

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: P590045

Luminaire Tested: FSR-24-2-LD4-1STD-35-UNV-81-84-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590045
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-1)
Test Lab: INNOVATION CENTER
Issue Date: 12/8/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-24-2-LD4-1STD-35-UNV-81-84-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1854.0 lumens
Efficiency: N/A
Efficacy: 111.7 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

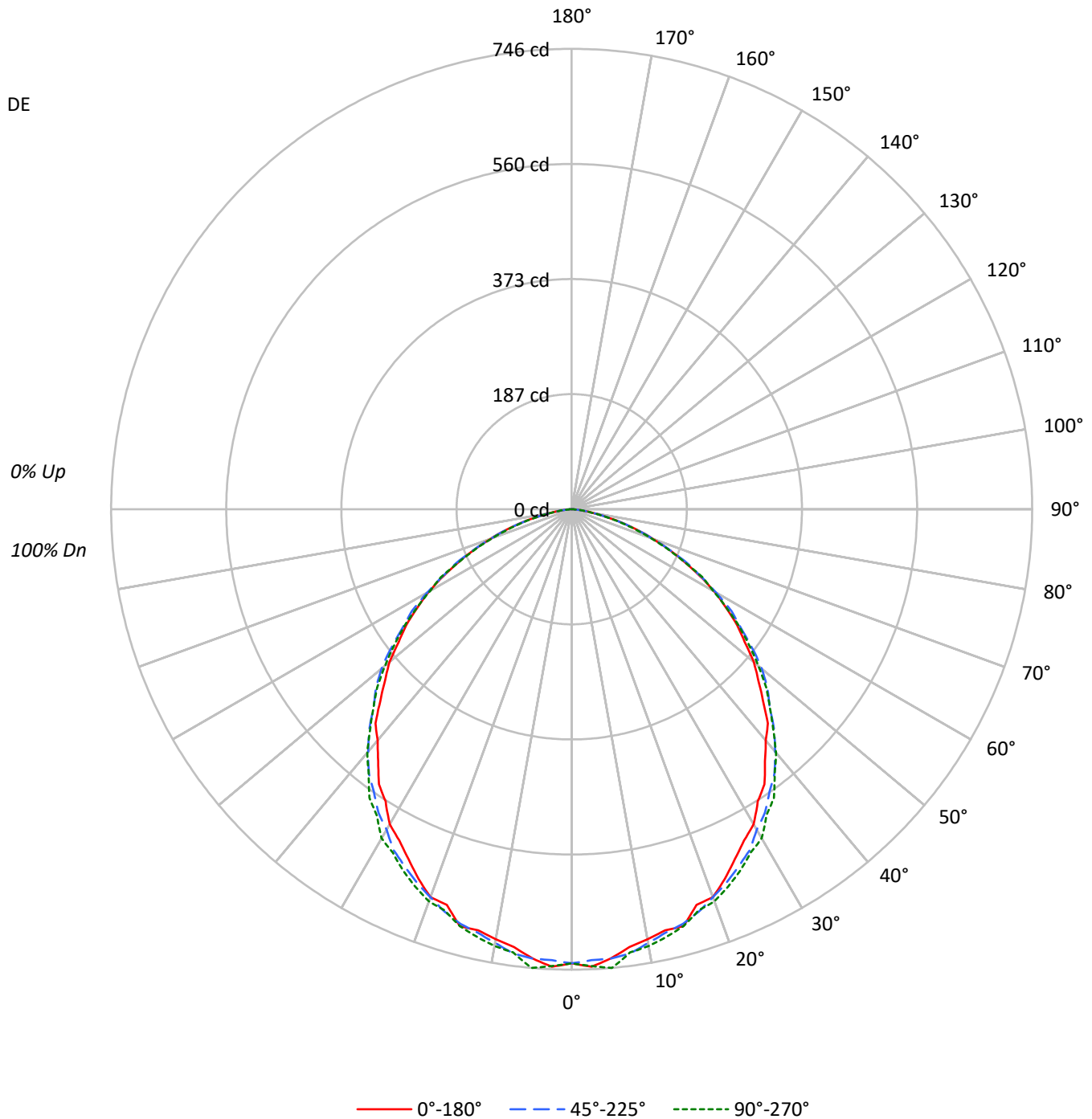
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86					86			
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73					73			
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62					62			
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53					53			
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46					46			
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41					41			
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36					36			
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32					32			
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29					29			
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26					26			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1979	1979	1979
5°	1973	1974	2015
10°	1933	1950	1964
15°	1948	1938	1948
20°	1915	1915	1936
25°	1857	1897	1918
30°	1831	1863	1913
35°	1788	1835	1876
40°	1718	1801	1809
45°	1666	1725	1728
50°	1612	1684	1652
55°	1536	1566	1554
60°	1436	1450	1424
65°	1280	1313	1271
70°	1098	1102	1072
75°	870	868	835
80°	583	567	544
85°	318	315	293

