

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: P310033

Luminaire Tested: **24FCZ2-40HE-UNV-L82765-RDP-CP250-W2A-U-3500K**

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: P310033  
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-CP250-W2A-U-3500K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" POLYCARB SHEET  
Light Source: (336) 3500K 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**

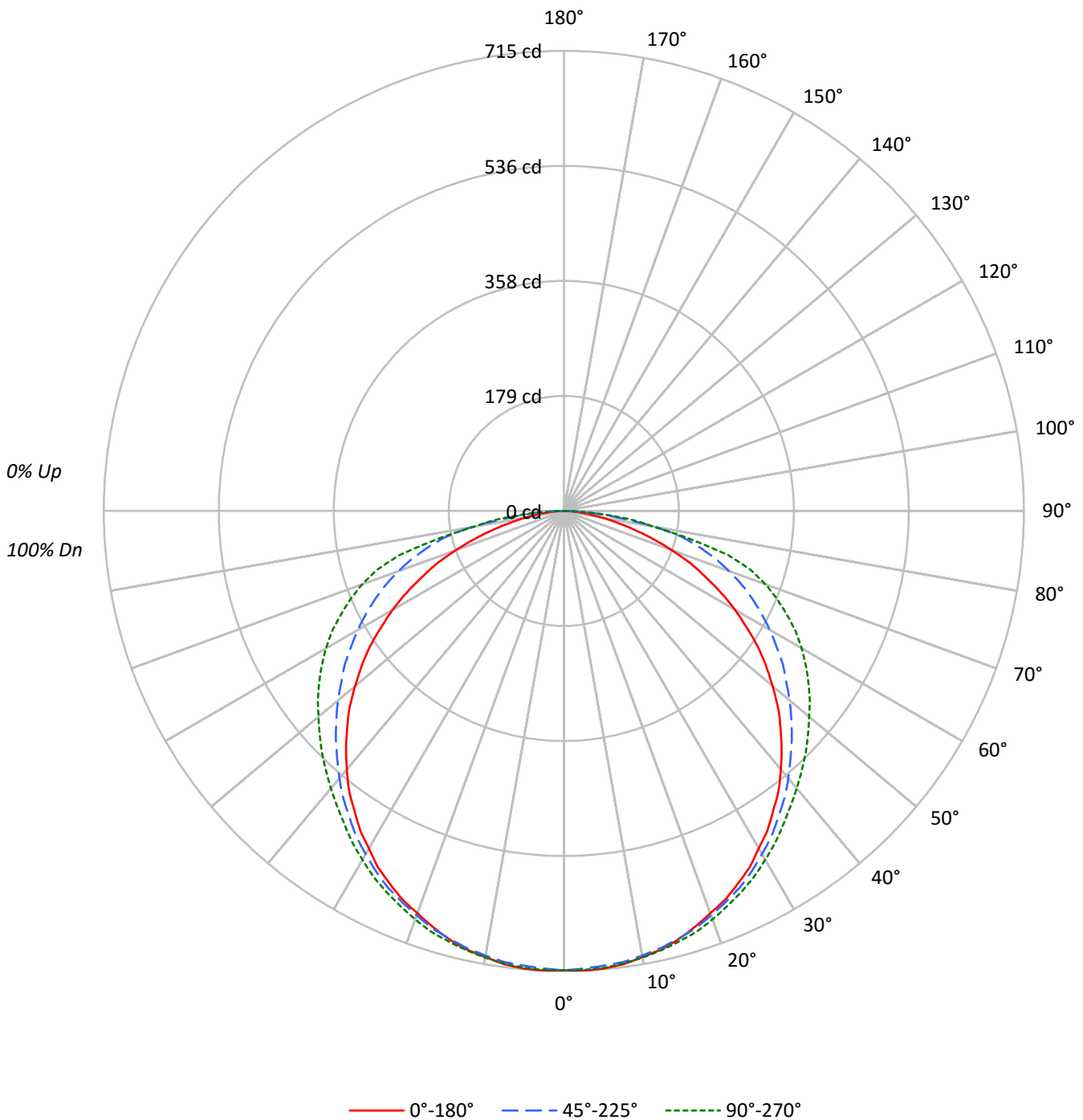
Lumens per Lamp: N/A  
Luminaire Lumens: 2270.0 lumens  
Efficiency: N/A  
Efficacy: 74.4 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 30.5  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	961	961	961
5°	964	958	963
10°	961	958	963
15°	960	958	965
20°	953	958	967
25°	949	959	969
30°	941	957	973
35°	932	954	976
40°	922	953	989
45°	906	953	1011
50°	886	959	1042
55°	864	975	1088
60°	827	994	1148
65°	774	1029	1219
70°	704	1076	1311
75°	597	1135	1370
80°	471	1143	1108
85°	347	869	974



