

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: P310664

Luminaire Tested: **24FCZ2-35-UNV-L82765-CP250-W2A-U-4000K**

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: P310664  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-15)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 24FCZ2-35-UNV-L82765-CP250-W2A-U-4000K  
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.250" POLYCARB SHEET  
Light Source: (168) 4000K 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**

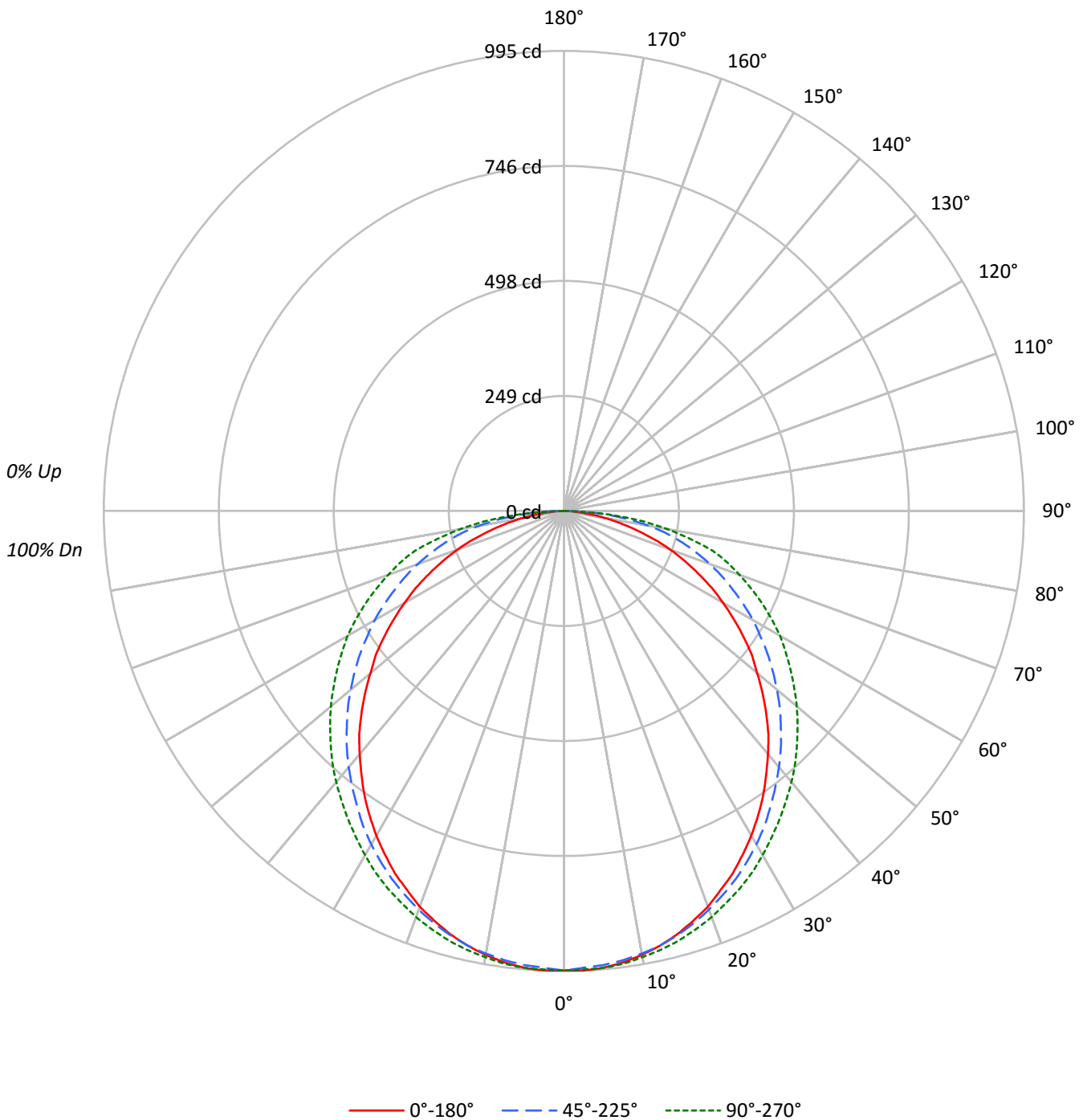
Lumens per Lamp: N/A  
Luminaire Lumens: 3013.0 lumens  
Efficiency: N/A  
Efficacy: 106.5 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 28.3  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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	87	88	86	84	82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	64	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	37	31	57	45	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	1337	1337	1337
5°	1339	1331	1339
10°	1332	1328	1339
15°	1320	1323	1340
20°	1304	1314	1338
25°	1284	1305	1337
30°	1260	1294	1336
35°	1235	1281	1337
40°	1206	1271	1345
45°	1177	1263	1356
50°	1142	1260	1377
55°	1114	1262	1405
60°	1071	1272	1453
65°	1022	1286	1505
70°	967	1325	1589
75°	862	1382	1736
80°	736	1464	1774
85°	525	1451	1698



