

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: P310252

Luminaire Tested: **24FCZ2-50-UNV-L82765-RDP-CP187-W2A-U-5000K**

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: P310252
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-50-UNV-L82765-RDP-CP187-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" POLYCARB SHEET
Light Source: (168) 5000K 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: 2963.0 lumens
Efficiency: N/A
Efficacy: 67.8 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

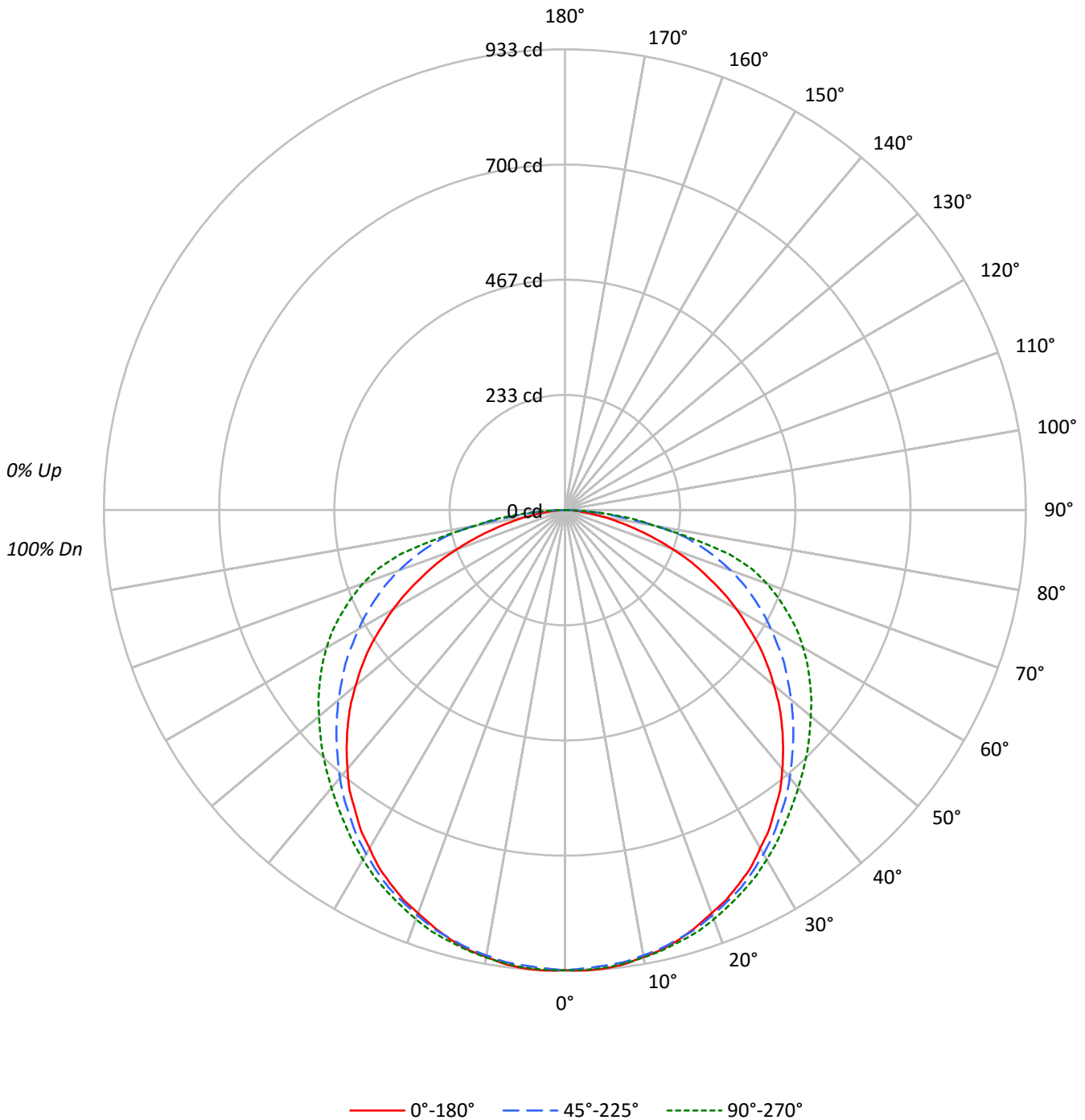
Input Watts (W): 43.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	93	89	92	89	87	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	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°	1254	1254	1254
5°	1259	1251	1256
10°	1255	1251	1257
15°	1253	1251	1259
20°	1244	1250	1263
25°	1239	1252	1265
30°	1228	1249	1269
35°	1217	1246	1275
40°	1203	1244	1291
45°	1183	1244	1320
50°	1157	1252	1360
55°	1127	1272	1420
60°	1080	1297	1499
65°	1011	1343	1591
70°	919	1405	1711
75°	779	1482	1788
80°	615	1492	1446
85°	454	1135	1271



