

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: P563463

Luminaire Tested: FSR-24-4-LD4-3STD-35-UNV-81-87-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563463
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-35-UNV-81-87-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10428.0 lumens
Efficiency: N/A
Efficacy: 104.4 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

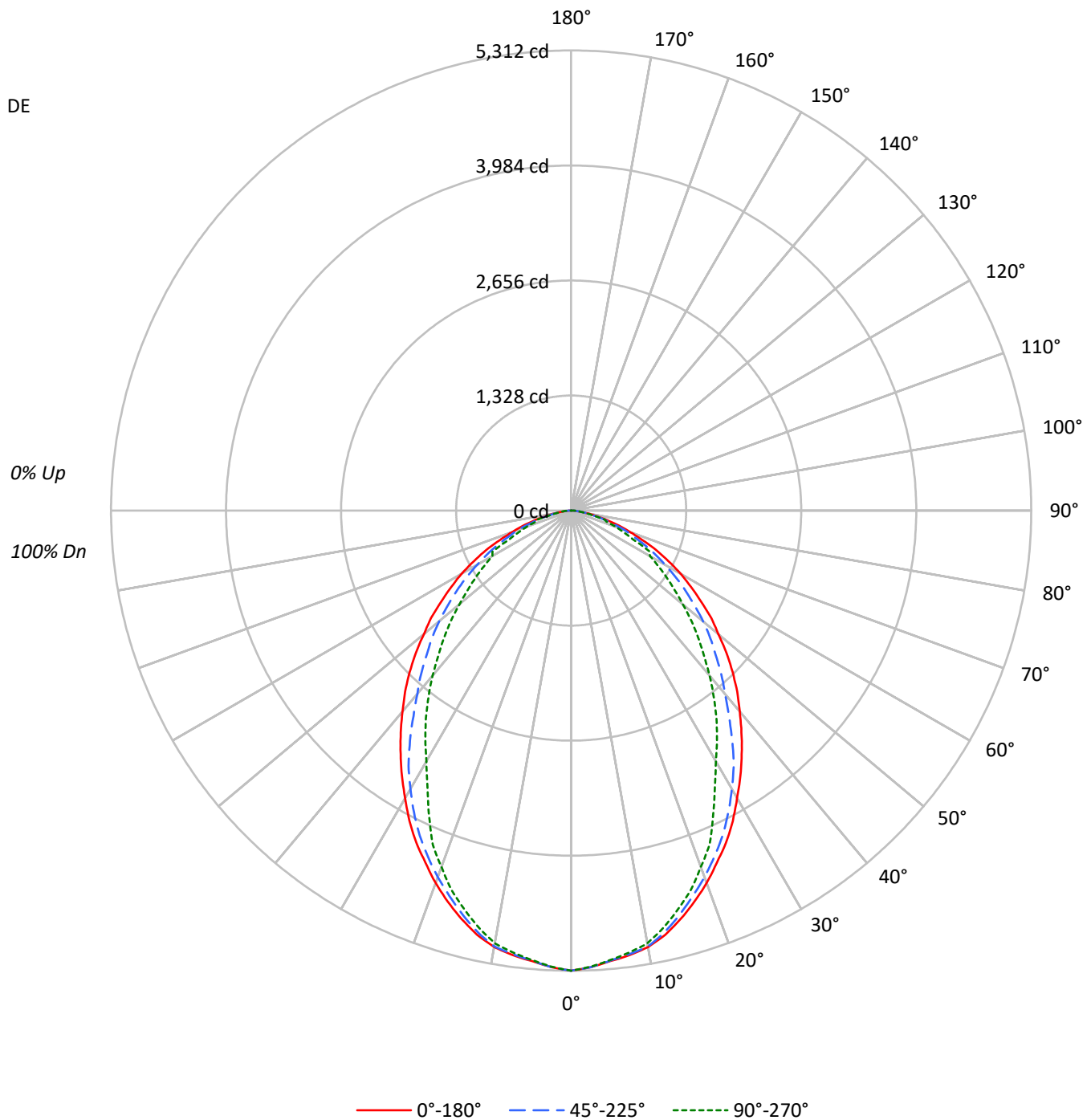
Input Watts (W): 99.9
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	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°	7147	7147	7147
5°	7050	7042	7033
10°	6989	6980	6930
15°	6800	6732	6638
20°	6551	6445	6269
25°	6281	6145	5762
30°	5953	5763	5190
35°	5639	5326	4801
40°	5318	4854	4368
45°	5013	4487	3949
50°	4640	4165	3522
55°	4293	3774	3155
60°	3933	3371	2826
65°	3460	2952	2502
70°	2851	2585	2126
75°	2267	1979	2075
80°	1523	1427	1332
85°	948	1138	1328