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	94.0	3.1
10°-20°	268.9	8.9
20°-30°	406.1	13.5
30°-40°	489.5	16.2
40°-50°	513.9	17.1
50°-60°	480.7	16.0
60°-70°	397.0	13.2
70°-80°	270.5	9.0
80°-90°	92.3	3.1
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°	769.1	25.5
0°-40°	1258.6	41.8
0°-60°	2253.2	74.8
0°-90°	3013.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3013.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	994	994	994	994	994	
5°	992	991	986	992	992	94
15°	948	949	950	960	962	267
25°	865	869	879	896	901	398
35°	752	760	780	806	814	470
45°	619	632	664	700	713	477
55°	475	494	538	582	599	424
65°	321	348	404	455	473	318
75°	166	204	266	316	334	177
85°	34	67	94	106	110	43
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	993.7	993.7	993.7	993.7	993.7
2.5°	994.7	993.7	988.7	993.7	992.7
5°	991.7	990.7	985.7	991.7	991.7
7.5°	984.7	984.7	979.7	986.7	987.7
10°	974.7	974.7	971.7	979.7	979.7
12.5°	962.7	962.7	962.7	970.7	971.7
15°	947.7	948.7	949.7	959.7	961.7
17.5°	929.7	931.7	934.7	946.7	948.7
20°	910.7	912.7	917.7	931.7	934.7
22.5°	886.7	891.7	898.7	914.7	917.7
25°	864.7	868.7	878.7	895.7	900.7
27.5°	837.7	843.7	856.7	874.7	881.7
30°	810.7	816.7	832.7	853.7	859.7
32.5°	781.7	790.7	807.7	829.7	836.7
35°	751.7	759.7	779.7	805.7	813.7
37.5°	718.8	729.8	751.7	779.7	789.7
40°	686.8	698.8	723.8	753.7	765.7
42.5°	654.8	666.8	694.8	728.8	740.7
45°	618.8	631.8	663.8	699.8	712.8
47.5°	582.8	598.8	633.8	671.8	685.8
50°	545.8	563.8	601.8	641.8	657.8
52.5°	512.8	529.8	569.8	612.8	627.8
55°	474.8	493.8	537.8	581.8	598.8
57.5°	435.9	456.8	503.8	551.8	568.8
60°	397.9	420.9	472.8	520.8	539.8
62.5°	360.9	383.9	437.9	487.8	506.8
65°	320.9	347.9	403.9	454.8	472.8
67.5°	282.9	311.9	370.9	420.9	438.9
70°	245.9	273.9	336.9	385.9	403.9
72.5°	205.9	237.9	300.9	351.9	370.9
75°	165.9	203.9	265.9	315.9	333.9
77.5°	129.0	167.9	229.9	270.9	279.9
80°	95.0	135.0	188.9	217.9	228.9
82.5°	61.0	101.0	144.0	164.9	173.9
85°	34.0	67.0	94.0	106.0	110.0
87.5°	14.0	29.0	38.0	43.0	43.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)