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 1770 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	69.2	3.7
10°-20°	196.1	10.6
20°-30°	293.8	15.8
30°-40°	348.2	18.8
40°-50°	348.9	18.8
50°-60°	296.1	16.0
60°-70°	199.7	10.8
70°-80°	87.7	4.7
80°-90°	14.3	0.8
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°	559.1	30.2
0°-40°	907.4	48.9
0°-60°	1552.4	83.7
0°-90°	1854.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1854.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	736	736	736	736	736	
5°	730	729	731	728	746	69
15°	699	691	696	699	699	195
25°	625	629	639	647	646	289
35°	544	546	558	571	571	338
45°	438	446	453	465	454	339
55°	327	325	334	331	331	291
65°	201	198	206	198	200	200
75°	84	82	84	78	80	90
85°	10	10	10	10	10	15
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	735.6	735.6	735.6	735.6	735.6
2.5°	742.0	736.4	731.2	737.2	740.9
5°	730.4	728.7	730.7	728.5	746.1
7.5°	715.4	721.9	725.7	723.4	724.4
10°	707.4	705.1	713.6	719.5	718.6
12.5°	698.9	702.3	702.8	709.1	709.7
15°	699.3	691.3	695.5	699.1	699.4
17.5°	672.2	680.9	683.9	692.1	681.9
20°	668.8	662.5	668.8	677.3	676.0
22.5°	648.4	641.3	655.0	662.5	662.0
25°	625.3	628.7	638.9	647.3	646.0
27.5°	604.9	608.9	623.5	635.0	627.6
30°	589.3	587.3	599.6	609.9	615.6
32.5°	561.2	568.5	582.9	593.1	587.6
35°	544.2	545.9	558.5	571.4	571.0
37.5°	514.5	522.0	539.8	543.4	540.1
40°	489.1	496.7	512.7	516.6	515.0
42.5°	470.4	471.8	485.5	490.0	482.9
45°	437.9	446.0	453.4	465.1	454.1
47.5°	410.1	413.9	429.9	433.0	427.2
50°	385.0	386.3	402.3	398.4	394.6
52.5°	353.3	358.9	368.0	367.2	362.7
55°	327.3	325.1	333.7	331.4	331.3
57.5°	296.1	299.9	306.9	303.3	297.5
60°	266.8	266.9	269.5	265.4	264.6
62.5°	234.2	235.4	235.9	230.9	239.1
65°	201.1	198.4	206.2	198.3	199.6
67.5°	170.6	171.9	171.2	166.2	168.1
70°	139.6	141.3	140.1	134.5	136.2
72.5°	111.3	109.2	110.6	103.5	106.8
75°	83.7	82.0	83.5	77.6	80.3
77.5°	57.0	58.3	57.4	54.2	56.0
80°	37.6	36.6	36.6	34.8	35.1
82.5°	21.9	20.9	20.6	20.0	20.9
85°	10.3	10.0	10.2	9.9	9.5
87.5°	3.7	3.8	3.8	3.6	3.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)