

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P308402

Luminaire Tested: **22FCZ2-24HE-UNV-L82765-RDP-CP187-W2A-U-2700K**

Issue Date: 3/3/2020

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.

Test Information

Test Method: LM-79-08
Report Number: P308402
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-24)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 22FCZ2-24HE-UNV-L82765-RDP-CP187-W2A-U-2700K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" POLYCARB SHEET
Light Source: (168) 3000K TUNABLE CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment:

<u>Sample No.</u>	<u>Condition</u>	<u>Description</u>
AS-5443-1	Good	WHITE TWIN R-EVOLVE FLOOD
AS-5443-2	Good	REFLECTOR
AS-5443-3	Good	DRIVER
AS-5443-4	Good	UPPER MODULE
AS-5443-5	Good	LENS
AS-5443-6	Good	DRIVER 2
AS-5443-7	Good	TRIM RING

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1261.0 lumens
Efficiency: N/A
Efficacy: 66.7 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

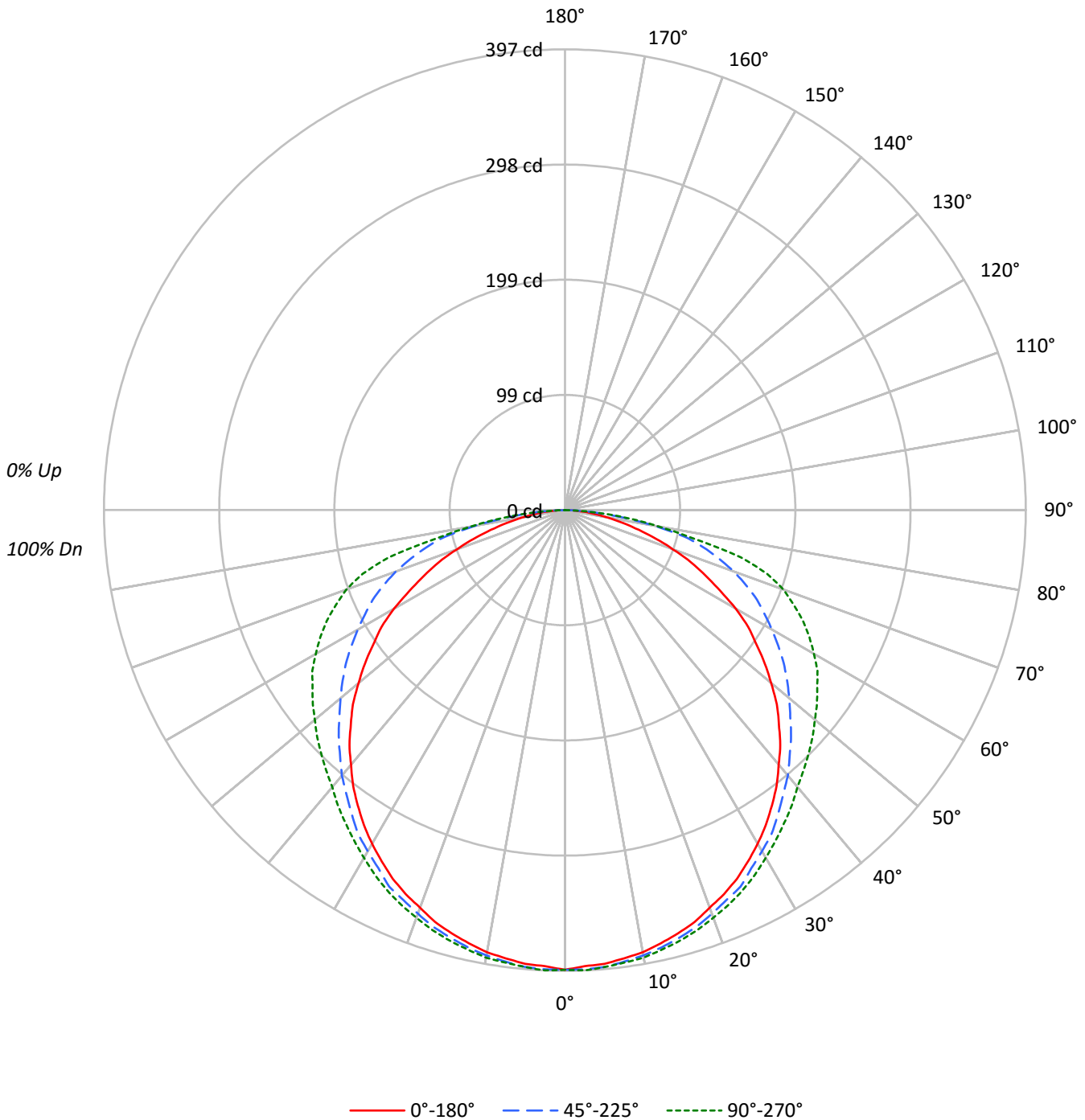
Input Watts (W): 18.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	108	103	98	94	105	100	96	92	96	92	89	92	89	86	88	86	84	82
2	97	88	81	75	95	86	80	74	83	77	72	80	75	71	76	72	69	67
3	88	77	68	61	86	75	67	61	72	65	60	70	64	59	67	62	58	55
4	80	68	59	51	78	66	58	51	64	56	50	61	55	50	59	54	49	47
5	74	60	51	44	72	59	50	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	44	38	51	43	38	50	43	37	48	42	37	35
7	63	49	40	33	61	48	39	33	47	39	33	45	38	33	44	37	33	31
8	59	45	36	30	57	44	35	30	43	35	29	41	34	29	40	34	29	27
9	55	41	32	27	53	40	32	27	39	32	26	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1066	1066	1066
5°	1060	1068	1068
10°	1057	1065	1070
15°	1052	1062	1070
20°	1044	1060	1070
25°	1041	1063	1074
30°	1032	1055	1075
35°	1021	1051	1082
40°	1007	1049	1095
45°	992	1048	1130
50°	971	1056	1177
55°	944	1080	1245
60°	914	1108	1333
65°	851	1163	1441
70°	781	1219	1577
75°	685	1283	1630
80°	589	1221	1280
85°	516	889	973



