

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: P309547

Luminaire Tested: **24FCZ2-50-UNV-L82765-HRP-CA08-W2A-U-3500K**

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: P309547  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 24FCZ2-50-UNV-L82765-HRP-CA08-W2A-U-3500K  
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" ACRYLIC SHEET  
Light Source: (168) 3500K 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**

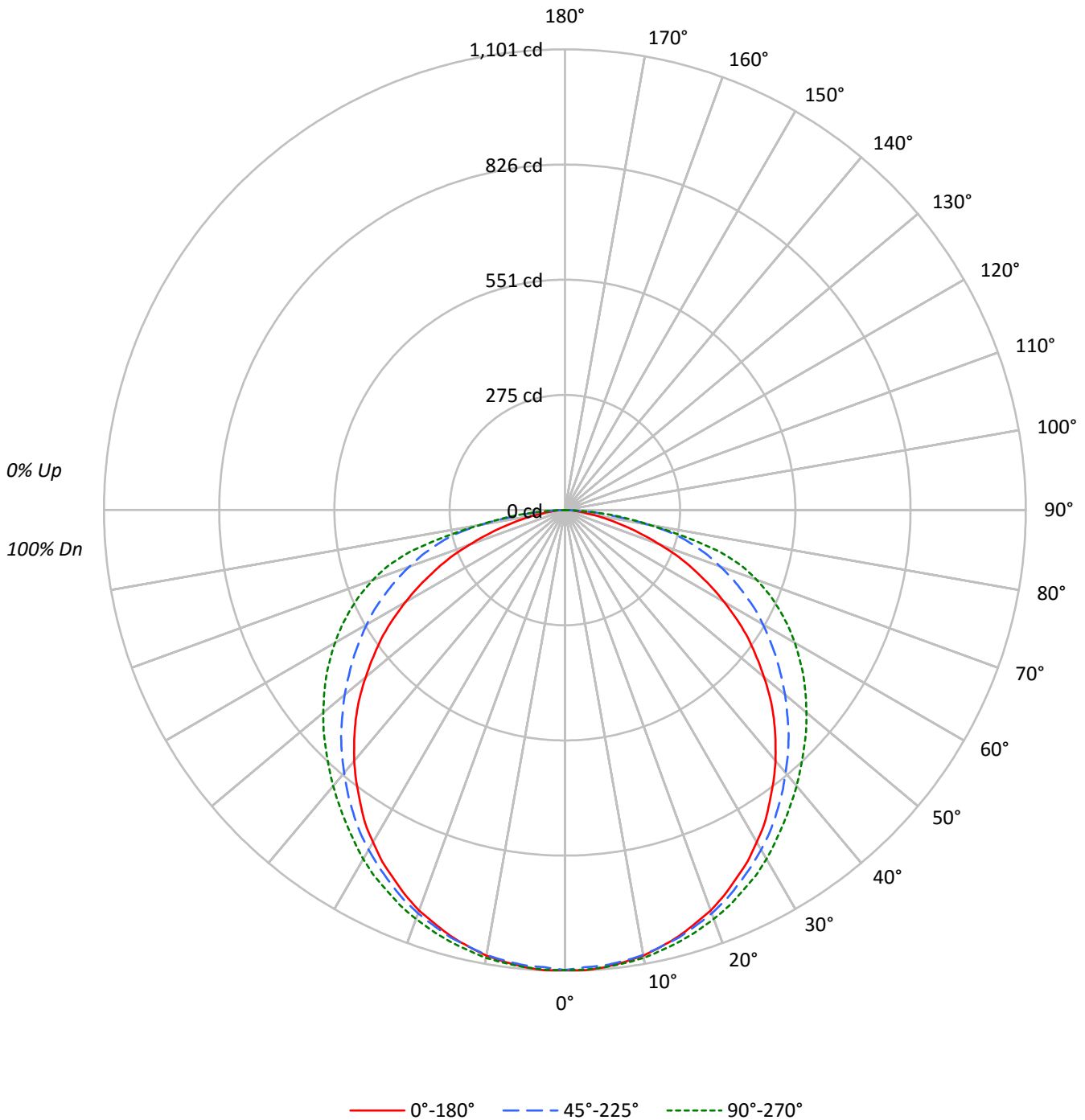
Lumens per Lamp: N/A  
Luminaire Lumens: 3388.0 lumens  
Efficiency: N/A  
Efficacy: 79.0 lumens/watt  
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 42.9  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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	101	96	93	96	93	90	92	90	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	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	24	35	29	24	23

