

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: P310254

Luminaire Tested: **24FCZ2-50-UNV-L82765-RDP-CP187-W2A-U-5700K**

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: P310254
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-5700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" POLYCARB SHEET
Light Source: (168) 5700K 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: 3001.0 lumens
Efficiency: N/A
Efficacy: 68.4 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

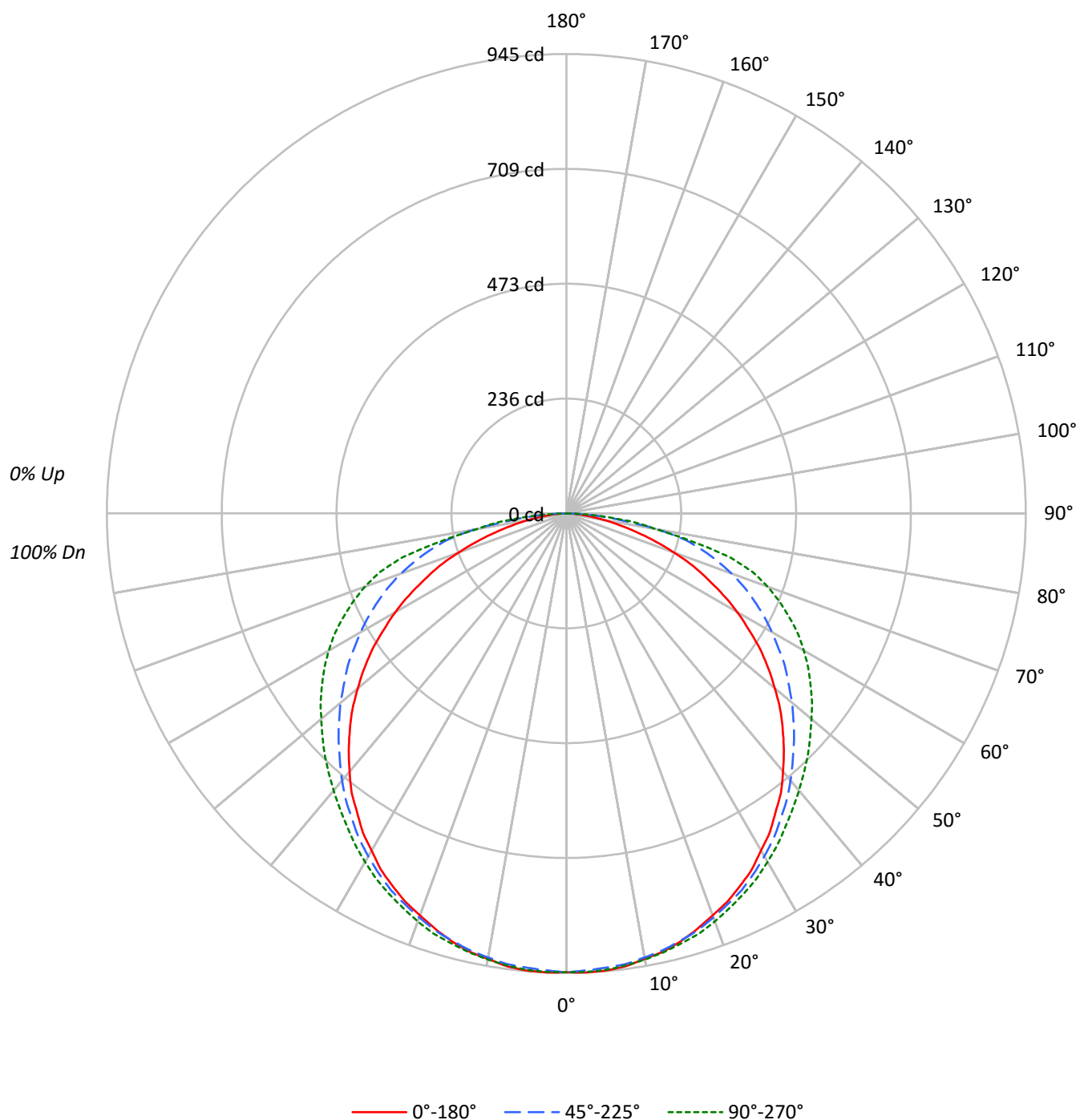
Input Watts (W): 43.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				0
RW	70	50	30	10	70	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		100
1	108	103	98	94	105	100	96	92	96	93	89		92	89	87		82
2	97	89	81	75	95	87	80	74	83	77	72		80	75	71		67
3	88	77	68	62	86	76	67	61	72	66	60		70	64	59		56
4	81	68	59	52	78	67	58	51	64	57	51		62	55	50		47
5	74	60	51	44	72	59	51	44	57	49	43		55	48	43		40
6	68	54	45	38	66	53	45	38	51	44	38		50	43	37		35
7	63	49	40	34	61	48	40	34	47	39	33		45	38	33		31
8	59	45	36	30	57	44	36	30	43	35	30		41	34	29		27
9	55	41	33	27	53	40	32	27	39	32	27		38	31	26		24
10	51	38	30	24	50	37	29	24	36	29	24		35	29	24		22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1270	1270	1270
5°	1275	1267	1273
10°	1271	1267	1273
15°	1269	1267	1275
20°	1260	1266	1279
25°	1255	1268	1282
30°	1244	1265	1286
35°	1232	1262	1291
40°	1218	1260	1307
45°	1198	1260	1337
50°	1172	1268	1377
55°	1142	1289	1439
60°	1094	1314	1518
65°	1024	1360	1611
70°	931	1423	1733
75°	789	1501	1811
80°	623	1511	1464
85°	460	1149	1288