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	67.7	3.0
10°-20°	194.9	8.6
20°-30°	298.0	13.1
30°-40°	364.3	16.0
40°-50°	388.3	17.1
50°-60°	371.3	16.4
60°-70°	314.5	13.9
70°-80°	211.4	9.3
80°-90°	59.6	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°	560.6	24.7
0°-40°	924.9	40.7
0°-60°	1684.5	74.2
0°-90°	2270.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2270.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	714	714	714	714	714	
5°	714	713	709	713	713	68
15°	689	689	688	694	692	194
25°	640	642	646	652	653	295
35°	568	572	581	592	594	356
45°	476	484	501	522	531	367
55°	368	382	416	448	464	328
65°	243	268	323	366	383	241
75°	115	156	218	256	264	123
85°	22	46	56	61	63	28
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	713.9	713.9	713.9	713.9	713.9
2.5°	715.0	715.0	711.6	713.9	713.9
5°	713.9	712.7	709.3	712.7	712.7
7.5°	710.5	709.3	707.1	710.5	709.3
10°	703.7	703.7	701.5	704.8	704.8
12.5°	698.1	697.0	695.8	700.3	699.2
15°	689.1	689.1	688.0	693.6	692.5
17.5°	677.8	678.9	680.1	684.6	685.7
20°	665.4	667.7	668.8	675.6	675.6
22.5°	654.2	655.3	657.6	664.3	664.3
25°	639.5	641.8	646.3	651.9	653.0
27.5°	624.9	626.0	631.7	639.5	640.7
30°	605.8	609.1	615.9	624.9	626.0
32.5°	588.9	592.2	600.1	609.1	611.4
35°	567.5	572.0	581.0	592.2	594.5
37.5°	548.3	551.7	563.0	575.4	578.7
40°	524.7	531.4	542.7	557.3	563.0
42.5°	501.0	507.8	521.3	540.5	547.2
45°	476.3	484.2	501.0	522.4	531.4
47.5°	451.5	460.5	479.7	504.4	514.6
50°	423.4	434.6	458.3	486.4	497.7
52.5°	396.3	409.8	435.7	467.3	481.9
55°	368.2	381.7	415.5	448.1	463.9
57.5°	336.7	354.7	391.8	429.0	445.9
60°	307.4	324.3	369.3	409.8	426.7
62.5°	275.9	298.4	346.8	389.6	406.5
65°	243.2	268.0	323.1	365.9	382.8
67.5°	213.9	241.0	299.5	342.3	359.2
70°	179.0	212.8	273.6	316.4	333.3
72.5°	146.4	183.5	246.6	288.2	304.0
75°	114.8	156.5	218.4	255.6	263.5
77.5°	85.6	129.5	189.2	204.9	199.3
80°	60.8	103.6	147.5	139.6	143.0
82.5°	39.4	78.8	91.2	103.6	107.0
85°	22.5	46.2	56.3	60.8	63.1
87.5°	10.1	16.9	22.5	22.5	21.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)