

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: P310000

Luminaire Tested: **24FCZ2-40HE-UNV-L82765-RDP-CA08-W2A-U-5000K**

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: P310000  
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: 24FCZ2-40HE-UNV-L82765-RDP-CA08-W2A-U-5000K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC SHEET  
Light Source: (336) 5000K 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**

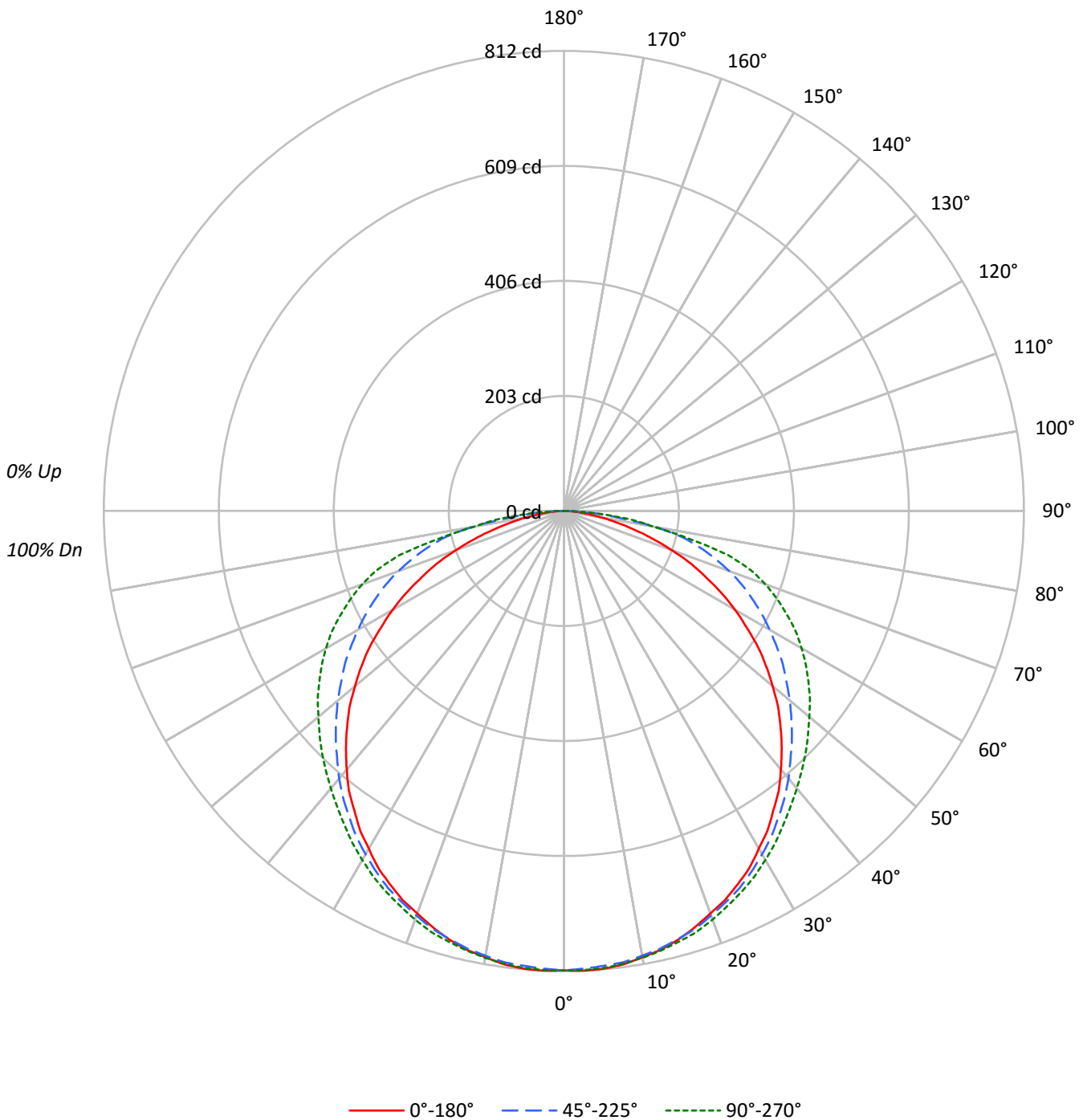
Lumens per Lamp: N/A  
Luminaire Lumens: 2579.0 lumens  
Efficiency: N/A  
Efficacy: 82.9 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 31.1  
Input Voltage (V): NR  
Input Current (Ain): NR  
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°	1091	1091	1091
5°	1095	1088	1094
10°	1092	1089	1094
15°	1091	1089	1096
20°	1082	1088	1099
25°	1079	1090	1101
30°	1069	1087	1105
35°	1059	1084	1109
40°	1047	1083	1123
45°	1030	1083	1149
50°	1007	1090	1184
55°	981	1107	1236
60°	940	1129	1305
65°	880	1169	1385
70°	800	1223	1489
75°	678	1290	1556
80°	535	1299	1259
85°	395	988	1105



