

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: P310757

Luminaire Tested: **24FCZ2-40-UNV-L82765-CP250-W2A-U-5500K**

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: P310757  
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: 24FCZ2-40-UNV-L82765-CP250-W2A-U-5500K  
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.250" POLYCARB SHEET  
Light Source: (168) 5500K 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**

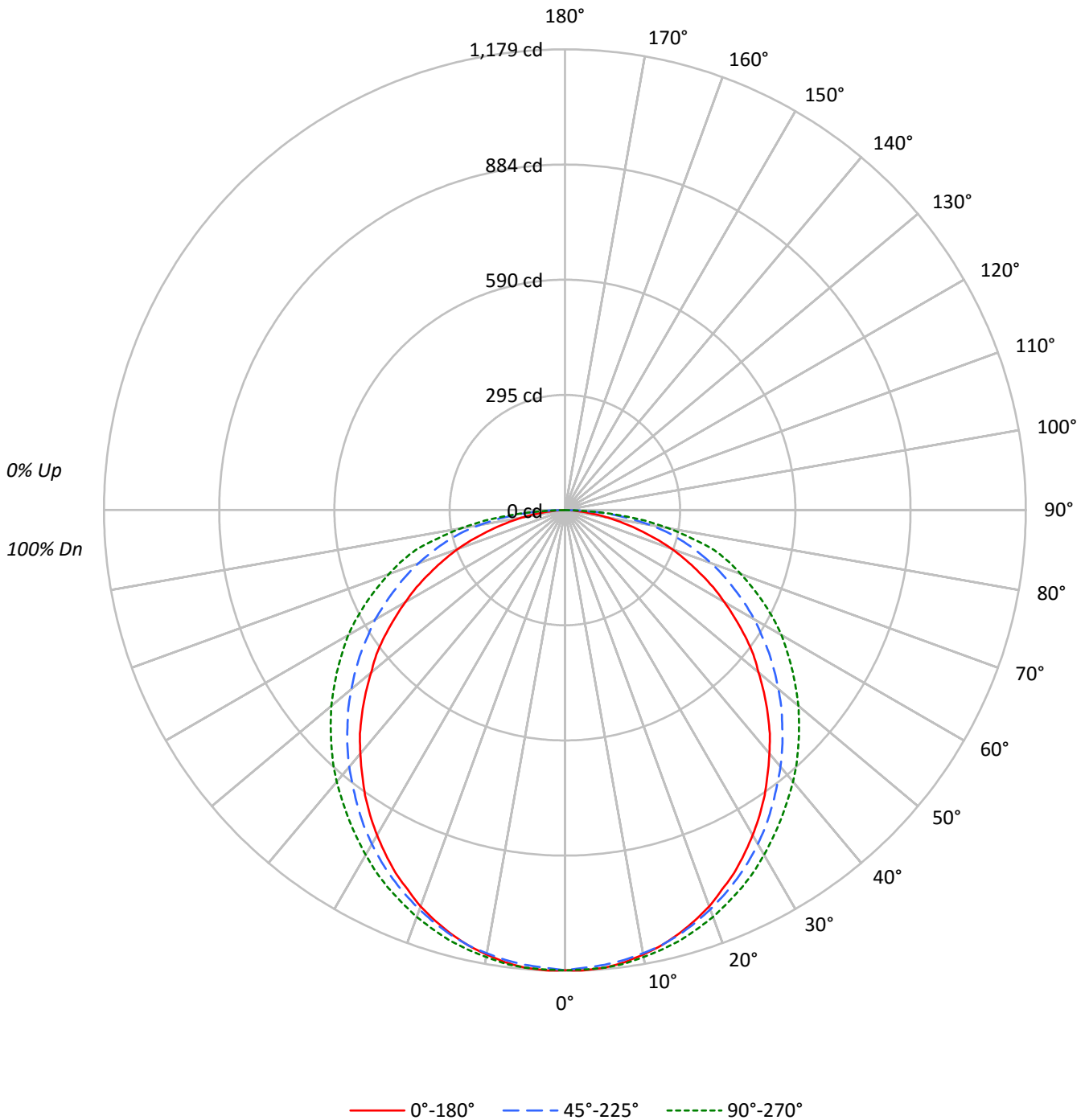
Lumens per Lamp: N/A  
Luminaire Lumens: 3571.0 lumens  
Efficiency: N/A  
Efficacy: 106.3 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 33.6  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	1585	1585	1585
5°	1587	1578	1587
10°	1578	1573	1586
15°	1565	1568	1588
20°	1545	1557	1586
25°	1521	1546	1585
30°	1493	1533	1583
35°	1464	1518	1584
40°	1430	1507	1594
45°	1396	1497	1607
50°	1354	1493	1632
55°	1320	1495	1665
60°	1269	1508	1722
65°	1211	1524	1784
70°	1147	1571	1883
75°	1023	1639	2057
80°	872	1735	2102
85°	622	1720	2012



