

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: P563955

Luminaire Tested: FSR-24-4-LD4-4LO-50-UNV-80-85-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563955
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-LD4-4LO-50-UNV-80-85-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRONM
SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

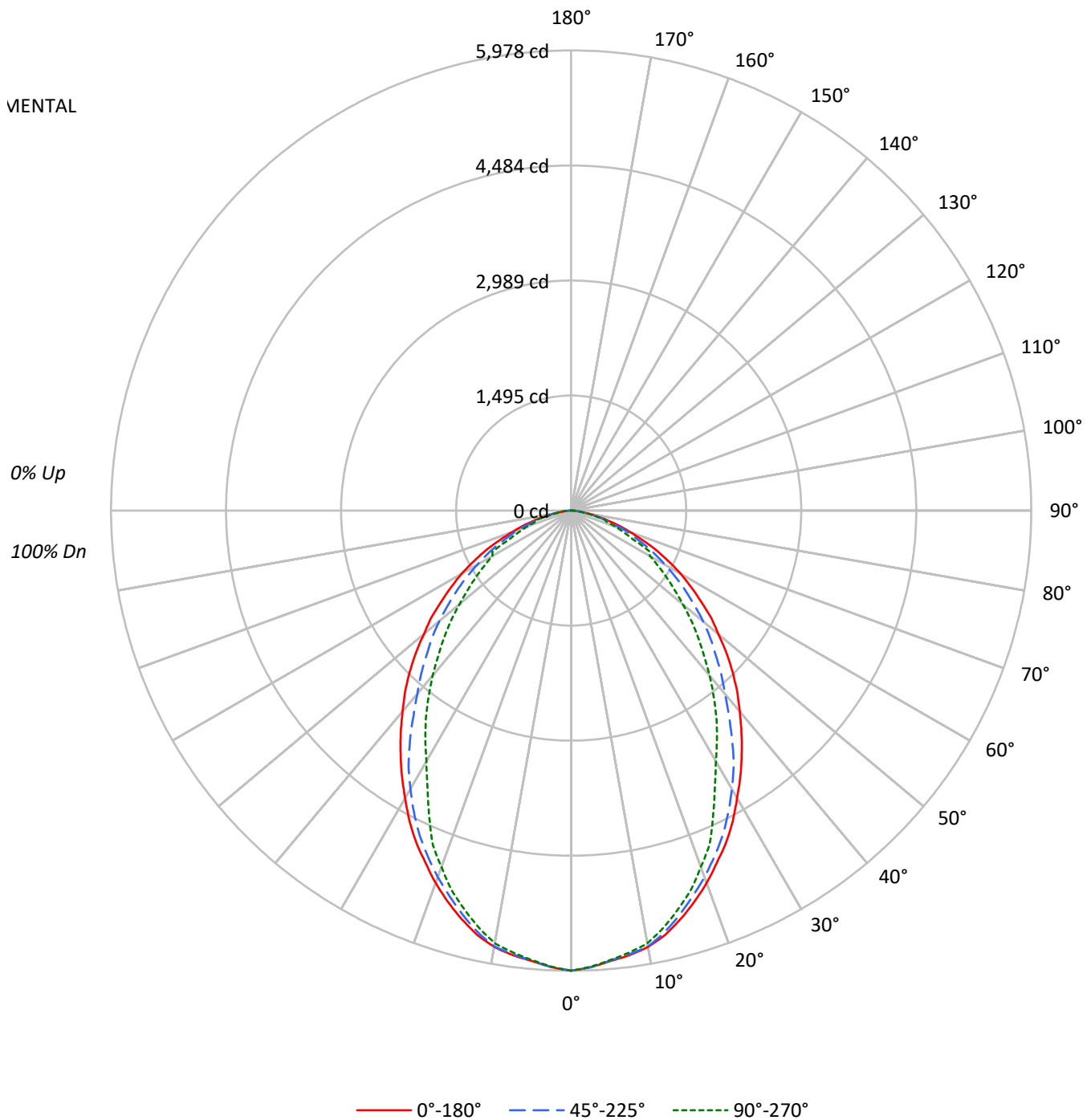
Lumens per Lamp: N/A
Luminaire Lumens: 11735.0 lumens
Efficiency: N/A
Efficacy: 125.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 93.6
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					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°	8043	8043	8043
5°	7934	7924	7915
10°	7865	7855	7799
15°	7653	7576	7470
20°	7372	7253	7055
25°	7069	6915	6484
30°	6700	6485	5841
35°	6345	5993	5403
40°	5984	5462	4916
45°	5641	5049	4445
50°	5222	4687	3963
55°	4831	4247	3550
60°	4426	3794	3180
65°	3894	3322	2816
70°	3208	2909	2392
75°	2551	2228	2335
80°	1713	1606	1499
85°	1067	1280	1493

