

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: P310125

Luminaire Tested: **24FCZ2-45HE-UNV-L82765-RDP-CP250-W2A-U-4500K**

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: P310125  
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-L82765-RDP-CP250-W2A-U-4500K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" POLYCARB SHEET  
Light Source: (336) 4500K 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**

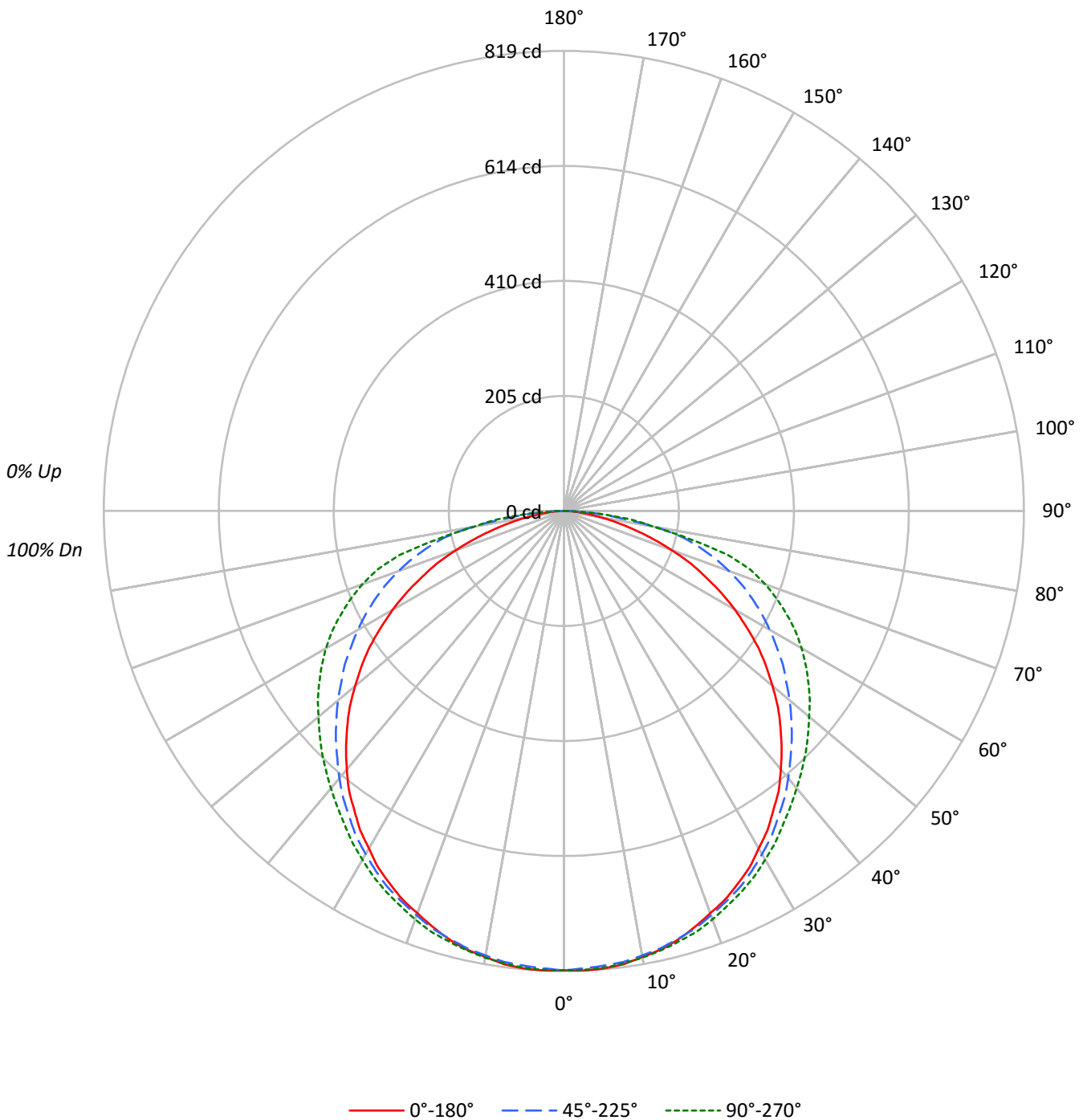
Lumens per Lamp: N/A  
Luminaire Lumens: 2600.0 lumens  
Efficiency: N/A  
Efficacy: 75.6 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 34.4  
Input Voltage (V): NR  
Input Current (Ain): NR  
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	68	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°	1100	1100	1100
5°	1104	1097	1103
10°	1101	1098	1103
15°	1099	1098	1105
20°	1091	1097	1108
25°	1087	1099	1110
30°	1078	1096	1114
35°	1068	1093	1118
40°	1056	1092	1133
45°	1038	1092	1158
50°	1015	1099	1193
55°	989	1116	1246
60°	947	1138	1315
65°	887	1178	1396
70°	807	1233	1502
75°	684	1301	1569
80°	539	1309	1269
85°	398	996	1115