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

	0°	45°	90°
0°	1479	1479	1479
5°	1481	1475	1481
10°	1477	1475	1484
15°	1468	1472	1486
20°	1458	1468	1489
25°	1440	1461	1491
30°	1424	1457	1496
35°	1400	1449	1498
40°	1375	1440	1512
45°	1344	1439	1536
50°	1300	1437	1577
55°	1254	1447	1634
60°	1183	1470	1706
65°	1093	1504	1802
70°	954	1557	1919
75°	774	1637	1983
80°	572	1605	1605
85°	438	1183	1335



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	104.1	3.1
10°-20°	299.0	8.8
20°-30°	455.2	13.4
30°-40°	552.8	16.3
40°-50°	584.0	17.2
50°-60°	551.0	16.3
60°-70°	458.2	13.5
70°-80°	301.4	8.9
80°-90°	82.2	2.4
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°	858.4	25.3
0°-40°	1411.2	41.7
0°-60°	2546.2	75.2
0°-90°	3388.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3388.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1099	1099	1099	1099	1099	
5°	1096	1096	1092	1096	1096	104
15°	1054	1055	1057	1067	1067	297
25°	970	976	984	1001	1004	448
35°	852	862	882	905	912	534
45°	706	720	756	793	807	544
55°	535	557	617	675	696	476
65°	343	383	472	542	566	339
75°	149	217	315	373	382	160
85°	28	62	77	85	86	35
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1099.2	1099.2	1099.2	1099.2	1099.2
2.5°	1100.7	1099.2	1093.6	1099.2	1099.2
5°	1096.4	1096.4	1092.1	1096.4	1096.4
7.5°	1089.3	1089.3	1086.5	1092.1	1092.1
10°	1080.8	1080.8	1079.4	1086.5	1086.5
12.5°	1068.0	1069.5	1068.0	1076.5	1076.5
15°	1053.9	1055.3	1056.7	1066.6	1066.6
17.5°	1035.4	1038.2	1041.1	1052.4	1053.9
20°	1018.4	1019.8	1025.5	1038.2	1039.7
22.5°	995.7	1000.0	1007.0	1019.8	1024.1
25°	970.2	975.8	984.4	1001.4	1004.2
27.5°	946.1	950.3	961.7	980.1	985.8
30°	916.3	923.4	937.5	956.0	963.1
32.5°	887.9	895.0	912.0	931.9	937.5
35°	852.4	862.4	882.2	904.9	912.0
37.5°	818.4	828.3	852.4	878.0	886.5
40°	782.9	794.3	819.8	849.6	861.0
42.5°	744.6	760.2	788.6	821.2	834.0
45°	706.3	720.5	756.0	792.9	807.1
47.5°	665.2	682.2	720.5	764.5	781.5
50°	621.2	642.5	686.5	734.7	753.2
52.5°	577.3	601.4	651.0	704.9	724.8
55°	534.7	557.4	617.0	675.1	696.4
57.5°	487.9	516.3	581.5	643.9	665.2
60°	439.7	470.9	546.1	611.3	634.0
62.5°	391.5	426.9	512.0	577.3	601.4
65°	343.2	383.0	472.3	541.8	565.9
67.5°	296.4	340.4	435.4	504.9	529.1
70°	242.5	297.9	395.7	463.8	487.9
72.5°	192.9	256.7	357.4	421.3	442.5
75°	148.9	217.0	314.9	373.0	381.5
77.5°	109.2	177.3	270.9	290.8	292.2
80°	73.8	141.8	207.1	204.2	207.1
82.5°	48.2	106.4	130.5	146.1	147.5
85°	28.4	62.4	76.6	85.1	86.5
87.5°	14.2	21.3	26.9	28.4	31.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)