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5641 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	556.4	4.7
10°-20°	1527.1	13.0
20°-30°	2114.2	18.0
30°-40°	2254.3	19.2
40°-50°	2056.6	17.5
50°-60°	1611.2	13.7
60°-70°	1050.1	8.9
70°-80°	465.2	4.0
80°-90°	99.9	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°	4197.7	35.8
0°-40°	6452.0	55.0
0°-60°	10119.8	86.2
0°-90°	11735.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11735.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5978	5978	5978	5978	5978	
5°	5874	5867	5867	5860	5860	558
15°	5494	5494	5439	5383	5363	1544
25°	4761	4734	4658	4492	4368	2186
35°	3863	3835	3649	3372	3289	2415
45°	2965	2902	2654	2432	2336	2284
55°	2059	1997	1811	1596	1513	1847
65°	1223	1154	1044	1064	885	1205
75°	491	456	428	408	449	526
85°	69	76	83	90	97	96
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5977.7	5977.7	5977.7	5977.7	5977.7
2.5°	5936.2	5936.2	5936.2	5929.3	5929.3
5°	5874.0	5867.1	5867.1	5860.2	5860.2
7.5°	5825.6	5818.7	5811.8	5804.9	5791.1
10°	5756.5	5756.5	5749.6	5715.1	5708.1
12.5°	5645.9	5639.0	5611.4	5563.0	5549.2
15°	5493.9	5493.9	5438.6	5383.3	5362.6
17.5°	5328.1	5321.1	5252.0	5196.8	5169.1
20°	5148.4	5134.6	5065.5	4975.6	4927.2
22.5°	4948.0	4948.0	4865.0	4747.6	4699.2
25°	4761.4	4733.7	4657.7	4491.9	4367.5
27.5°	4547.2	4505.7	4422.8	4187.8	4042.7
30°	4312.2	4291.5	4174.0	3869.9	3759.4
32.5°	4091.1	4056.5	3932.1	3614.2	3524.4
35°	3863.0	3835.4	3648.8	3372.4	3289.4
37.5°	3635.0	3600.4	3365.5	3144.3	3040.7
40°	3406.9	3365.5	3109.8	2909.4	2798.8
42.5°	3192.7	3137.4	2888.6	2674.4	2550.0
45°	2964.6	2902.4	2653.7	2432.5	2335.8
47.5°	2736.6	2681.3	2453.3	2225.2	2114.6
50°	2494.7	2446.3	2239.0	2011.0	1893.5
52.5°	2294.3	2218.3	2017.9	1789.8	1693.1
55°	2059.4	1997.2	1810.6	1596.3	1513.4
57.5°	1845.1	1782.9	1610.2	1409.8	1340.7
60°	1644.7	1554.9	1409.8	1237.0	1181.7
62.5°	1423.6	1354.5	1230.1	1085.0	1154.1
65°	1223.2	1154.1	1043.5	1064.2	884.6
67.5°	1002.0	967.5	870.7	774.0	746.3
70°	815.4	774.0	739.4	635.8	608.1
72.5°	649.6	608.1	559.8	504.5	483.7
75°	490.7	456.1	428.5	407.7	449.2
77.5°	338.6	324.8	304.1	283.3	276.4
80°	221.1	214.2	207.3	200.4	193.5
82.5°	131.3	131.3	131.3	131.3	131.3
85°	69.1	76.0	82.9	89.8	96.7
87.5°	41.5	41.5	48.4	55.3	62.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)