

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: P313565

Luminaire Tested: **24FCZ2-45HE-UNV-L83050-RDP-CA08-W2A-U-3000K**

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: P313565  
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: 24FCZ2-45HE-UNV-L83050-RDP-CA08-W2A-U-3000K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC SHEET  
Light Source: (336) 3000K 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**

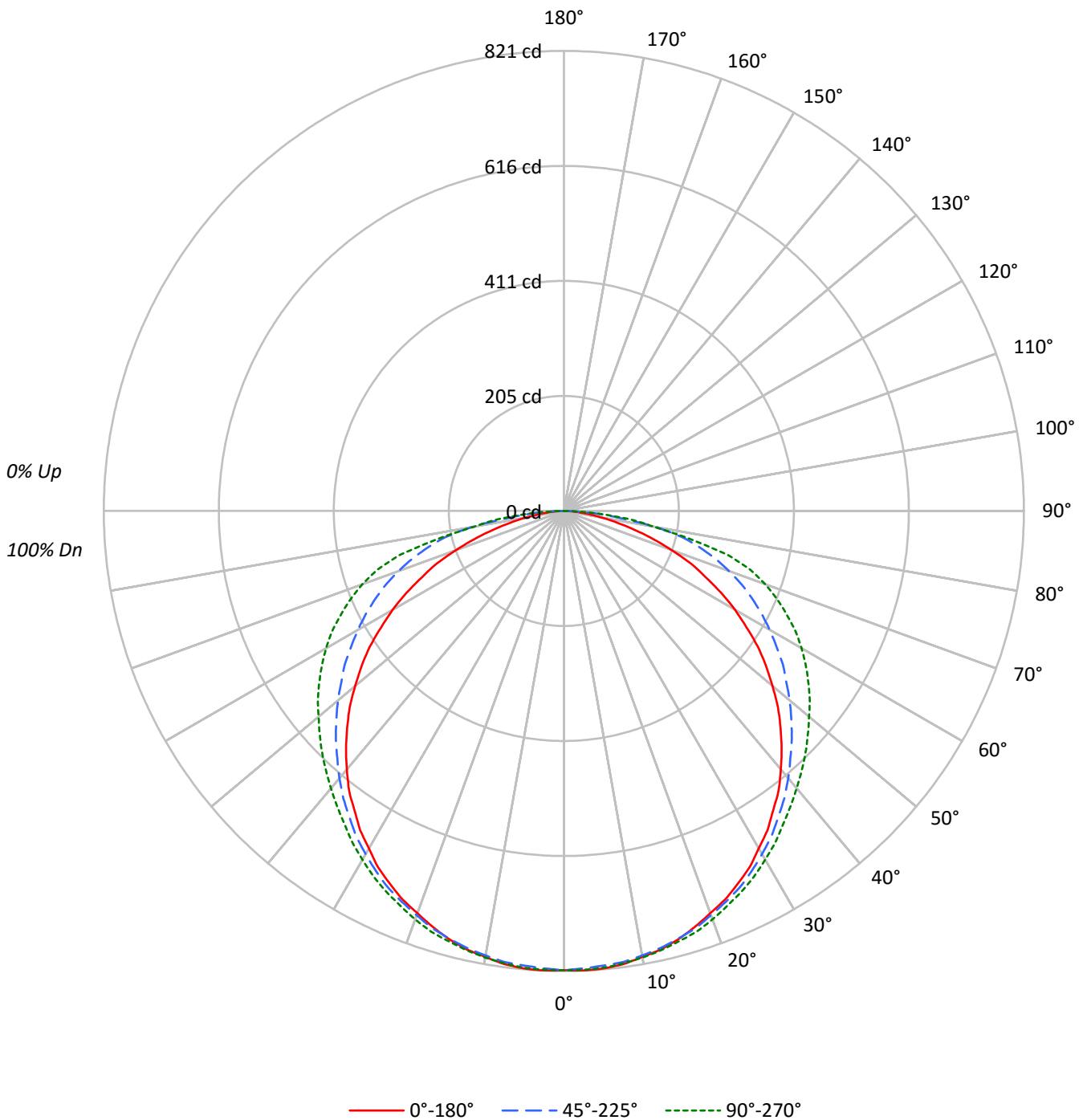
Lumens per Lamp: N/A  
Luminaire Lumens: 2606.0 lumens  
Efficiency: N/A  
Efficacy: 77.3 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 33.7  
Input Voltage (V): NR  
Input Current (Ain): NR  
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°	1103	1103	1103
5°	1107	1100	1105
10°	1104	1100	1106
15°	1102	1100	1107
20°	1094	1099	1111
25°	1090	1102	1113
30°	1080	1099	1117
35°	1070	1096	1121
40°	1058	1094	1135
45°	1040	1094	1161
50°	1017	1101	1196
55°	992	1119	1249
60°	950	1141	1318
65°	889	1181	1399
70°	808	1236	1505
75°	685	1304	1573
80°	541	1312	1272
85°	400	997	1118



