

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: P310166

Luminaire Tested: **24FCZ2-45-UNV-L82765-RDP-CP250-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: P310166
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: 24FCZ2-45-UNV-L82765-RDP-CP250-W2A-U-2700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" POLYCARB SHEET
Light Source: (168) 2700K 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: 2373.0 lumens
Efficiency: N/A
Efficacy: 63.1 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

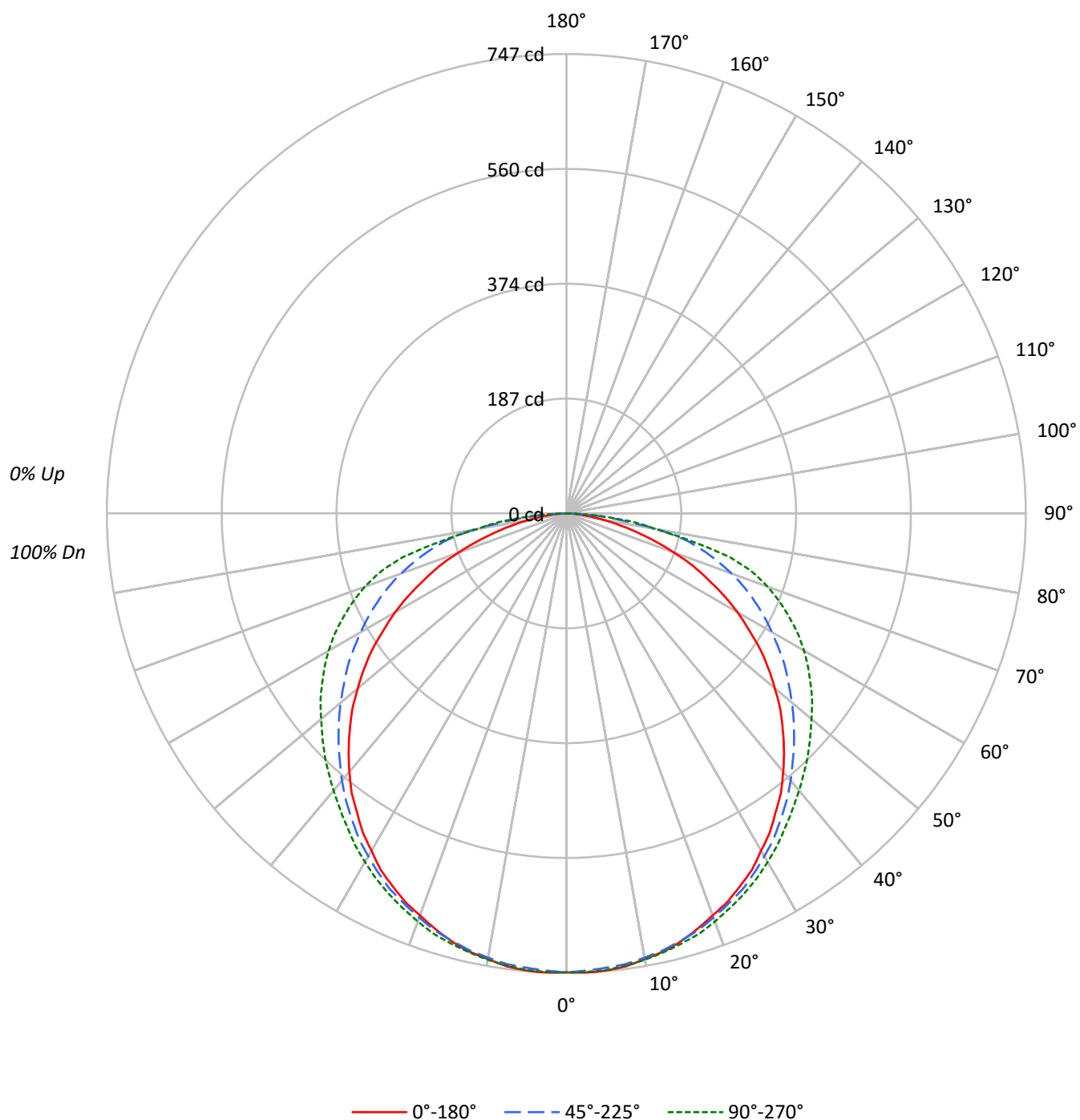
Input Watts (W): 37.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1004	1004	1004
5°	1008	1001	1006
10°	1005	1002	1007
15°	1003	1002	1008
20°	996	1001	1011
25°	993	1003	1014
30°	984	1000	1017
35°	974	998	1021
40°	963	996	1034
45°	947	997	1057
50°	926	1003	1089
55°	903	1019	1137
60°	865	1039	1200
65°	809	1075	1274
70°	736	1125	1371
75°	624	1187	1432
80°	493	1195	1158
85°	363	909	1017