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.5	3.0
10°-20°	257.6	8.6
20°-30°	394.0	13.1
30°-40°	481.6	16.0
40°-50°	513.3	17.1
50°-60°	490.8	16.4
60°-70°	415.8	13.9
70°-80°	279.4	9.3
80°-90°	78.8	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°	741.2	24.7
0°-40°	1222.8	40.7
0°-60°	2227.0	74.2
0°-90°	3001.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3001.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	944	944	944	944	944	
5°	944	942	938	942	942	90
15°	911	911	910	917	915	257
25°	846	848	854	862	863	390
35°	750	756	768	783	786	470
45°	630	640	662	691	703	486
55°	487	505	549	592	613	434
65°	322	354	427	484	506	319
75°	152	207	289	338	348	163
85°	30	61	74	80	83	37
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	943.7	943.7	943.7	943.7	943.7
2.5°	945.2	945.2	940.8	943.7	943.7
5°	943.7	942.2	937.8	942.2	942.2
7.5°	939.3	937.8	934.8	939.3	937.8
10°	930.3	930.3	927.4	931.8	931.8
12.5°	922.9	921.4	919.9	925.9	924.4
15°	911.0	911.0	909.5	916.9	915.4
17.5°	896.1	897.6	899.1	905.0	906.5
20°	879.7	882.7	884.2	893.1	893.1
22.5°	864.8	866.3	869.3	878.2	878.2
25°	845.5	848.5	854.4	861.9	863.3
27.5°	826.1	827.6	835.1	845.5	847.0
30°	800.8	805.3	814.2	826.1	827.6
32.5°	778.5	783.0	793.4	805.3	808.3
35°	750.2	756.2	768.1	783.0	785.9
37.5°	724.9	729.4	744.3	760.6	765.1
40°	693.7	702.6	717.5	736.8	744.3
42.5°	662.4	671.3	689.2	714.5	723.4
45°	629.6	640.1	662.4	690.7	702.6
47.5°	596.9	608.8	634.1	666.9	680.3
50°	559.7	574.6	605.8	643.0	657.9
52.5°	524.0	541.8	576.1	617.7	637.1
55°	486.7	504.6	549.3	592.4	613.3
57.5°	445.1	468.9	518.0	567.1	589.5
60°	406.4	428.7	488.2	541.8	564.2
62.5°	364.7	394.5	458.5	515.0	537.4
65°	321.5	354.3	427.2	483.8	506.1
67.5°	282.8	318.5	395.9	452.5	474.8
70°	236.7	281.3	361.7	418.3	440.6
72.5°	193.5	242.6	326.0	381.1	401.9
75°	151.8	206.9	288.8	337.9	348.3
77.5°	113.1	171.2	250.1	270.9	263.5
80°	80.4	136.9	195.0	184.6	189.0
82.5°	52.1	104.2	120.6	136.9	141.4
85°	29.8	61.0	74.4	80.4	83.4
87.5°	13.4	22.3	29.8	29.8	28.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)