

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: P309815

Luminaire Tested: **24FCZ2-30HE-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: P309815  
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: 24FCZ2-30HE-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**

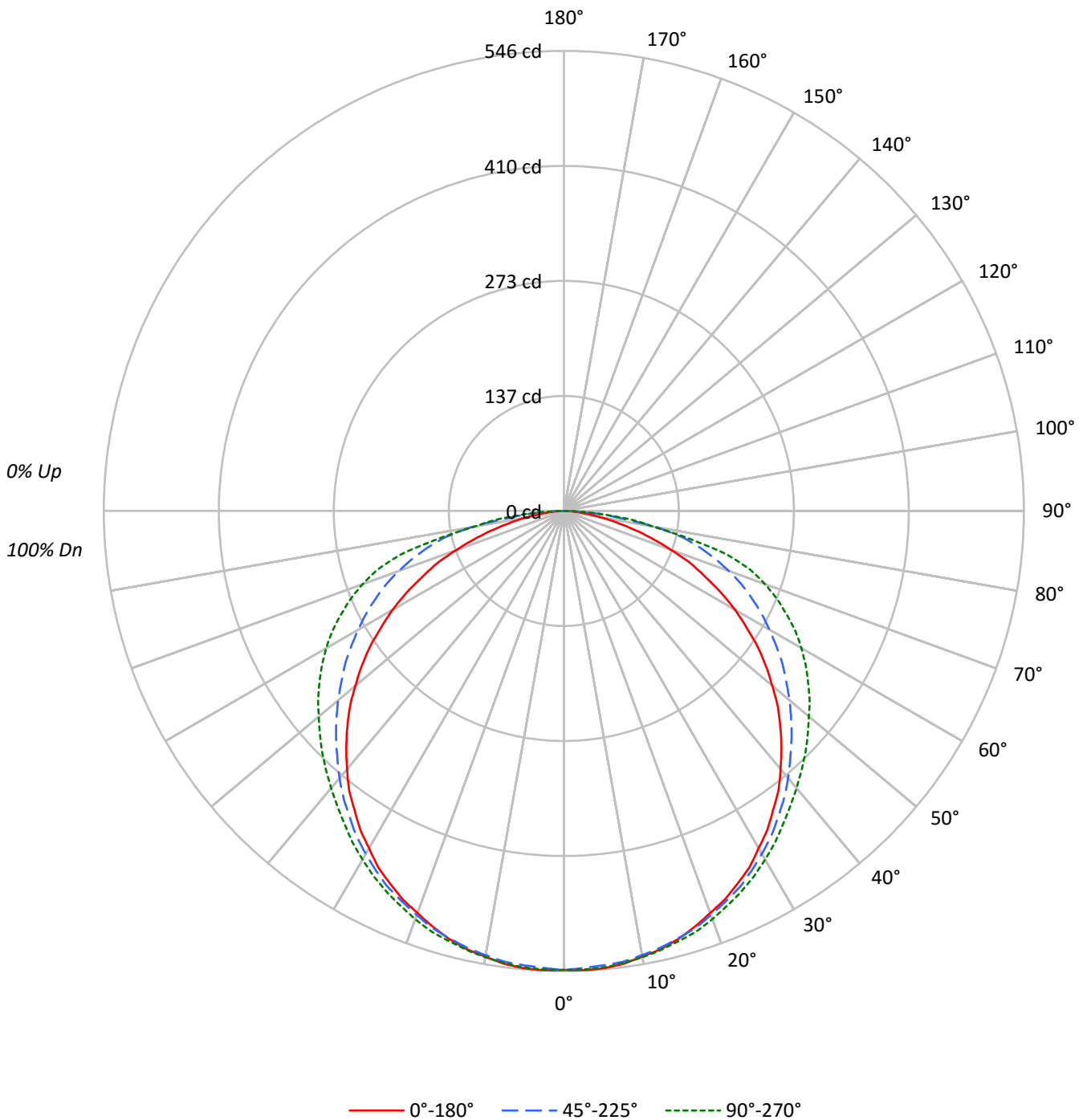
Lumens per Lamp: N/A  
Luminaire Lumens: 1732.0 lumens  
Efficiency: N/A  
Efficacy: 82.1 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 21.1  
Input Voltage (V): NR  
Input Current (A<sub>in</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	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°	733	733	733
5°	736	731	734
10°	734	731	735
15°	732	731	736
20°	727	731	738
25°	724	732	740
30°	718	730	742
35°	711	728	745
40°	703	727	754
45°	691	727	772
50°	676	732	795
55°	659	744	830
60°	631	758	876
65°	591	785	930
70°	537	821	1000
75°	455	867	1045
80°	360	872	845
85°	266	664	743



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	51.7	3.0
10°-20°	148.7	8.6
20°-30°	227.4	13.1
30°-40°	278.0	16.0
40°-50°	296.3	17.1
50°-60°	283.3	16.4
60°-70°	240.0	13.9
70°-80°	161.3	9.3
80°-90°	45.5	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°	427.8	24.7
0°-40°	705.7	40.7
0°-60°	1285.3	74.2
0°-90°	1732.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1732.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	545	545	545	545	545	
5°	545	544	541	544	544	52
15°	526	526	525	529	528	148
25°	488	490	493	497	498	225
35°	433	436	443	452	454	271
45°	363	369	382	399	406	280
55°	281	291	317	342	354	250
65°	186	204	247	279	292	184
75°	88	119	167	195	201	94
85°	17	35	43	46	48	21
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	544.7	544.7	544.7	544.7	544.7
2.5°	545.5	545.5	542.9	544.7	544.7
5°	544.7	543.8	541.2	543.8	543.8
7.5°	542.1	541.2	539.5	542.1	541.2
10°	536.9	536.9	535.2	537.8	537.8
12.5°	532.6	531.8	530.9	534.4	533.5
15°	525.8	525.8	524.9	529.2	528.3
17.5°	517.2	518.0	518.9	522.3	523.2
20°	507.7	509.4	510.3	515.5	515.5
22.5°	499.1	500.0	501.7	506.9	506.9
25°	488.0	489.7	493.1	497.4	498.3
27.5°	476.8	477.7	482.0	488.0	488.8
30°	462.2	464.8	469.9	476.8	477.7
32.5°	449.3	451.9	457.9	464.8	466.5
35°	433.0	436.4	443.3	451.9	453.6
37.5°	418.4	421.0	429.5	439.0	441.6
40°	400.3	405.5	414.1	425.3	429.5
42.5°	382.3	387.5	397.8	412.4	417.5
45°	363.4	369.4	382.3	398.6	405.5
47.5°	344.5	351.4	366.0	384.9	392.6
50°	323.0	331.6	349.7	371.1	379.7
52.5°	302.4	312.7	332.5	356.5	367.7
55°	280.9	291.2	317.0	341.9	353.9
57.5°	256.9	270.6	299.0	327.3	340.2
60°	234.5	247.4	281.8	312.7	325.6
62.5°	210.5	227.7	264.6	297.2	310.1
65°	185.6	204.5	246.6	279.2	292.1
67.5°	163.2	183.8	228.5	261.2	274.1
70°	136.6	162.4	208.8	241.4	254.3
72.5°	111.7	140.0	188.1	219.9	232.0
75°	87.6	119.4	166.7	195.0	201.0
77.5°	65.3	98.8	144.3	156.4	152.1
80°	46.4	79.0	112.5	106.5	109.1
82.5°	30.1	60.1	69.6	79.0	81.6
85°	17.2	35.2	43.0	46.4	48.1
87.5°	7.7	12.9	17.2	17.2	16.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)