

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: P310175

Luminaire Tested: **24FCZ2-50HE-UNV-L82765-RDP-CA08-W2A-U-2700K**

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: P310175  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 24FCZ2-50HE-UNV-L82765-RDP-CA08-W2A-U-2700K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC SHEET  
Light Source: (336) 2700K 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**

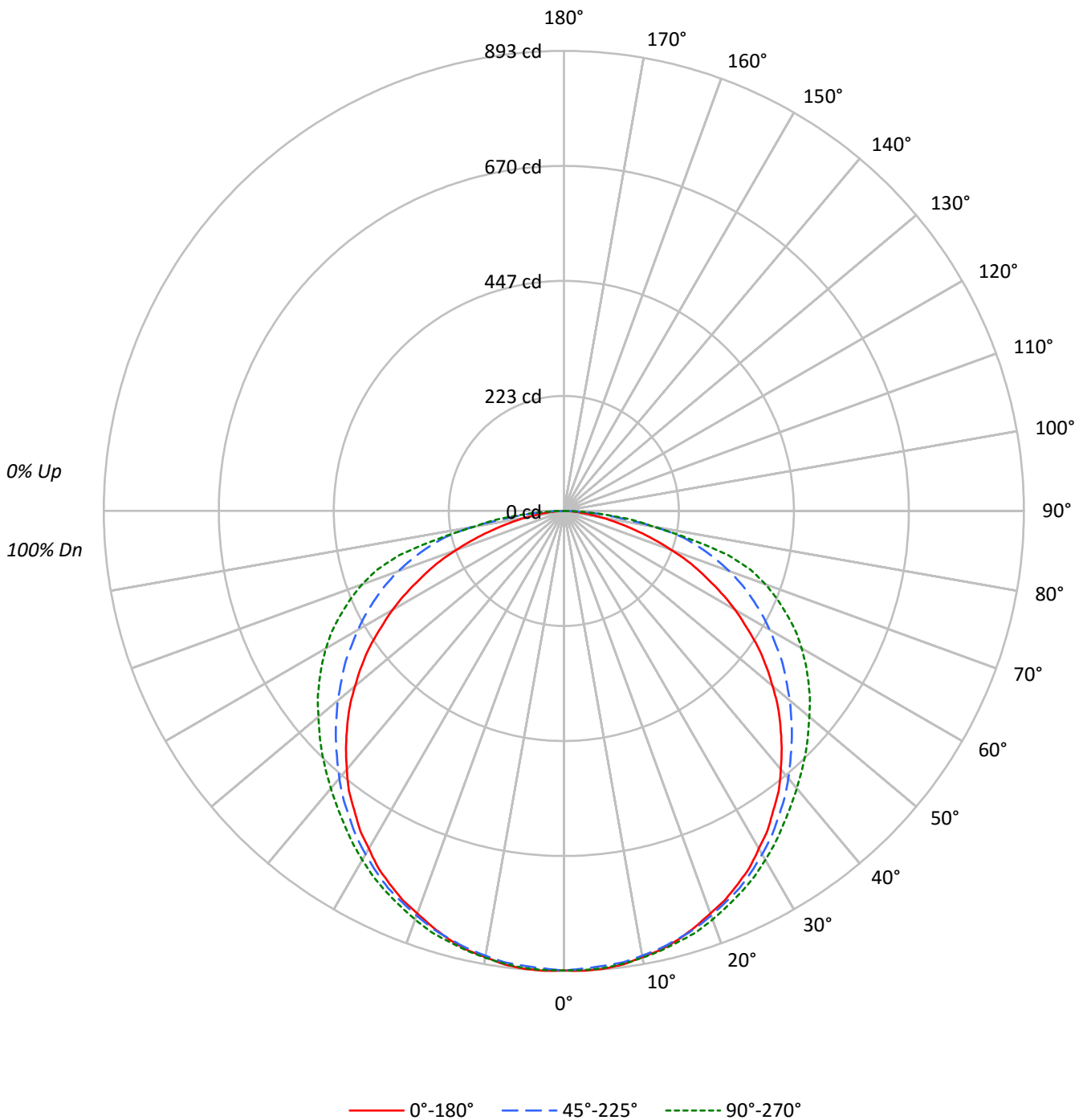
Lumens per Lamp: N/A  
Luminaire Lumens: 2836.0 lumens  
Efficiency: N/A  
Efficacy: 73.9 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 38.4  
Input Voltage (V): NR  
Input Current (Ain): NR  
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	93	89	92	89	87	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

