

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: P562547

Luminaire Tested: FSR-24-4-LD4-2HI-40-UNV-80-85-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562547
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-LD4-2HI-40-UNV-80-85-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9477.0 lumens
Efficiency: N/A
Efficacy: 109.7 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

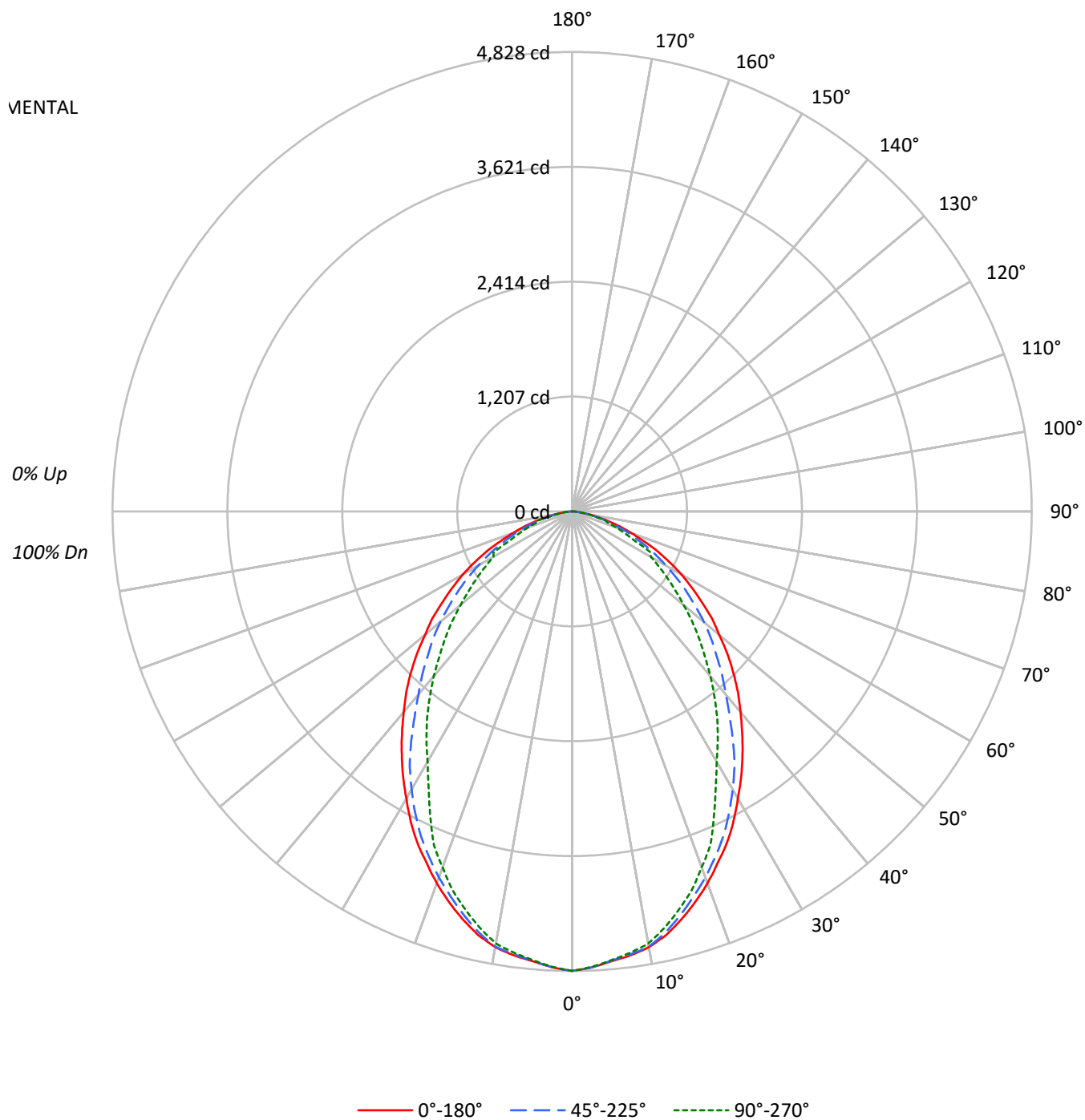
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
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°	6495	6495	6495
5°	6407	6400	6392
10°	6352	6344	6298
15°	6180	6118	6033
20°	5953	5857	5698
25°	5709	5584	5236
30°	5411	5237	4717
35°	5124	4840	4363
40°	4833	4411	3970
45°	4556	4078	3589
50°	4217	3785	3201
55°	3901	3430	2867
60°	3574	3064	2568
65°	3145	2683	2274
70°	2591	2349	1932
75°	2060	1799	1886
80°	1384	1297	1211
85°	861	1034	1206

