

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: P563506

Luminaire Tested: FSR-24-4-LD4-3STD-40-UNV-80-85-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563506
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-LD4-3STD-40-UNV-80-85-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRONM
SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9738.0 lumens
Efficiency: N/A
Efficacy: 97.5 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

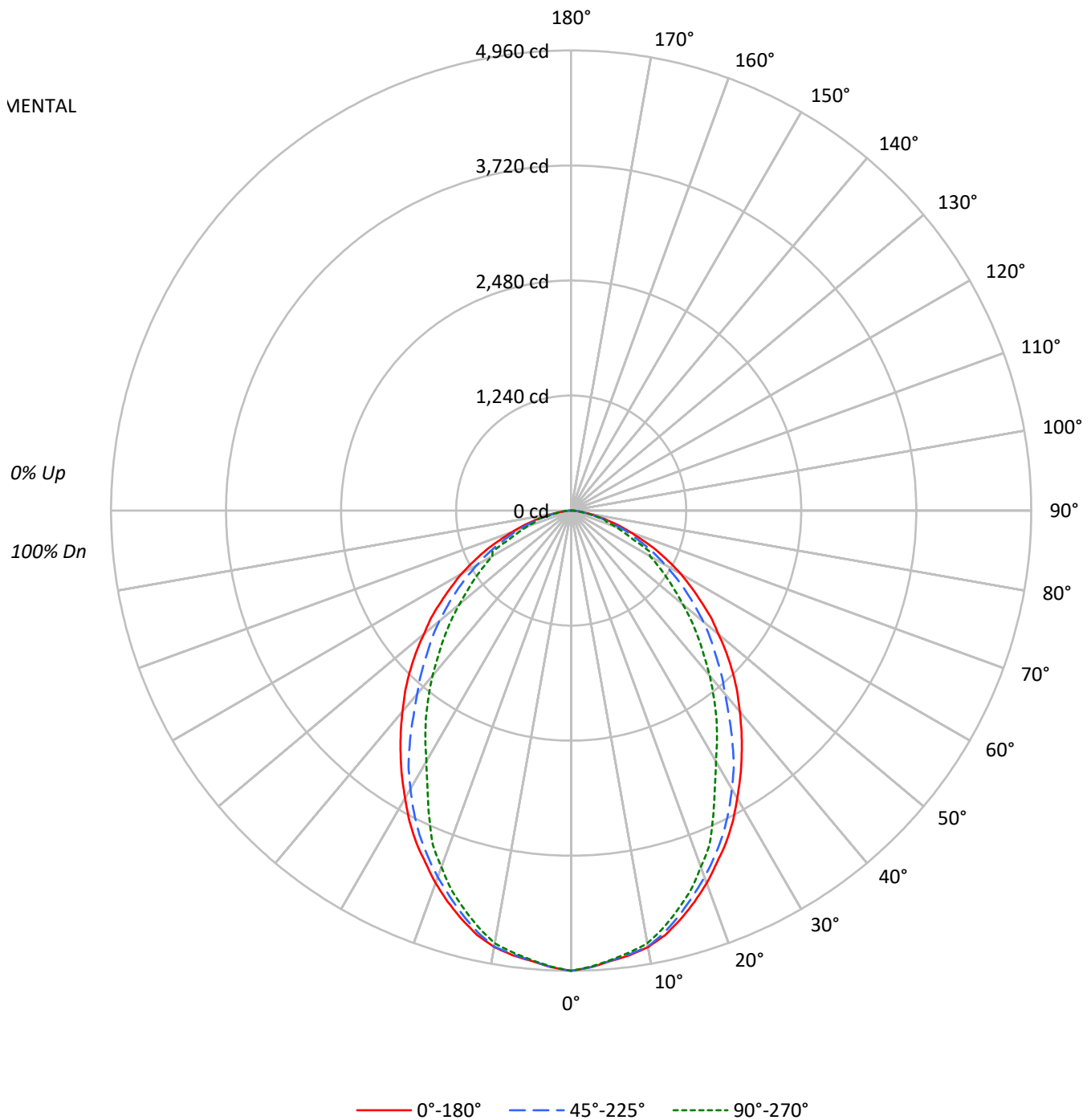
Input Watts (W): 99.9
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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					87			
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75					75			
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65					65			
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56					56			
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50					50			
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44					44			
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40					40			
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36					36			
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33					33			
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30					30			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6674	6674	6674
5°	6584	6576	6568
10°	6526	6519	6472
15°	6350	6287	6199
20°	6117	6019	5855
25°	5866	5738	5381
30°	5560	5381	4847
35°	5265	4973	4484
40°	4966	4533	4079
45°	4681	4190	3688
50°	4333	3889	3289
55°	4009	3525	2946
60°	3673	3148	2639
65°	3231	2757	2337
70°	2662	2414	1985
75°	2117	1848	1938
80°	1422	1333	1244
85°	885	1062	1240

