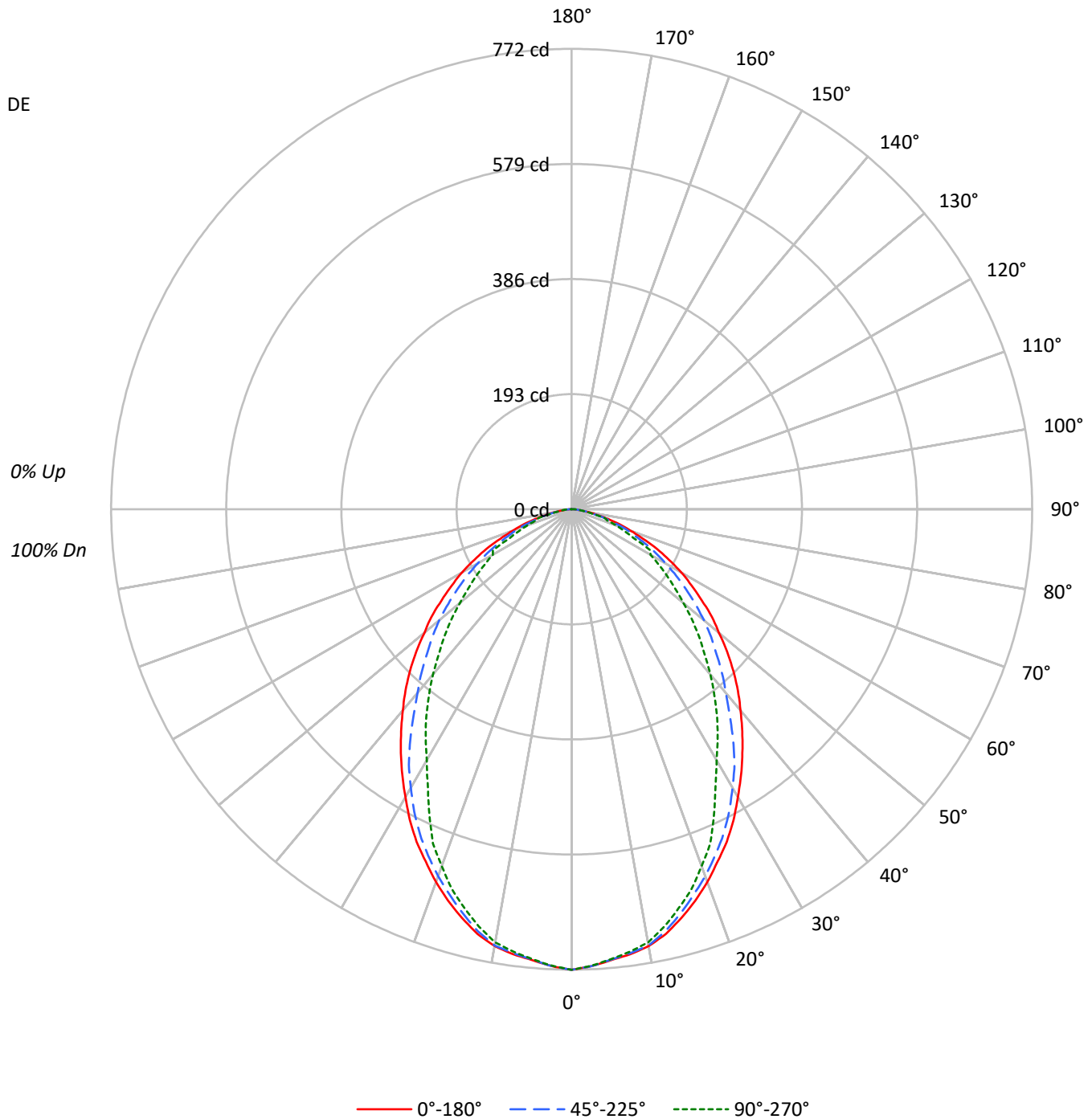
Lumens per Lamp: N/A
Luminaire Lumens: 1516.0 lumens
Efficiency: N/A
Efficacy: 70.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

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°	4156	4156	4156
5°	4099	4095	4090
10°	4064	4059	4030
15°	3954	3915	3860
20°	3809	3748	3645
25°	3653	3573	3350
30°	3462	3351	3018
35°	3279	3097	2792
40°	3092	2822	2540
45°	2915	2609	2297
50°	2699	2422	2048
55°	2496	2195	1834
60°	2287	1960	1644
65°	2012	1717	1456
70°	1657	1503	1237
75°	1318	1152	1206
80°	886	831	775
85°	550	661	772

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2915 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	71.9	4.7
10°-20°	197.3	13.0
20°-30°	273.1	18.0
30°-40°	291.2	19.2
40°-50°	265.7	17.5
50°-60°	208.1	13.7
60°-70°	135.7	8.9
70°-80°	60.1	4.0
80°-90°	12.9	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°	542.3	35.8
0°-40°	833.5	55.0
0°-60°	1307.3	86.2
0°-90°	1516.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1516.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	772	772	772	772	772	
5°	759	758	758	757	757	72
15°	710	710	703	696	693	200
25°	615	612	602	580	564	282
35°	499	496	471	436	425	312
45°	383	375	343	314	302	295
55°	266	258	234	206	196	239
65°	158	149	135	138	114	156
75°	63	59	55	53	58	68
85°	9	10	11	12	12	12
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	772.2	772.2	772.2	772.2	772.2
2.5°	766.9	766.9	766.9	766.0	766.0
5°	758.8	757.9	757.9	757.1	757.1
7.5°	752.6	751.7	750.8	749.9	748.1
10°	743.7	743.7	742.8	738.3	737.4
12.5°	729.4	728.5	724.9	718.7	716.9
15°	709.7	709.7	702.6	695.5	692.8
17.5°	688.3	687.4	678.5	671.3	667.8
20°	665.1	663.3	654.4	642.8	636.5
22.5°	639.2	639.2	628.5	613.3	607.1
25°	615.1	611.5	601.7	580.3	564.2
27.5°	587.4	582.1	571.4	541.0	522.3
30°	557.1	554.4	539.2	499.9	485.7
32.5°	528.5	524.0	508.0	466.9	455.3
35°	499.0	495.5	471.4	435.7	424.9
37.5°	469.6	465.1	434.8	406.2	392.8
40°	440.1	434.8	401.7	375.8	361.6
42.5°	412.5	405.3	373.2	345.5	329.4
45°	383.0	375.0	342.8	314.2	301.8
47.5°	353.5	346.4	316.9	287.5	273.2
50°	322.3	316.0	289.3	259.8	244.6
52.5°	296.4	286.6	260.7	231.2	218.7
55°	266.0	258.0	233.9	206.2	195.5
57.5°	238.4	230.3	208.0	182.1	173.2
60°	212.5	200.9	182.1	159.8	152.7
62.5°	183.9	175.0	158.9	140.2	149.1
65°	158.0	149.1	134.8	137.5	114.3
67.5°	129.4	125.0	112.5	100.0	96.4
70°	105.3	100.0	95.5	82.1	78.6
72.5°	83.9	78.6	72.3	65.2	62.5
75°	63.4	58.9	55.4	52.7	58.0
77.5°	43.7	42.0	39.3	36.6	35.7
80°	28.6	27.7	26.8	25.9	25.0
82.5°	17.0	17.0	17.0	17.0	17.0
85°	8.9	9.8	10.7	11.6	12.5
87.5°	5.4	5.4	6.2	7.1	8.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)