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 4556 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	449.4	4.7
10°-20°	1233.3	13.0
20°-30°	1707.4	18.0
30°-40°	1820.6	19.2
40°-50°	1660.9	17.5
50°-60°	1301.2	13.7
60°-70°	848.0	8.9
70°-80°	375.7	4.0
80°-90°	80.7	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°	3390.0	35.8
0°-40°	5210.6	55.0
0°-60°	8172.6	86.2
0°-90°	9477.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9477.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4828	4828	4828	4828	4828	
5°	4744	4738	4738	4733	4733	450
15°	4437	4437	4392	4348	4331	1247
25°	3845	3823	3762	3628	3527	1765
35°	3120	3097	2947	2724	2656	1950
45°	2394	2344	2143	1964	1886	1844
55°	1663	1613	1462	1289	1222	1492
65°	988	932	843	860	714	973
75°	396	368	346	329	363	425
85°	56	61	67	73	78	77
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4827.5	4827.5	4827.5	4827.5	4827.5
2.5°	4794.0	4794.0	4794.0	4788.4	4788.4
5°	4743.7	4738.2	4738.2	4732.6	4732.6
7.5°	4704.7	4699.1	4693.5	4687.9	4676.8
10°	4648.9	4648.9	4643.3	4615.4	4609.8
12.5°	4559.6	4554.0	4531.7	4492.6	4481.4
15°	4436.8	4436.8	4392.1	4347.5	4330.8
17.5°	4302.9	4297.3	4241.5	4196.8	4174.5
20°	4157.8	4146.6	4090.8	4018.2	3979.2
22.5°	3995.9	3995.9	3928.9	3834.1	3795.0
25°	3845.2	3822.9	3761.5	3627.6	3527.1
27.5°	3672.2	3638.7	3571.8	3382.0	3264.8
30°	3482.5	3465.7	3370.8	3125.3	3036.0
32.5°	3303.9	3276.0	3175.5	2918.8	2846.2
35°	3119.7	3097.4	2946.7	2723.5	2656.5
37.5°	2935.5	2907.6	2717.9	2539.3	2455.6
40°	2751.4	2717.9	2511.4	2349.5	2260.3
42.5°	2578.4	2533.7	2332.8	2159.8	2059.3
45°	2394.2	2344.0	2143.1	1964.5	1886.3
47.5°	2210.0	2165.4	1981.2	1797.0	1707.7
50°	2014.7	1975.6	1808.2	1624.0	1529.2
52.5°	1852.9	1791.5	1629.6	1445.4	1367.3
55°	1663.1	1612.9	1462.2	1289.2	1222.2
57.5°	1490.1	1439.9	1300.3	1138.5	1082.7
60°	1328.2	1255.7	1138.5	999.0	954.3
62.5°	1149.7	1093.9	993.4	876.2	932.0
65°	987.8	932.0	842.7	859.5	714.4
67.5°	809.2	781.3	703.2	625.1	602.7
70°	658.5	625.1	597.2	513.4	491.1
72.5°	524.6	491.1	452.1	407.4	390.7
75°	396.2	368.3	346.0	329.3	362.8
77.5°	273.5	262.3	245.6	228.8	223.2
80°	178.6	173.0	167.4	161.8	156.3
82.5°	106.0	106.0	106.0	106.0	106.0
85°	55.8	61.4	67.0	72.6	78.1
87.5°	33.5	33.5	39.1	44.6	50.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)