

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: P313867

Luminaire Tested: **24FCZ2-35-UNV-L83050-CA08-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: P313867  
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-L83050-CA08-W2A-U-4000K  
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.08" ACRYLIC 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**

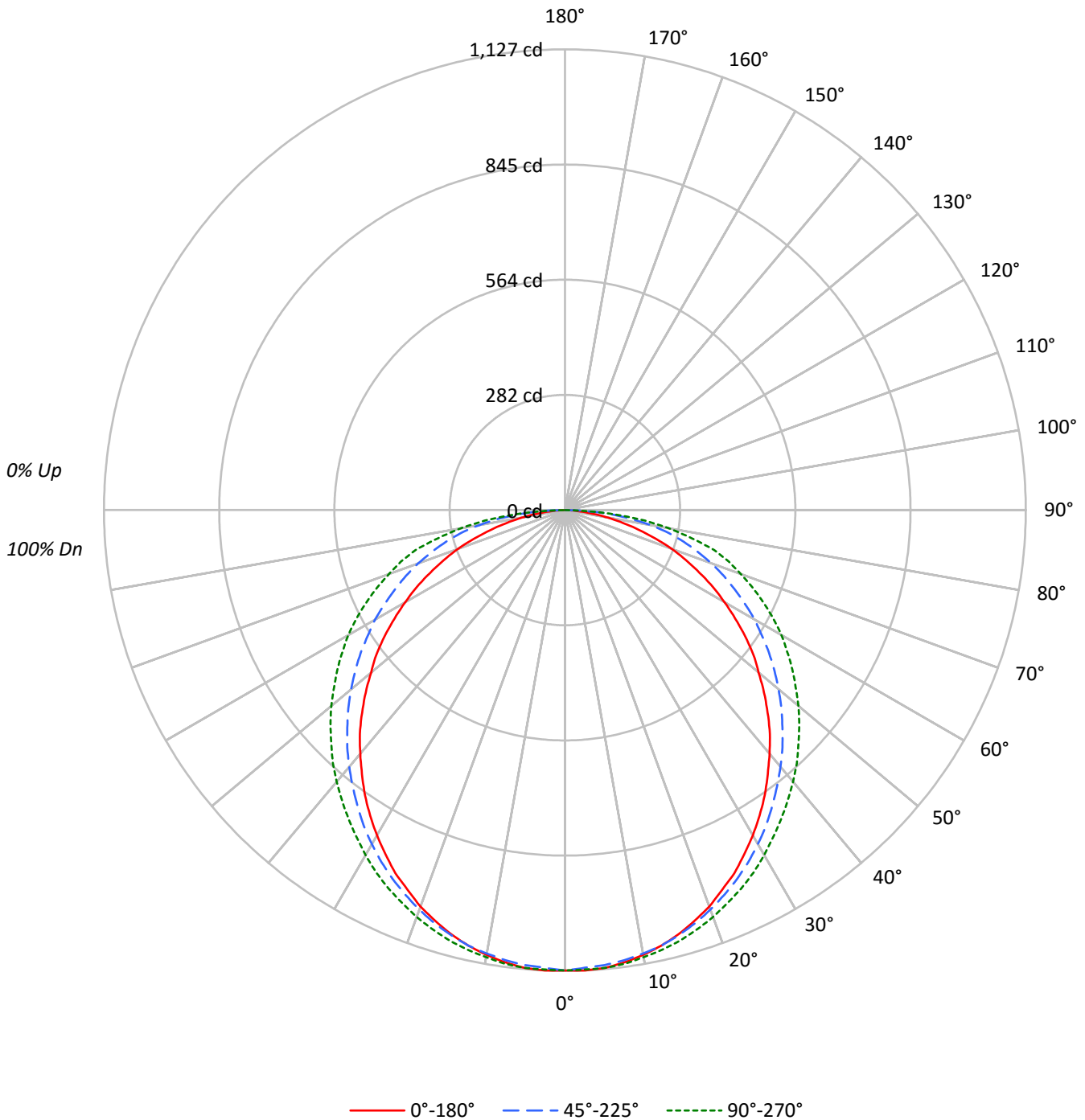
Lumens per Lamp: N/A  
Luminaire Lumens: 3415.0 lumens  
Efficiency: N/A  
Efficacy: 119.4 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 28.6  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	1515	1515	1515
5°	1518	1509	1518
10°	1509	1505	1517
15°	1496	1499	1518
20°	1478	1489	1517
25°	1455	1478	1516
30°	1428	1466	1514
35°	1399	1452	1515
40°	1367	1441	1524
45°	1334	1431	1537
50°	1295	1428	1560
55°	1263	1430	1592
60°	1213	1442	1646
65°	1158	1457	1706
70°	1096	1502	1801
75°	978	1567	1967
80°	834	1659	2011
85°	594	1644	1924