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	37.5	3.0
10°-20°	107.6	8.5
20°-30°	164.1	13.0
30°-40°	200.4	15.9
40°-50°	214.3	17.0
50°-60°	206.8	16.4
60°-70°	178.0	14.1
70°-80°	120.5	9.6
80°-90°	31.8	2.5
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°	309.2	24.5
0°-40°	509.6	40.4
0°-60°	930.7	73.8
0°-90°	1261.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1261.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	396	396	396	396	396	
5°	392	393	395	395	395	37
15°	378	378	381	383	384	107
25°	351	352	358	360	362	161
35°	311	314	320	326	329	194
45°	261	265	276	289	297	201
55°	201	208	230	253	265	180
65°	134	147	183	212	226	133
75°	66	87	123	148	157	71
85°	17	23	29	30	32	19
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	396.1	396.1	396.1	396.1	396.1
2.5°	393.3	394.2	396.1	396.1	397.0
5°	392.4	393.3	395.2	395.2	395.2
7.5°	389.6	390.5	392.4	393.3	393.3
10°	386.8	387.8	389.6	390.5	391.5
12.5°	382.2	383.1	385.9	387.8	387.8
15°	377.5	378.5	381.3	383.1	384.0
17.5°	372.0	373.8	376.6	378.5	379.4
20°	364.6	366.4	370.1	372.9	373.8
22.5°	358.1	359.9	363.6	366.4	368.3
25°	350.6	352.5	358.1	359.9	361.8
27.5°	341.4	343.2	347.9	351.6	354.4
30°	332.1	334.0	339.5	344.2	346.0
32.5°	321.9	324.7	331.2	334.9	337.7
35°	310.8	313.5	320.0	326.5	329.3
37.5°	299.6	302.4	308.9	317.3	321.0
40°	286.6	290.4	298.7	309.8	311.7
42.5°	274.6	279.2	286.6	299.6	304.3
45°	260.7	265.3	275.5	289.4	296.8
47.5°	247.7	252.3	263.4	280.1	289.4
50°	231.9	238.4	252.3	271.8	281.1
52.5°	217.1	222.6	241.2	262.5	273.7
55°	201.3	207.8	230.1	253.2	265.3
57.5°	187.4	192.9	218.0	244.0	257.9
60°	169.8	177.2	205.9	233.8	247.7
62.5°	151.2	162.3	193.9	222.6	237.5
65°	133.6	146.6	182.7	211.5	226.3
67.5°	117.8	131.7	168.8	199.4	213.4
70°	99.3	116.9	154.9	184.6	200.4
72.5°	82.6	102.0	139.1	168.8	182.7
75°	65.9	87.2	123.4	148.4	156.8
77.5°	51.0	71.4	105.8	113.2	114.1
80°	38.0	56.6	78.8	79.8	82.6
82.5°	26.0	39.9	51.0	55.7	56.6
85°	16.7	23.2	28.8	29.7	31.5
87.5°	7.4	8.3	10.2	9.3	9.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)