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	88.4	3.0
10°-20°	254.4	8.6
20°-30°	389.0	13.1
30°-40°	475.5	16.0
40°-50°	506.8	17.1
50°-60°	484.6	16.4
60°-70°	410.5	13.9
70°-80°	275.9	9.3
80°-90°	77.8	2.6
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°	731.8	24.7
0°-40°	1207.3	40.7
0°-60°	2198.7	74.2
0°-90°	2963.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2963.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	932	932	932	932	932	
5°	932	930	926	930	930	89
15°	899	899	898	905	904	254
25°	835	838	844	851	852	385
35°	741	747	758	773	776	464
45°	622	632	654	682	694	479
55°	481	498	542	585	606	428
65°	318	350	422	478	500	315
75°	150	204	285	334	344	161
85°	29	60	74	79	82	36
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	931.8	931.8	931.8	931.8	931.8
2.5°	933.2	933.2	928.8	931.8	931.8
5°	931.8	930.3	925.9	930.3	930.3
7.5°	927.4	925.9	923.0	927.4	925.9
10°	918.6	918.6	915.6	920.0	920.0
12.5°	911.2	909.7	908.3	914.1	912.7
15°	899.4	899.4	898.0	905.3	903.9
17.5°	884.7	886.2	887.7	893.6	895.0
20°	868.6	871.5	873.0	881.8	881.8
22.5°	853.9	855.4	858.3	867.1	867.1
25°	834.8	837.7	843.6	850.9	852.4
27.5°	815.7	817.1	824.5	834.8	836.2
30°	790.7	795.1	803.9	815.7	817.1
32.5°	768.6	773.1	783.3	795.1	798.0
35°	740.7	746.6	758.4	773.1	776.0
37.5°	715.7	720.1	734.8	751.0	755.4
40°	684.9	693.7	708.4	727.5	734.8
42.5°	654.0	662.8	680.5	705.4	714.3
45°	621.7	632.0	654.0	681.9	693.7
47.5°	589.3	601.1	626.1	658.4	671.6
50°	552.6	567.3	598.2	634.9	649.6
52.5°	517.3	535.0	568.8	609.9	629.0
55°	480.6	498.2	542.3	584.9	605.5
57.5°	439.4	463.0	511.4	559.9	582.0
60°	401.2	423.3	482.1	535.0	557.0
62.5°	360.1	389.5	452.7	508.5	530.6
65°	317.5	349.8	421.8	477.6	499.7
67.5°	279.2	314.5	390.9	446.8	468.8
70°	233.7	277.8	357.1	413.0	435.0
72.5°	191.1	239.6	321.9	376.2	396.8
75°	149.9	204.3	285.1	333.6	343.9
77.5°	111.7	169.0	246.9	267.5	260.1
80°	79.4	135.2	192.5	182.2	186.6
82.5°	51.4	102.9	119.0	135.2	139.6
85°	29.4	60.3	73.5	79.4	82.3
87.5°	13.2	22.0	29.4	29.4	27.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)