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5013 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	494.5	4.7
10°-20°	1357.0	13.0
20°-30°	1878.7	18.0
30°-40°	2003.2	19.2
40°-50°	1827.5	17.5
50°-60°	1431.7	13.7
60°-70°	933.1	8.9
70°-80°	413.4	4.0
80°-90°	88.8	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°	3730.2	35.8
0°-40°	5733.4	55.0
0°-60°	8992.7	86.2
0°-90°	10428.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10428.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5312	5312	5312	5312	5312	
5°	5220	5214	5214	5208	5208	495
15°	4882	4882	4833	4784	4765	1372
25°	4231	4206	4139	3992	3881	1942
35°	3433	3408	3242	2997	2923	2146
45°	2634	2579	2358	2162	2076	2029
55°	1830	1775	1609	1418	1345	1641
65°	1087	1026	927	946	786	1071
75°	436	405	381	362	399	467
85°	61	68	74	80	86	85
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5311.9	5311.9	5311.9	5311.9	5311.9
2.5°	5275.0	5275.0	5275.0	5268.9	5268.9
5°	5219.8	5213.6	5213.6	5207.5	5207.5
7.5°	5176.8	5170.6	5164.5	5158.4	5146.1
10°	5115.4	5115.4	5109.2	5078.5	5072.4
12.5°	5017.1	5011.0	4986.4	4943.4	4931.1
15°	4882.0	4882.0	4832.9	4783.8	4765.3
17.5°	4734.6	4728.5	4667.1	4618.0	4593.4
20°	4575.0	4562.7	4501.3	4421.5	4378.5
22.5°	4396.9	4396.9	4323.2	4218.8	4175.8
25°	4231.1	4206.5	4139.0	3991.6	3881.1
27.5°	4040.7	4003.9	3930.2	3721.4	3592.4
30°	3831.9	3813.5	3709.1	3438.9	3340.7
32.5°	3635.4	3604.7	3494.2	3211.7	3131.9
35°	3432.8	3408.2	3242.4	2996.8	2923.1
37.5°	3230.1	3199.4	2990.6	2794.1	2702.0
40°	3027.5	2990.6	2763.4	2585.3	2487.1
42.5°	2837.1	2788.0	2566.9	2376.5	2266.0
45°	2634.4	2579.2	2358.1	2161.6	2075.6
47.5°	2431.8	2382.7	2180.0	1977.4	1879.1
50°	2216.9	2173.9	1989.7	1787.0	1682.6
52.5°	2038.8	1971.2	1793.1	1590.5	1504.5
55°	1830.0	1774.7	1608.9	1418.5	1344.9
57.5°	1639.6	1584.4	1430.8	1252.7	1191.3
60°	1461.5	1381.7	1252.7	1099.2	1050.1
62.5°	1265.0	1203.6	1093.1	964.1	1025.5
65°	1086.9	1025.5	927.3	945.7	786.0
67.5°	890.4	859.7	773.8	687.8	663.2
70°	724.6	687.8	657.1	565.0	540.4
72.5°	577.2	540.4	497.4	448.3	429.9
75°	436.0	405.3	380.7	362.3	399.2
77.5°	300.9	288.6	270.2	251.8	245.6
80°	196.5	190.4	184.2	178.1	171.9
82.5°	116.7	116.7	116.7	116.7	116.7
85°	61.4	67.5	73.7	79.8	86.0
87.5°	36.8	36.8	43.0	49.1	55.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)