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	106.6	3.1
10°-20°	304.8	8.9
20°-30°	460.3	13.5
30°-40°	554.8	16.2
40°-50°	582.4	17.1
50°-60°	544.9	16.0
60°-70°	450.0	13.2
70°-80°	306.6	9.0
80°-90°	104.6	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°	871.7	25.5
0°-40°	1426.5	41.8
0°-60°	2553.8	74.8
0°-90°	3415.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3415.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1126	1126	1126	1126	1126	
5°	1124	1123	1117	1124	1124	107
15°	1074	1075	1076	1088	1090	303
25°	980	985	996	1015	1021	451
35°	852	861	884	913	922	532
45°	701	716	752	793	808	541
55°	538	560	610	659	679	480
65°	364	394	458	516	536	361
75°	188	231	301	358	378	201
85°	38	76	106	120	125	48
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1126.2	1126.2	1126.2	1126.2	1126.2
2.5°	1127.4	1126.2	1120.6	1126.2	1125.1
5°	1124.0	1122.8	1117.2	1124.0	1124.0
7.5°	1116.0	1116.0	1110.4	1118.3	1119.4
10°	1104.7	1104.7	1101.3	1110.4	1110.4
12.5°	1091.1	1091.1	1091.1	1100.2	1101.3
15°	1074.1	1075.3	1076.4	1087.7	1090.0
17.5°	1053.7	1056.0	1059.4	1073.0	1075.3
20°	1032.2	1034.5	1040.1	1056.0	1059.4
22.5°	1005.0	1010.7	1018.6	1036.7	1040.1
25°	980.1	984.6	995.9	1015.2	1020.9
27.5°	949.5	956.3	971.0	991.4	999.3
30°	918.9	925.7	943.8	967.6	974.4
32.5°	886.0	896.2	915.5	940.4	948.4
35°	852.0	861.1	883.8	913.2	922.3
37.5°	814.7	827.1	852.0	883.8	895.1
40°	778.4	792.0	820.3	854.3	867.9
42.5°	742.1	755.7	787.5	826.0	839.6
45°	701.3	716.1	752.3	793.1	807.9
47.5°	660.6	678.7	718.3	761.4	777.3
50°	618.6	639.0	682.1	727.4	745.5
52.5°	581.2	600.5	645.8	694.6	711.5
55°	538.2	559.7	609.6	659.4	678.7
57.5°	494.0	517.8	571.0	625.4	644.7
60°	450.9	477.0	535.9	590.3	611.8
62.5°	409.0	435.1	496.3	552.9	574.4
65°	363.7	394.3	457.7	515.5	535.9
67.5°	320.6	353.5	420.4	477.0	497.4
70°	278.7	310.5	381.8	437.4	457.7
72.5°	233.4	269.7	341.0	398.8	420.4
75°	188.1	231.1	301.4	358.0	378.4
77.5°	146.2	190.3	260.6	307.1	317.2
80°	107.6	153.0	214.1	247.0	259.5
82.5°	69.1	114.4	163.2	187.0	197.1
85°	38.5	75.9	106.5	120.1	124.6
87.5°	15.9	32.9	43.1	48.7	48.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)