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	77.7	3.0
10°-20°	223.7	8.6
20°-30°	342.1	13.1
30°-40°	418.2	16.0
40°-50°	445.8	17.1
50°-60°	426.2	16.4
60°-70°	361.0	13.9
70°-80°	242.7	9.3
80°-90°	68.5	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°	643.6	24.7
0°-40°	1061.8	40.7
0°-60°	1933.8	74.2
0°-90°	2606.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2606.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	820	820	820	820	820	
5°	820	818	814	818	818	78
15°	791	791	790	796	795	223
25°	734	737	742	748	750	338
35°	652	657	667	680	682	408
45°	547	556	575	600	610	422
55°	423	438	477	514	533	376
65°	279	308	371	420	440	277
75°	132	180	251	293	302	141
85°	26	53	65	70	72	32
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	819.5	819.5	819.5	819.5	819.5
2.5°	820.8	820.8	816.9	819.5	819.5
5°	819.5	818.2	814.3	818.2	818.2
7.5°	815.6	814.3	811.8	815.6	814.3
10°	807.9	807.9	805.3	809.2	809.2
12.5°	801.4	800.1	798.8	804.0	802.7
15°	791.1	791.1	789.8	796.2	795.0
17.5°	778.1	779.4	780.7	785.9	787.2
20°	763.9	766.5	767.8	775.6	775.6
22.5°	751.0	752.3	754.9	762.6	762.6
25°	734.2	736.8	742.0	748.4	749.7
27.5°	717.4	718.7	725.2	734.2	735.5
30°	695.4	699.3	707.1	717.4	718.7
32.5°	676.0	679.9	689.0	699.3	701.9
35°	651.5	656.6	667.0	679.9	682.5
37.5°	629.5	633.4	646.3	660.5	664.4
40°	602.4	610.1	623.0	639.8	646.3
42.5°	575.2	583.0	598.5	620.5	628.2
45°	546.8	555.8	575.2	599.8	610.1
47.5°	518.3	528.7	550.7	579.1	590.7
50°	486.0	498.9	526.1	558.4	571.3
52.5°	455.0	470.5	500.2	536.4	553.2
55°	422.7	438.2	477.0	514.5	532.6
57.5°	386.5	407.2	449.8	492.5	511.9
60°	352.9	372.3	424.0	470.5	489.9
62.5°	316.7	342.5	398.1	447.2	466.6
65°	279.2	307.6	371.0	420.1	439.5
67.5°	245.6	276.6	343.8	393.0	412.3
70°	205.5	244.3	314.1	363.2	382.6
72.5°	168.0	210.7	283.1	330.9	349.0
75°	131.8	179.7	250.8	293.4	302.5
77.5°	98.2	148.6	217.2	235.3	228.8
80°	69.8	118.9	169.3	160.3	164.2
82.5°	45.2	90.5	104.7	118.9	122.8
85°	25.9	53.0	64.6	69.8	72.4
87.5°	11.6	19.4	25.9	25.9	24.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)