

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: P310130

Luminaire Tested: **24FCZ2-45-UNV-L82765-RDP-CA08-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: P310130  
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-CA08-W2A-U-2700K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC 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**

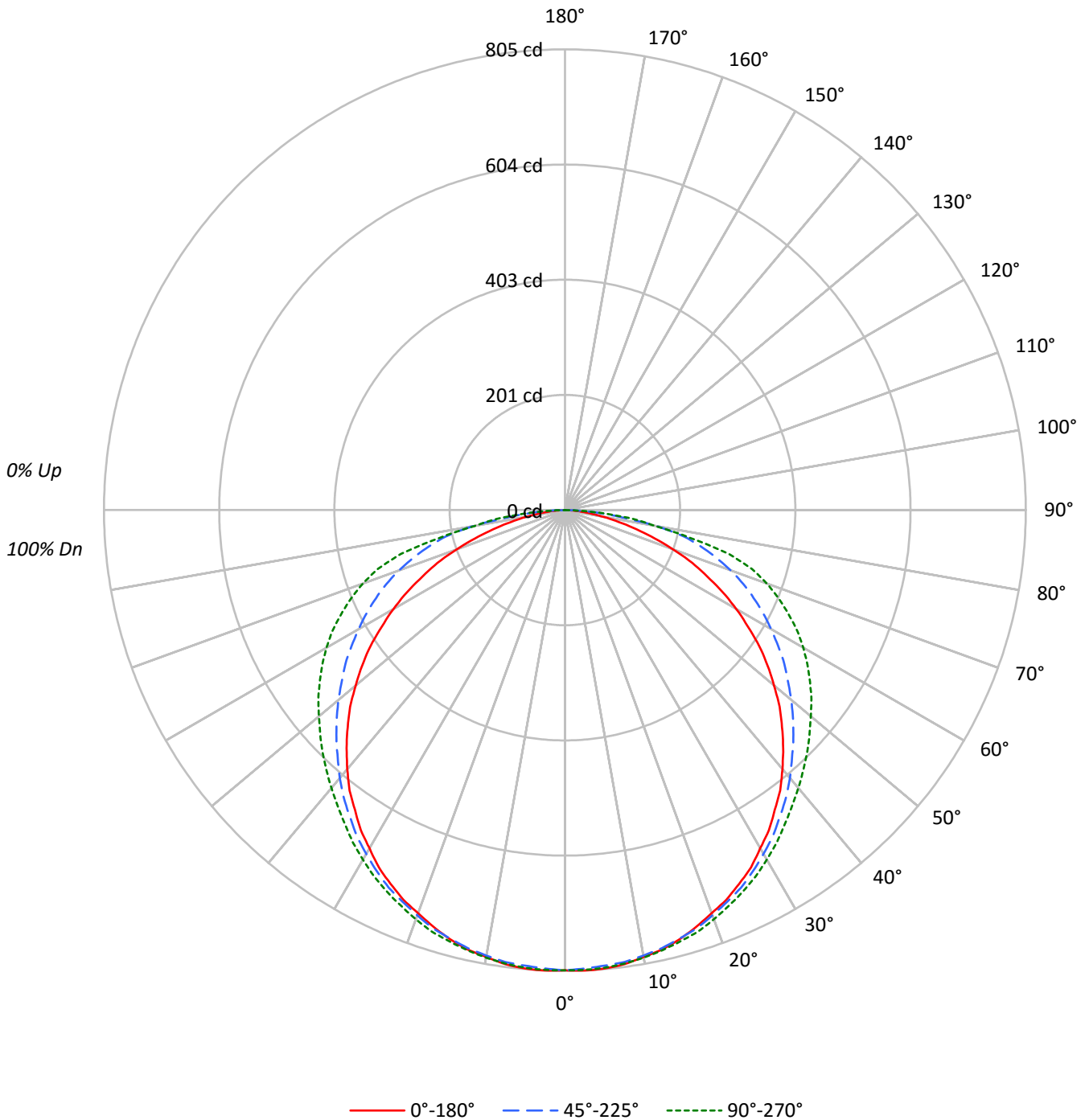
Lumens per Lamp: N/A  
Luminaire Lumens: 2557.0 lumens  
Efficiency: N/A  
Efficacy: 68.0 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 37.6  
Input Voltage (V): NR  
Input Current (Ain): NR  
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				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°	1082	1082	1082
5°	1086	1079	1084
10°	1083	1080	1085
15°	1081	1079	1087
20°	1073	1079	1090
25°	1069	1081	1092
30°	1060	1078	1096
35°	1050	1075	1100
40°	1038	1074	1114
45°	1021	1074	1139
50°	998	1081	1173
55°	973	1098	1226
60°	932	1119	1294
65°	872	1159	1373
70°	793	1212	1477
75°	673	1279	1543
80°	531	1287	1248
85°	392	979	1096