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	77.6	3.0
10°-20°	223.2	8.6
20°-30°	341.3	13.1
30°-40°	417.3	16.0
40°-50°	444.7	17.1
50°-60°	425.2	16.4
60°-70°	360.2	13.9
70°-80°	242.1	9.3
80°-90°	68.3	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°	642.1	24.7
0°-40°	1059.4	40.7
0°-60°	1929.4	74.2
0°-90°	2600.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2600.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	818	818	818	818	818	
5°	818	816	812	816	816	78
15°	789	789	788	794	793	223
25°	732	735	740	747	748	338
35°	650	655	665	678	681	407
45°	546	554	574	598	609	421
55°	422	437	476	513	531	376
65°	279	307	370	419	438	277
75°	132	179	250	293	302	141
85°	26	53	64	70	72	32
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	817.6	817.6	817.6	817.6	817.6
2.5°	818.9	818.9	815.0	817.6	817.6
5°	817.6	816.3	812.5	816.3	816.3
7.5°	813.8	812.5	809.9	813.8	812.5
10°	806.0	806.0	803.4	807.3	807.3
12.5°	799.6	798.3	797.0	802.2	800.9
15°	789.3	789.3	788.0	794.4	793.1
17.5°	776.4	777.6	778.9	784.1	785.4
20°	762.2	764.8	766.0	773.8	773.8
22.5°	749.3	750.6	753.1	760.9	760.9
25°	732.5	735.1	740.2	746.7	748.0
27.5°	715.7	717.0	723.5	732.5	733.8
30°	693.8	697.7	705.4	715.7	717.0
32.5°	674.5	678.3	687.4	697.7	700.3
35°	650.0	655.1	665.4	678.3	680.9
37.5°	628.1	631.9	644.8	659.0	662.9
40°	601.0	608.7	621.6	638.4	644.8
42.5°	573.9	581.6	597.1	619.0	626.8
45°	545.5	554.5	573.9	598.4	608.7
47.5°	517.1	527.5	549.4	577.8	589.4
50°	484.9	497.8	524.9	557.1	570.0
52.5°	453.9	469.4	499.1	535.2	552.0
55°	421.7	437.2	475.9	513.3	531.3
57.5°	385.6	406.2	448.8	491.3	510.7
60°	352.1	371.4	423.0	469.4	488.8
62.5°	316.0	341.8	397.2	446.2	465.6
65°	278.6	306.9	370.1	419.1	438.5
67.5°	245.0	276.0	343.0	392.0	411.4
70°	205.1	243.7	313.4	362.4	381.7
72.5°	167.7	210.2	282.4	330.1	348.2
75°	131.5	179.3	250.2	292.7	301.8
77.5°	98.0	148.3	216.7	234.7	228.3
80°	69.6	118.6	168.9	159.9	163.8
82.5°	45.1	90.3	104.5	118.6	122.5
85°	25.8	52.9	64.5	69.6	72.2
87.5°	11.6	19.3	25.8	25.8	24.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)