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	111.5	3.1
10°-20°	318.7	8.9
20°-30°	481.3	13.5
30°-40°	580.1	16.2
40°-50°	609.0	17.1
50°-60°	569.8	16.0
60°-70°	470.6	13.2
70°-80°	320.6	9.0
80°-90°	109.4	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°	911.5	25.5
0°-40°	1491.6	41.8
0°-60°	2670.5	74.8
0°-90°	3571.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3571.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1178	1178	1178	1178	1178	
5°	1175	1174	1168	1175	1175	112
15°	1123	1124	1126	1137	1140	317
25°	1025	1030	1041	1062	1068	472
35°	891	900	924	955	964	557
45°	733	749	787	829	845	566
55°	563	585	637	690	710	502
65°	380	412	479	539	560	377
75°	197	242	315	374	396	210
85°	40	79	111	126	130	50
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1177.7	1177.7	1177.7	1177.7	1177.7
2.5°	1178.9	1177.7	1171.8	1177.7	1176.5
5°	1175.3	1174.1	1168.2	1175.3	1175.3
7.5°	1167.0	1167.0	1161.1	1169.4	1170.6
10°	1155.2	1155.2	1151.6	1161.1	1161.1
12.5°	1141.0	1141.0	1141.0	1150.4	1151.6
15°	1123.2	1124.4	1125.6	1137.4	1139.8
17.5°	1101.9	1104.2	1107.8	1122.0	1124.4
20°	1079.3	1081.7	1087.6	1104.2	1107.8
22.5°	1050.9	1056.8	1065.1	1084.1	1087.6
25°	1024.8	1029.6	1041.4	1061.6	1067.5
27.5°	992.9	1000.0	1015.4	1036.7	1045.0
30°	960.9	968.0	986.9	1011.8	1018.9
32.5°	926.5	937.2	957.3	983.4	991.7
35°	891.0	900.4	924.1	954.9	964.4
37.5°	851.9	864.9	891.0	924.1	936.0
40°	814.0	828.2	857.8	893.3	907.6
42.5°	776.0	790.3	823.4	863.7	877.9
45°	733.4	748.8	786.7	829.4	844.8
47.5°	690.7	709.7	751.2	796.2	812.8
50°	646.9	668.2	713.2	760.6	779.6
52.5°	607.8	627.9	675.3	726.3	744.1
55°	562.8	585.3	637.4	689.5	709.7
57.5°	516.6	541.5	597.1	654.0	674.1
60°	471.5	498.8	560.4	617.3	639.8
62.5°	427.7	455.0	518.9	578.2	600.7
65°	380.3	412.3	478.7	539.1	560.4
67.5°	335.3	369.7	439.6	498.8	520.1
70°	291.5	324.6	399.3	457.3	478.7
72.5°	244.1	282.0	356.6	417.0	439.6
75°	196.7	241.7	315.2	374.4	395.7
77.5°	152.8	199.0	272.5	321.1	331.7
80°	112.6	159.9	223.9	258.3	271.3
82.5°	72.3	119.7	170.6	195.5	206.2
85°	40.3	79.4	111.4	125.6	130.3
87.5°	16.6	34.4	45.0	50.9	50.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)