

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: P312630

Luminaire Tested: **22FCZ2-24HE-UNV-L83050-RDP-CP187-W2A-U-3000K**

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: P312630
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-L83050-RDP-CP187-W2A-U-3000K
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: 1299.0 lumens
Efficiency: N/A
Efficacy: 68.7 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

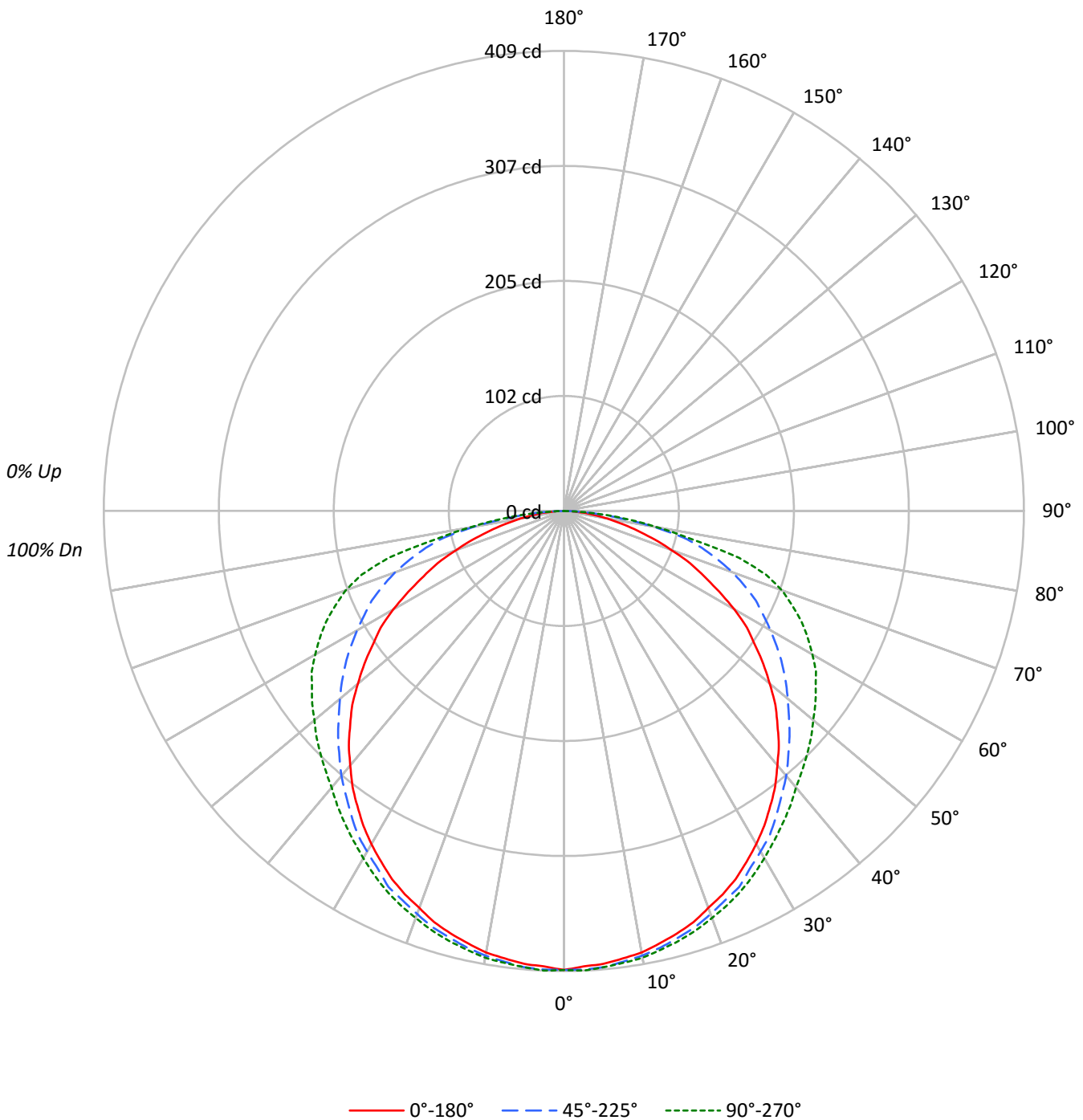
Input Watts (W): 18.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1098	1098	1098
5°	1092	1100	1100
10°	1089	1097	1102
15°	1083	1094	1102
20°	1075	1092	1103
25°	1072	1095	1107
30°	1063	1087	1107
35°	1052	1083	1114
40°	1037	1081	1128
45°	1022	1080	1164
50°	1000	1088	1212
55°	973	1112	1282
60°	941	1142	1373
65°	876	1199	1485
70°	804	1256	1624
75°	705	1321	1679
80°	607	1258	1317
85°	531	914	1003



