

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: P310178

Luminaire Tested: **24FCZ2-50HE-UNV-L82765-RDP-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: P310178  
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-4000K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC SHEET  
Light Source: (336) 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**

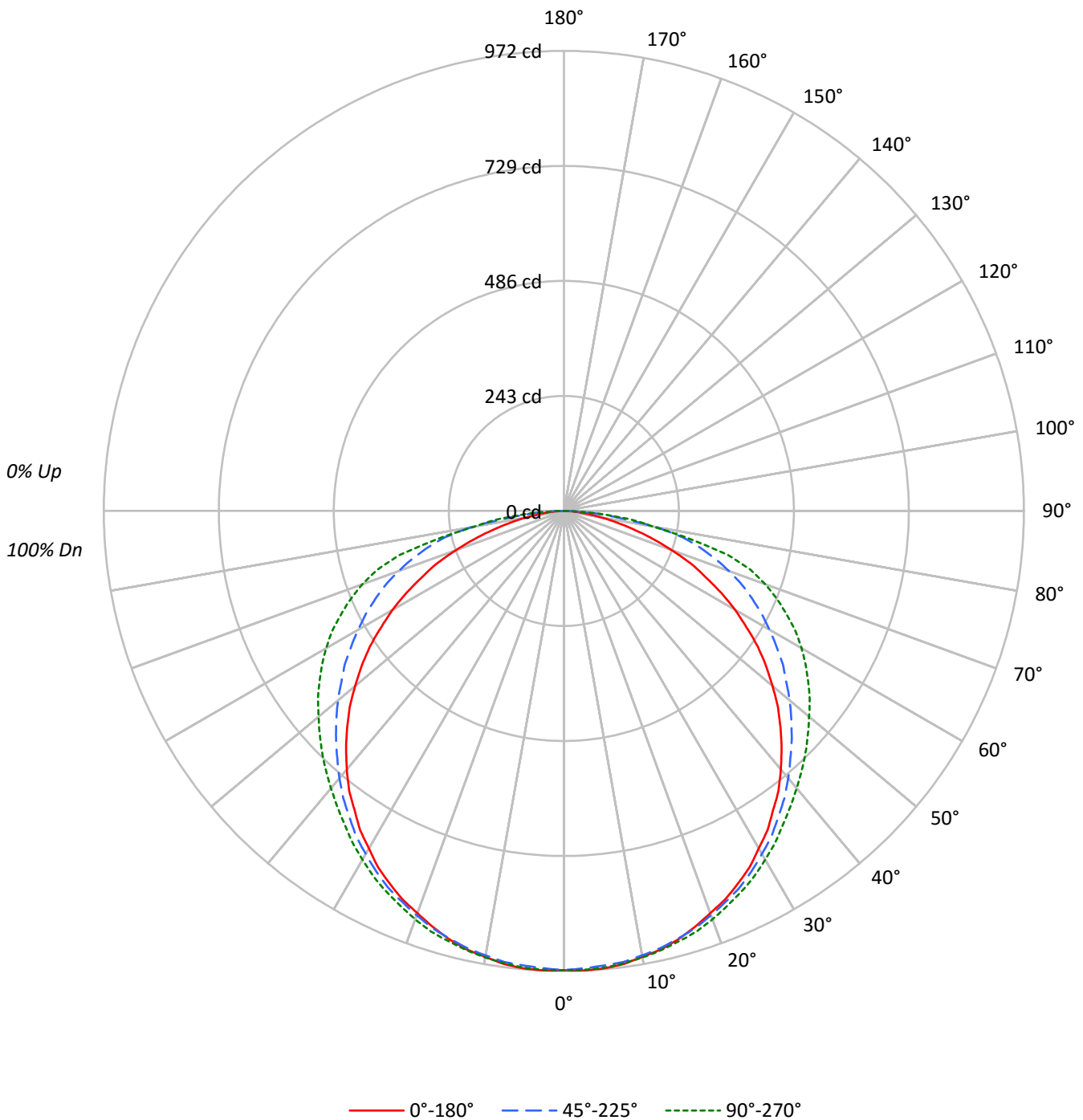
Lumens per Lamp: N/A  
Luminaire Lumens: 3085.0 lumens  
Efficiency: N/A  
Efficacy: 79.5 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 38.8  
Input Voltage (V): NR  
Input Current (A<sub>in</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	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°	1305	1305	1305
5°	1310	1302	1308
10°	1307	1302	1309
15°	1305	1302	1311
20°	1295	1301	1315
25°	1290	1304	1318
30°	1279	1300	1322
35°	1267	1297	1327
40°	1252	1296	1344
45°	1232	1296	1374
50°	1204	1304	1416
55°	1174	1324	1479
60°	1124	1351	1560
65°	1052	1398	1656
70°	957	1463	1782
75°	811	1543	1862
80°	640	1554	1506
85°	472	1181	1323



