

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: P309995

Luminaire Tested: **24FCZ2-40HE-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: P309995  
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-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**

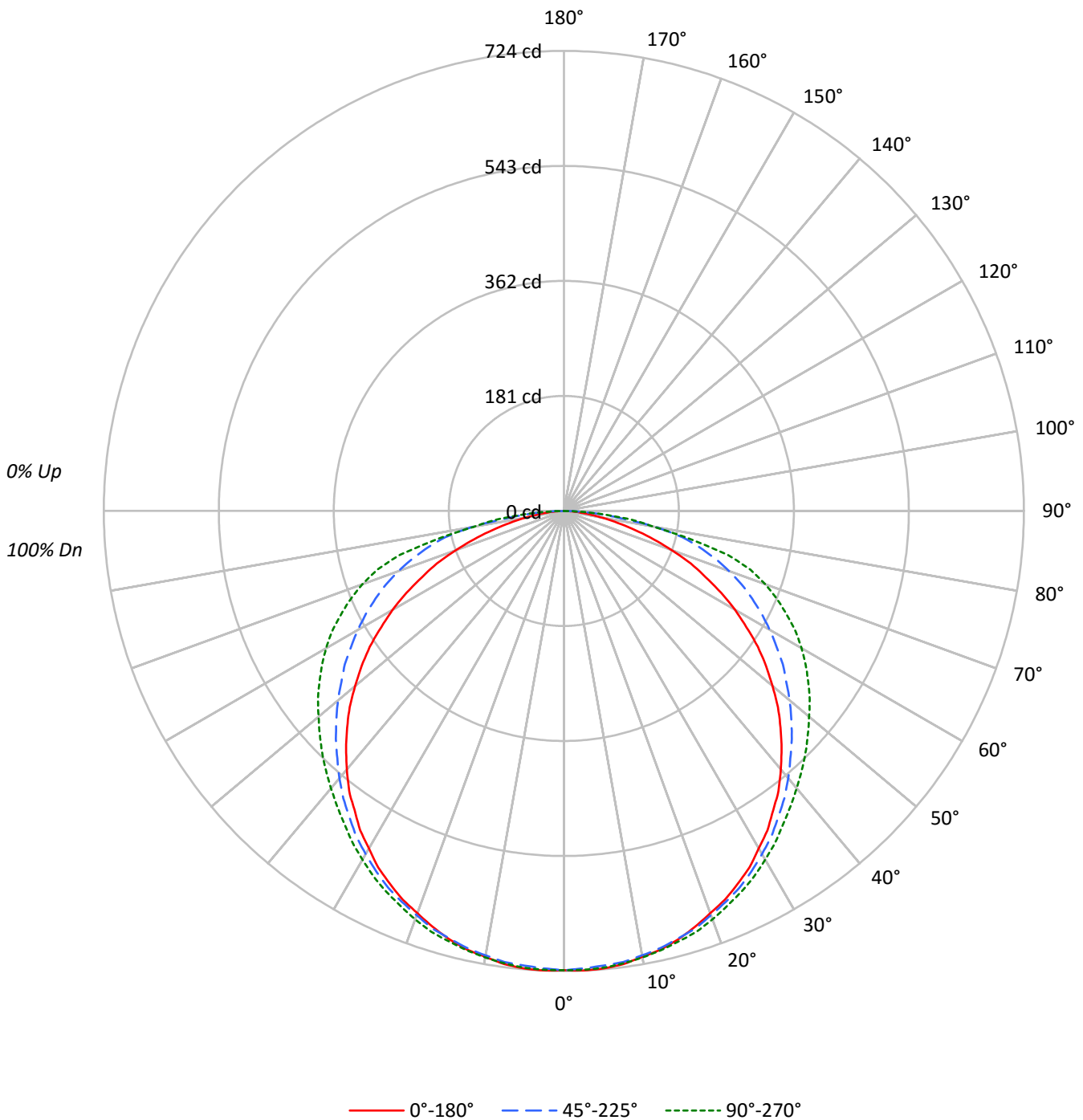
Lumens per Lamp: N/A  
Luminaire Lumens: 2298.0 lumens  
Efficiency: N/A  
Efficacy: 75.6 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 30.4  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	972	972	972
5°	976	970	974
10°	973	970	975
15°	972	970	976
20°	964	969	979
25°	961	971	981
30°	953	969	985
35°	944	966	988
40°	933	965	1001
45°	918	965	1024
50°	897	971	1055
55°	874	987	1102
60°	837	1006	1163
65°	784	1041	1234
70°	713	1090	1327
75°	605	1149	1386
80°	477	1157	1122
85°	352	880	985



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	68.5	3.0
10°-20°	197.3	8.6
20°-30°	301.7	13.1
30°-40°	368.8	16.0
40°-50°	393.1	17.1
50°-60°	375.8	16.4
60°-70°	318.4	13.9
70°-80°	214.0	9.3
80°-90°	60.4	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°	567.5	24.7
0°-40°	936.4	40.7
0°-60°	1705.3	74.2
0°-90°	2298.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2298.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	723	723	723	723	723	
5°	723	722	718	722	722	69
15°	698	698	696	702	701	197
25°	647	650	654	660	661	298
35°	574	579	588	600	602	360
45°	482	490	507	529	538	372
55°	373	386	421	454	470	332
65°	246	271	327	370	388	244
75°	116	158	221	259	267	124
85°	23	47	57	62	64	28
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	722.7	722.7	722.7	722.7	722.7
2.5°	723.8	723.8	720.4	722.7	722.7
5°	722.7	721.5	718.1	721.5	721.5
7.5°	719.2	718.1	715.8	719.2	718.1
10°	712.4	712.4	710.1	713.5	713.5
12.5°	706.7	705.6	704.4	709.0	707.8
15°	697.6	697.6	696.4	702.1	701.0
17.5°	686.2	687.3	688.5	693.0	694.2
20°	673.6	675.9	677.1	683.9	683.9
22.5°	662.2	663.4	665.7	672.5	672.5
25°	647.4	649.7	654.3	660.0	661.1
27.5°	632.6	633.7	639.4	647.4	648.6
30°	613.2	616.7	623.5	632.6	633.7
32.5°	596.1	599.6	607.5	616.7	618.9
35°	574.5	579.0	588.2	599.6	601.8
37.5°	555.1	558.5	569.9	582.5	585.9
40°	531.2	538.0	549.4	564.2	569.9
42.5°	507.2	514.1	527.7	547.1	554.0
45°	482.2	490.1	507.2	528.9	538.0
47.5°	457.1	466.2	485.6	510.6	520.9
50°	428.6	440.0	463.9	492.4	503.8
52.5°	401.2	414.9	441.1	473.0	487.8
55°	372.7	386.4	420.6	453.7	469.6
57.5°	340.8	359.0	396.7	434.3	451.4
60°	311.2	328.3	373.9	414.9	432.0
62.5°	279.3	302.1	351.1	394.4	411.5
65°	246.2	271.3	327.1	370.4	387.5
67.5°	216.6	243.9	303.2	346.5	363.6
70°	181.2	215.4	277.0	320.3	337.4
72.5°	148.2	185.8	249.6	291.8	307.8
75°	116.3	158.4	221.1	258.7	266.7
77.5°	86.6	131.1	191.5	207.4	201.8
80°	61.6	104.9	149.3	141.3	144.8
82.5°	39.9	79.8	92.3	104.9	108.3
85°	22.8	46.7	57.0	61.6	63.8
87.5°	10.3	17.1	22.8	22.8	21.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)