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	70.8	3.0
10°-20°	203.7	8.6
20°-30°	311.5	13.1
30°-40°	380.9	16.0
40°-50°	405.9	17.1
50°-60°	388.1	16.4
60°-70°	328.8	13.9
70°-80°	221.0	9.3
80°-90°	62.3	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°	586.1	24.7
0°-40°	966.9	40.7
0°-60°	1760.9	74.2
0°-90°	2373.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2373.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	746	746	746	746	746	
5°	746	745	742	745	745	71
15°	720	720	719	725	724	203
25°	669	671	676	682	683	308
35°	593	598	607	619	622	372
45°	498	506	524	546	556	384
55°	385	399	434	468	485	343
65°	254	280	338	382	400	252
75°	120	164	228	267	275	129
85°	24	48	59	64	66	29
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	746.2	746.2	746.2	746.2	746.2
2.5°	747.4	747.4	743.9	746.2	746.2
5°	746.2	745.1	741.5	745.1	745.1
7.5°	742.7	741.5	739.2	742.7	741.5
10°	735.6	735.6	733.3	736.8	736.8
12.5°	729.8	728.6	727.4	732.1	730.9
15°	720.3	720.3	719.2	725.1	723.9
17.5°	708.6	709.8	710.9	715.6	716.8
20°	695.6	698.0	699.2	706.2	706.2
22.5°	683.9	685.0	687.4	694.5	694.5
25°	668.6	670.9	675.6	681.5	682.7
27.5°	653.3	654.4	660.3	668.6	669.7
30°	633.2	636.8	643.8	653.3	654.4
32.5°	615.6	619.1	627.4	636.8	639.1
35°	593.2	597.9	607.4	619.1	621.5
37.5°	573.2	576.7	588.5	601.5	605.0
40°	548.5	555.6	567.3	582.6	588.5
42.5°	523.8	530.8	545.0	565.0	572.0
45°	497.9	506.1	523.8	546.1	555.6
47.5°	472.0	481.4	501.4	527.3	537.9
50°	442.6	454.3	479.1	508.5	520.2
52.5°	414.3	428.4	455.5	488.5	503.8
55°	384.9	399.0	434.3	468.5	484.9
57.5°	351.9	370.8	409.6	448.5	466.1
60°	321.3	339.0	386.1	428.4	446.1
62.5°	288.4	311.9	362.5	407.3	424.9
65°	254.2	280.1	337.8	382.5	400.2
67.5°	223.6	251.9	313.1	357.8	375.5
70°	187.1	222.5	286.0	330.7	348.4
72.5°	153.0	191.9	257.8	301.3	317.8
75°	120.1	163.6	228.3	267.2	275.4
77.5°	89.5	135.4	197.7	214.2	208.3
80°	63.6	108.3	154.2	146.0	149.5
82.5°	41.2	82.4	95.3	108.3	111.8
85°	23.5	48.3	58.9	63.6	65.9
87.5°	10.6	17.7	23.5	23.5	22.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)