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	92.0	3.0
10°-20°	264.9	8.6
20°-30°	405.0	13.1
30°-40°	495.1	16.0
40°-50°	527.7	17.1
50°-60°	504.5	16.4
60°-70°	427.4	13.9
70°-80°	287.3	9.3
80°-90°	81.0	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°	761.9	24.7
0°-40°	1257.0	40.7
0°-60°	2289.3	74.2
0°-90°	3085.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3085.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	970	970	970	970	970	
5°	970	969	964	969	969	92
15°	936	936	935	943	941	264
25°	869	872	878	886	888	401
35°	771	777	790	805	808	483
45°	647	658	681	710	722	499
55°	500	519	565	609	630	446
65°	330	364	439	497	520	328
75°	156	213	297	347	358	167
85°	31	63	76	83	86	38
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	970.1	970.1	970.1	970.1	970.1
2.5°	971.7	971.7	967.1	970.1	970.1
5°	970.1	968.6	964.0	968.6	968.6
7.5°	965.6	964.0	961.0	965.6	964.0
10°	956.4	956.4	953.3	957.9	957.9
12.5°	948.7	947.2	945.7	951.8	950.3
15°	936.5	936.5	934.9	942.6	941.1
17.5°	921.2	922.7	924.2	930.4	931.9
20°	904.3	907.4	908.9	918.1	918.1
22.5°	889.0	890.6	893.6	902.8	902.8
25°	869.2	872.2	878.3	886.0	887.5
27.5°	849.3	850.8	858.4	869.2	870.7
30°	823.2	827.8	837.0	849.3	850.8
32.5°	800.3	804.9	815.6	827.8	830.9
35°	771.2	777.3	789.6	804.9	807.9
37.5°	745.2	749.8	765.1	781.9	786.5
40°	713.1	722.3	737.6	757.4	765.1
42.5°	680.9	690.1	708.5	734.5	743.7
45°	647.3	658.0	680.9	710.0	722.3
47.5°	613.6	625.9	651.9	685.5	699.3
50°	575.4	590.7	622.8	661.0	676.3
52.5°	538.6	557.0	592.2	635.0	654.9
55°	500.4	518.7	564.6	609.0	630.4
57.5°	457.5	482.0	532.5	583.0	606.0
60°	417.7	440.7	501.9	557.0	579.9
62.5°	374.9	405.5	471.3	529.4	552.4
65°	330.5	364.2	439.2	497.3	520.3
67.5°	290.7	327.5	407.0	465.2	488.1
70°	243.3	289.2	371.8	430.0	452.9
72.5°	198.9	249.4	335.1	391.7	413.2
75°	156.1	212.7	296.9	347.4	358.1
77.5°	116.3	176.0	257.1	278.5	270.8
80°	82.6	140.8	200.5	189.7	194.3
82.5°	53.6	107.1	123.9	140.8	145.4
85°	30.6	62.7	76.5	82.6	85.7
87.5°	13.8	23.0	30.6	30.6	29.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)