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	38.6	3.0
10°-20°	110.8	8.5
20°-30°	169.1	13.0
30°-40°	206.4	15.9
40°-50°	220.7	17.0
50°-60°	213.1	16.4
60°-70°	183.4	14.1
70°-80°	124.1	9.6
80°-90°	32.7	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°	318.5	24.5
0°-40°	524.9	40.4
0°-60°	958.8	73.8
0°-90°	1299.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1299.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	408	408	408	408	408	
5°	404	405	407	407	407	38
15°	389	390	393	395	396	110
25°	361	363	369	371	373	166
35°	320	323	330	336	339	200
45°	268	273	284	298	306	207
55°	207	214	237	261	273	186
65°	138	151	188	218	233	137
75°	68	90	127	153	162	73
85°	17	24	30	31	32	19
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	408.0	408.0	408.0	408.0	408.0
2.5°	405.2	406.1	408.0	408.0	409.0
5°	404.2	405.2	407.1	407.1	407.1
7.5°	401.3	402.3	404.2	405.2	405.2
10°	398.5	399.4	401.3	402.3	403.3
12.5°	393.7	394.7	397.5	399.4	399.4
15°	388.9	389.9	392.7	394.7	395.6
17.5°	383.2	385.1	388.0	389.9	390.8
20°	375.5	377.5	381.3	384.1	385.1
22.5°	368.9	370.8	374.6	377.5	379.4
25°	361.2	363.1	368.9	370.8	372.7
27.5°	351.7	353.6	358.3	362.2	365.0
30°	342.1	344.0	349.7	354.5	356.4
32.5°	331.6	334.5	341.1	345.0	347.8
35°	320.1	323.0	329.7	336.4	339.2
37.5°	308.7	311.5	318.2	326.8	330.6
40°	295.3	299.1	307.7	319.2	321.1
42.5°	282.9	287.6	295.3	308.7	313.4
45°	268.5	273.3	283.8	298.1	305.8
47.5°	255.1	259.9	271.4	288.6	298.1
50°	238.9	245.6	259.9	280.0	289.5
52.5°	223.6	229.3	248.5	270.4	281.9
55°	207.4	214.1	237.0	260.9	273.3
57.5°	193.0	198.8	224.6	251.3	265.7
60°	174.9	182.5	212.1	240.8	255.1
62.5°	155.8	167.2	199.7	229.3	244.6
65°	137.6	151.0	188.3	217.9	233.2
67.5°	121.4	135.7	173.9	205.5	219.8
70°	102.2	120.4	159.6	190.2	206.4
72.5°	85.0	105.1	143.3	173.9	188.3
75°	67.8	89.8	127.1	152.9	161.5
77.5°	52.6	73.6	108.9	116.6	117.5
80°	39.2	58.3	81.2	82.2	85.0
82.5°	26.8	41.1	52.6	57.3	58.3
85°	17.2	23.9	29.6	30.6	32.5
87.5°	7.6	8.6	10.5	9.6	9.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)