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	76.3	3.0
10°-20°	219.5	8.6
20°-30°	335.7	13.1
30°-40°	410.4	16.0
40°-50°	437.4	17.1
50°-60°	418.2	16.4
60°-70°	354.3	13.9
70°-80°	238.1	9.3
80°-90°	67.2	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°	631.5	24.7
0°-40°	1041.9	40.7
0°-60°	1897.5	74.2
0°-90°	2557.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2557.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	804	804	804	804	804	
5°	804	803	799	803	803	76
15°	776	776	775	781	780	219
25°	720	723	728	734	736	332
35°	639	644	654	667	670	400
45°	536	545	564	588	599	414
55°	415	430	468	505	522	369
65°	274	302	364	412	431	272
75°	129	176	246	288	297	139
85°	25	52	63	68	71	31
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	804.1	804.1	804.1	804.1	804.1
2.5°	805.4	805.4	801.6	804.1	804.1
5°	804.1	802.8	799.0	802.8	802.8
7.5°	800.3	799.0	796.5	800.3	799.0
10°	792.7	792.7	790.2	794.0	794.0
12.5°	786.3	785.1	783.8	788.9	787.6
15°	776.2	776.2	774.9	781.3	780.0
17.5°	763.5	764.8	766.1	771.1	772.4
20°	749.6	752.1	753.4	761.0	761.0
22.5°	736.9	738.2	740.7	748.3	748.3
25°	720.4	722.9	728.0	734.3	735.6
27.5°	703.9	705.2	711.5	720.4	721.7
30°	682.3	686.2	693.8	703.9	705.2
32.5°	663.3	667.1	676.0	686.2	688.7
35°	639.2	644.3	654.4	667.1	669.7
37.5°	617.7	621.5	634.2	648.1	651.9
40°	591.0	598.6	611.3	627.8	634.2
42.5°	564.4	572.0	587.2	608.8	616.4
45°	536.5	545.4	564.4	588.5	598.6
47.5°	508.6	518.7	540.3	568.2	579.6
50°	476.9	489.6	516.2	547.9	560.6
52.5°	446.4	461.7	490.8	526.3	542.8
55°	414.7	430.0	468.0	504.8	522.5
57.5°	379.2	399.5	441.4	483.2	502.2
60°	346.2	365.3	416.0	461.7	480.7
62.5°	310.7	336.1	390.6	438.8	457.9
65°	274.0	301.9	364.0	412.2	431.2
67.5°	241.0	271.4	337.4	385.6	404.6
70°	201.7	239.7	308.2	356.4	375.4
72.5°	164.9	206.7	277.8	324.7	342.4
75°	129.4	176.3	246.1	287.9	296.8
77.5°	96.4	145.9	213.1	230.8	224.5
80°	68.5	116.7	166.1	157.3	161.1
82.5°	44.4	88.8	102.7	116.7	120.5
85°	25.4	52.0	63.4	68.5	71.0
87.5°	11.4	19.0	25.4	25.4	24.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)