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4681 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	461.7	4.7
10°-20°	1267.2	13.0
20°-30°	1754.4	18.0
30°-40°	1870.7	19.2
40°-50°	1706.6	17.5
50°-60°	1337.0	13.7
60°-70°	871.4	8.9
70°-80°	386.1	4.0
80°-90°	82.9	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°	3483.4	35.8
0°-40°	5354.1	55.0
0°-60°	8397.7	86.2
0°-90°	9738.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9738.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4960	4960	4960	4960	4960	
5°	4874	4869	4869	4863	4863	463
15°	4559	4559	4513	4467	4450	1282
25°	3951	3928	3865	3728	3624	1814
35°	3206	3183	3028	2798	2730	2004
45°	2460	2408	2202	2019	1938	1895
55°	1709	1657	1502	1325	1256	1533
65°	1015	958	866	883	734	1000
75°	407	378	356	338	373	436
85°	57	63	69	74	80	80
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4960.4	4960.4	4960.4	4960.4	4960.4
2.5°	4926.0	4926.0	4926.0	4920.3	4920.3
5°	4874.4	4868.7	4868.7	4862.9	4862.9
7.5°	4834.2	4828.5	4822.8	4817.0	4805.6
10°	4776.9	4776.9	4771.2	4742.5	4736.8
12.5°	4685.1	4679.4	4656.5	4616.3	4604.9
15°	4559.0	4559.0	4513.1	4467.2	4450.0
17.5°	4421.4	4415.6	4358.3	4312.4	4289.5
20°	4272.3	4260.8	4203.4	4128.9	4088.8
22.5°	4106.0	4106.0	4037.1	3939.7	3899.5
25°	3951.1	3928.2	3865.1	3727.5	3624.3
27.5°	3773.4	3738.9	3670.1	3475.2	3354.7
30°	3578.4	3561.2	3463.7	3211.4	3119.6
32.5°	3394.9	3366.2	3263.0	2999.2	2924.6
35°	3205.6	3182.7	3027.9	2798.5	2729.7
37.5°	3016.4	2987.7	2792.7	2609.2	2523.2
40°	2827.1	2792.7	2580.6	2414.3	2322.5
42.5°	2649.4	2603.5	2397.1	2219.3	2116.1
45°	2460.1	2408.5	2202.1	2018.6	1938.3
47.5°	2270.9	2225.0	2035.8	1846.5	1754.8
50°	2070.2	2030.0	1858.0	1668.8	1571.3
52.5°	1903.9	1840.8	1674.5	1485.3	1405.0
55°	1708.9	1657.3	1502.5	1324.7	1255.9
57.5°	1531.1	1479.5	1336.2	1169.9	1112.5
60°	1364.8	1290.3	1169.9	1026.5	980.6
62.5°	1181.3	1124.0	1020.8	900.3	957.7
65°	1015.0	957.7	865.9	883.1	734.0
67.5°	831.5	802.8	722.6	642.3	619.3
70°	676.7	642.3	613.6	527.6	504.6
72.5°	539.1	504.6	464.5	418.6	401.4
75°	407.2	378.5	355.5	338.3	372.7
77.5°	281.0	269.5	252.3	235.1	229.4
80°	183.5	177.8	172.0	166.3	160.6
82.5°	109.0	109.0	109.0	109.0	109.0
85°	57.3	63.1	68.8	74.5	80.3
87.5°	34.4	34.4	40.1	45.9	51.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)