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

	0°	45°	90°
0°	1200	1200	1200
5°	1204	1197	1203
10°	1201	1197	1203
15°	1199	1197	1205
20°	1190	1196	1208
25°	1186	1199	1211
30°	1176	1196	1215
35°	1165	1192	1220
40°	1151	1191	1235
45°	1132	1191	1263
50°	1107	1198	1302
55°	1079	1218	1360
60°	1033	1242	1435
65°	967	1285	1523
70°	880	1345	1638
75°	746	1419	1711
80°	589	1428	1384
85°	434	1085	1216



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	84.6	3.0
10°-20°	243.5	8.6
20°-30°	372.3	13.1
30°-40°	455.2	16.0
40°-50°	485.1	17.1
50°-60°	463.8	16.4
60°-70°	392.9	13.9
70°-80°	264.1	9.3
80°-90°	74.5	2.6
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°	700.4	24.7
0°-40°	1155.6	40.7
0°-60°	2104.5	74.2
0°-90°	2836.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2836.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	892	892	892	892	892	
5°	892	890	886	890	890	85
15°	861	861	860	866	865	243
25°	799	802	807	814	816	368
35°	709	715	726	740	743	444
45°	595	605	626	653	664	459
55°	460	477	519	560	580	410
65°	304	335	404	457	478	302
75°	144	196	273	319	329	154
85°	28	58	70	76	79	35
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	891.8	891.8	891.8	891.8	891.8
2.5°	893.2	893.2	889.0	891.8	891.8
5°	891.8	890.4	886.2	890.4	890.4
7.5°	887.6	886.2	883.4	887.6	886.2
10°	879.2	879.2	876.4	880.6	880.6
12.5°	872.1	870.7	869.3	875.0	873.6
15°	860.9	860.9	859.5	866.5	865.1
17.5°	846.8	848.2	849.6	855.3	856.7
20°	831.4	834.2	835.6	844.0	844.0
22.5°	817.3	818.7	821.5	829.9	829.9
25°	799.0	801.8	807.4	814.5	815.9
27.5°	780.7	782.1	789.2	799.0	800.4
30°	756.8	761.0	769.5	780.7	782.1
32.5°	735.7	739.9	749.8	761.0	763.8
35°	709.0	714.6	725.9	739.9	742.7
37.5°	685.1	689.3	703.3	718.8	723.0
40°	655.5	664.0	678.0	696.3	703.3
42.5°	626.0	634.4	651.3	675.2	683.7
45°	595.0	604.9	626.0	652.7	664.0
47.5°	564.1	575.3	599.2	630.2	642.9
50°	528.9	543.0	572.5	607.7	621.8
52.5°	495.2	512.0	544.4	583.8	602.1
55°	460.0	476.9	519.1	559.9	579.6
57.5°	420.6	443.1	489.5	535.9	557.0
60°	384.0	405.1	461.4	512.0	533.1
62.5°	344.6	372.8	433.3	486.7	507.8
65°	303.8	334.8	403.7	457.2	478.3
67.5°	267.3	301.0	374.2	427.6	448.7
70°	223.7	265.9	341.8	395.3	416.4
72.5°	182.9	229.3	308.1	360.1	379.8
75°	143.5	195.5	272.9	319.3	329.2
77.5°	106.9	161.8	236.3	256.0	249.0
80°	76.0	129.4	184.3	174.4	178.6
82.5°	49.2	98.5	113.9	129.4	133.6
85°	28.1	57.7	70.3	76.0	78.8
87.5°	12.7	21.1	28.1	28.1	26.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)