

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: P310630

Luminaire Tested: **24FCZ2-35-UNV-L82765-CA08-W2A-U-5000K**

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: P310630  
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-CA08-W2A-U-5000K  
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.08" ACRYLIC SHEET  
Light Source: (168) 5000K 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**

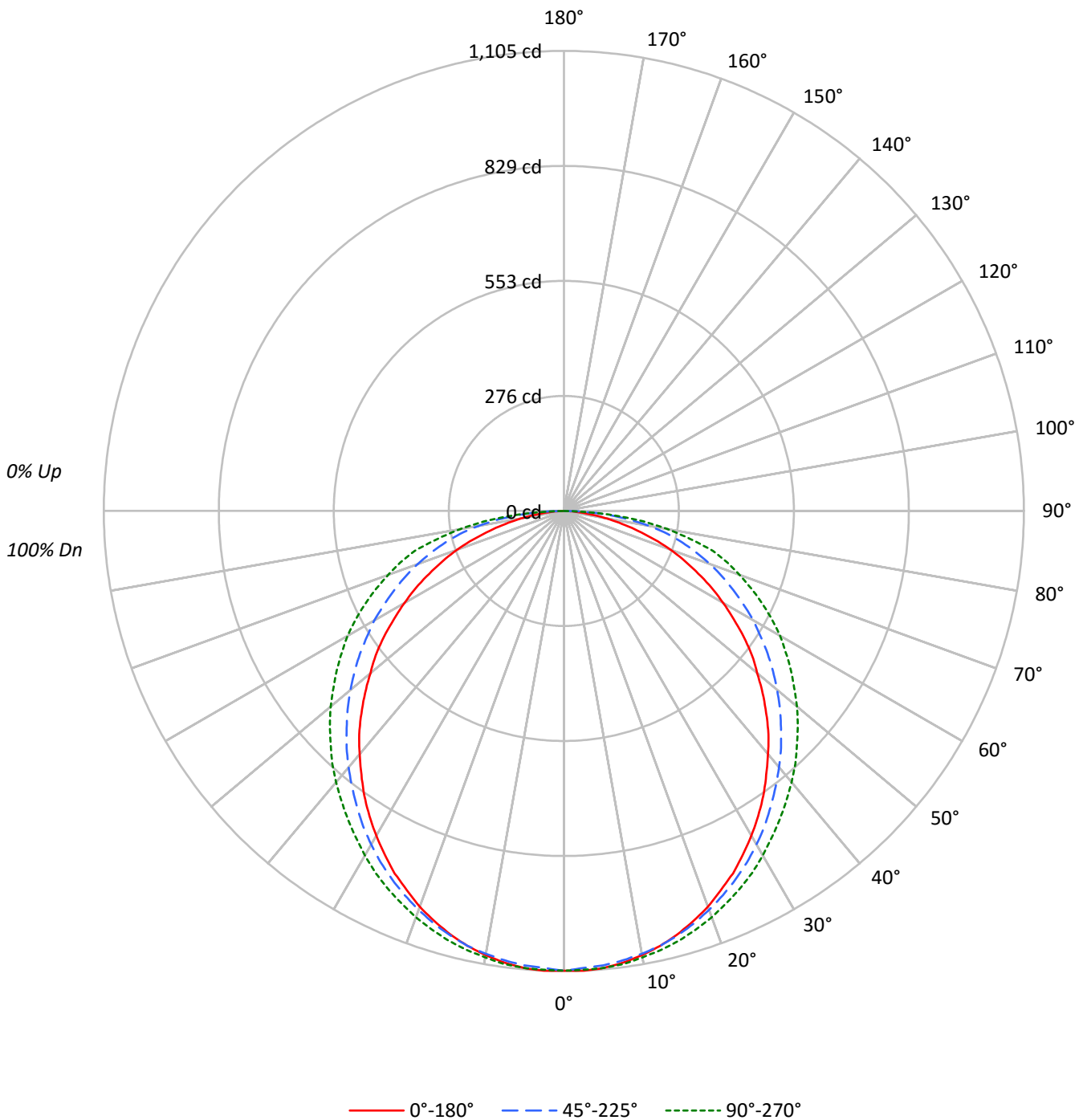
Lumens per Lamp: N/A  
Luminaire Lumens: 3348.0 lumens  
Efficiency: N/A  
Efficacy: 116.7 lumens/watt  
Spacing Criteria (0/90/45): 1.22 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 28.7  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	1486	1486	1486
5°	1488	1479	1488
10°	1480	1475	1487
15°	1467	1470	1489
20°	1449	1460	1487
25°	1426	1450	1486
30°	1400	1438	1484
35°	1372	1423	1485
40°	1340	1413	1495
45°	1308	1404	1507
50°	1270	1400	1530
55°	1238	1402	1561
60°	1190	1414	1614
65°	1135	1429	1673
70°	1075	1472	1766
75°	959	1536	1929
80°	817	1626	1971
85°	584	1612	1886