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	76.9	3.0
10°-20°	221.4	8.6
20°-30°	338.6	13.1
30°-40°	413.9	16.0
40°-50°	441.2	17.1
50°-60°	421.8	16.4
60°-70°	357.3	13.9
70°-80°	240.1	9.3
80°-90°	67.7	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°	636.9	24.7
0°-40°	1050.9	40.7
0°-60°	1913.8	74.2
0°-90°	2579.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2579.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	811	811	811	811	811	
5°	811	810	806	810	810	77
15°	783	783	782	788	787	221
25°	727	729	734	741	742	335
35°	645	650	660	673	675	404
45°	541	550	569	594	604	417
55°	418	434	472	509	527	373
65°	276	304	367	416	435	274
75°	130	178	248	290	299	140
85°	26	52	64	69	72	32
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	811.0	811.0	811.0	811.0	811.0
2.5°	812.3	812.3	808.5	811.0	811.0
5°	811.0	809.7	805.9	809.7	809.7
7.5°	807.2	805.9	803.3	807.2	805.9
10°	799.5	799.5	797.0	800.8	800.8
12.5°	793.1	791.8	790.6	795.7	794.4
15°	782.9	782.9	781.6	788.0	786.7
17.5°	770.1	771.4	772.6	777.8	779.0
20°	756.0	758.6	759.9	767.5	767.5
22.5°	743.2	744.5	747.1	754.7	754.7
25°	726.6	729.2	734.3	740.7	741.9
27.5°	710.0	711.2	717.6	726.6	727.9
30°	688.2	692.1	699.7	710.0	711.2
32.5°	669.0	672.9	681.8	692.1	694.6
35°	644.7	649.8	660.1	672.9	675.4
37.5°	623.0	626.8	639.6	653.7	657.5
40°	596.1	603.8	616.6	633.2	639.6
42.5°	569.3	576.9	592.3	614.0	621.7
45°	541.1	550.1	569.3	593.6	603.8
47.5°	513.0	523.2	544.9	573.1	584.6
50°	481.0	493.8	520.6	552.6	565.4
52.5°	450.3	465.6	495.1	530.9	547.5
55°	418.3	433.7	472.0	509.1	527.0
57.5°	382.5	403.0	445.2	487.4	506.6
60°	349.2	368.4	419.6	465.6	484.8
62.5°	313.4	339.0	394.0	442.6	461.8
65°	276.3	304.5	367.1	415.7	434.9
67.5°	243.1	273.8	340.3	388.9	408.1
70°	203.4	241.8	310.8	359.5	378.6
72.5°	166.3	208.5	280.1	327.5	345.4
75°	130.5	177.8	248.2	290.4	299.3
77.5°	97.2	147.1	214.9	232.8	226.4
80°	69.1	117.7	167.6	158.6	162.5
82.5°	44.8	89.5	103.6	117.7	121.5
85°	25.6	52.4	64.0	69.1	71.6
87.5°	11.5	19.2	25.6	25.6	24.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)