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	104.5	3.1
10°-20°	298.8	8.9
20°-30°	451.3	13.5
30°-40°	543.9	16.2
40°-50°	571.0	17.1
50°-60°	534.2	16.0
60°-70°	441.2	13.2
70°-80°	300.6	9.0
80°-90°	102.5	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°	854.6	25.5
0°-40°	1398.5	41.8
0°-60°	2503.7	74.8
0°-90°	3348.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3348.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1104	1104	1104	1104	1104	
5°	1102	1101	1095	1102	1102	105
15°	1053	1054	1055	1066	1069	297
25°	961	965	976	995	1001	442
35°	835	844	866	895	904	522
45°	688	702	738	778	792	530
55°	528	549	598	646	665	471
65°	357	387	449	505	525	354
75°	184	227	296	351	371	197
85°	38	74	104	118	122	47
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1104.1	1104.1	1104.1	1104.1	1104.1
2.5°	1105.3	1104.1	1098.6	1104.1	1103.0
5°	1101.9	1100.8	1095.3	1101.9	1101.9
7.5°	1094.1	1094.1	1088.6	1096.4	1097.5
10°	1083.0	1083.0	1079.7	1088.6	1088.6
12.5°	1069.7	1069.7	1069.7	1078.6	1079.7
15°	1053.0	1054.2	1055.3	1066.4	1068.6
17.5°	1033.0	1035.3	1038.6	1051.9	1054.2
20°	1011.9	1014.2	1019.7	1035.3	1038.6
22.5°	985.3	990.8	998.6	1016.4	1019.7
25°	960.8	965.3	976.4	995.3	1000.8
27.5°	930.9	937.5	952.0	972.0	979.7
30°	900.9	907.5	925.3	948.6	955.3
32.5°	868.7	878.6	897.5	922.0	929.7
35°	835.3	844.2	866.4	895.3	904.2
37.5°	798.7	810.9	835.3	866.4	877.5
40°	763.1	776.5	804.2	837.5	850.9
42.5°	727.6	740.9	772.0	809.8	823.1
45°	687.6	702.0	737.6	777.6	792.0
47.5°	647.6	665.4	704.3	746.5	762.0
50°	606.5	626.5	668.7	713.1	730.9
52.5°	569.8	588.7	633.2	680.9	697.6
55°	527.6	548.7	597.6	646.5	665.4
57.5°	484.3	507.6	559.8	613.2	632.0
60°	442.1	467.6	525.4	578.7	599.8
62.5°	401.0	426.5	486.5	542.1	563.2
65°	356.6	386.6	448.8	505.4	525.4
67.5°	314.4	346.6	412.1	467.6	487.6
70°	273.3	304.4	374.3	428.8	448.8
72.5°	228.8	264.4	334.4	391.0	412.1
75°	184.4	226.6	295.5	351.0	371.0
77.5°	143.3	186.6	255.5	301.0	311.0
80°	105.5	150.0	209.9	242.2	254.4
82.5°	67.8	112.2	160.0	183.3	193.3
85°	37.8	74.4	104.4	117.7	122.2
87.5°	15.6	32.2	42.2	47.8	47.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)