

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: P309822

Luminaire Tested: **24FCZ2-30HE-UNV-L82765-RDP-CA08-W2A-U-5700K**

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: P309822  
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-5700K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC SHEET  
Light Source: (336) 5700K 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**

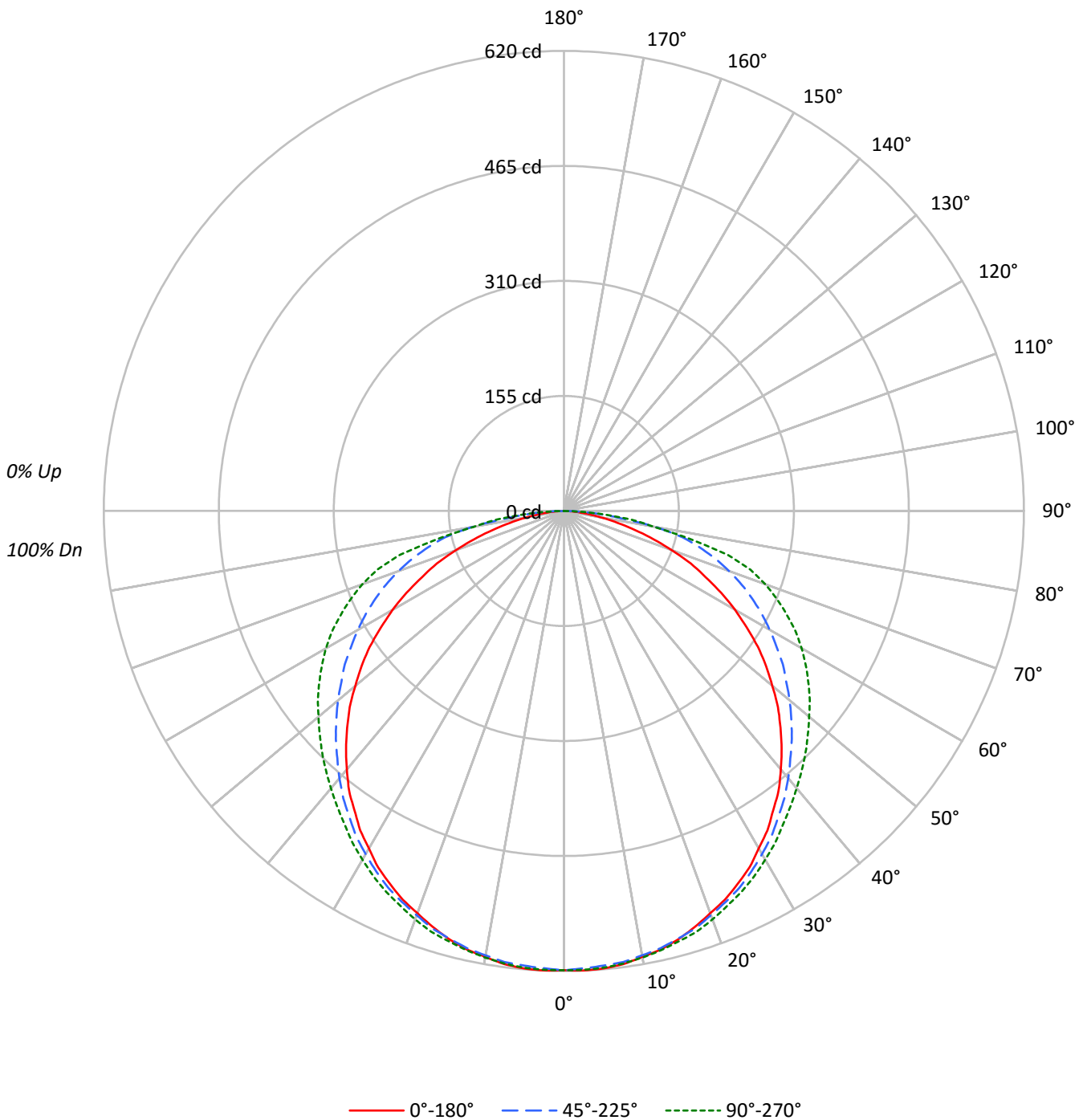
Lumens per Lamp: N/A  
Luminaire Lumens: 1968.0 lumens  
Efficiency: N/A  
Efficacy: 90.7 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 21.7  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	833	833	833
5°	836	831	835
10°	834	831	835
15°	832	831	836
20°	826	830	839
25°	823	832	841
30°	816	830	843
35°	808	827	847
40°	799	826	857
45°	786	827	877
50°	768	832	903
55°	749	845	943
60°	717	862	996
65°	671	892	1057
70°	611	933	1137
75°	518	985	1187
80°	408	991	961
85°	301	753	844



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	58.7	3.0
10°-20°	169.0	8.6
20°-30°	258.4	13.1
30°-40°	315.9	16.0
40°-50°	336.6	17.1
50°-60°	321.9	16.4
60°-70°	272.7	13.9
70°-80°	183.3	9.3
80°-90°	51.7	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°	486.0	24.7
0°-40°	801.9	40.7
0°-60°	1460.4	74.2
0°-90°	1968.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1968.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	619	619	619	619	619	
5°	619	618	615	618	618	59
15°	597	597	596	601	600	168
25°	554	556	560	565	566	256
35°	492	496	504	514	515	308
45°	413	420	434	453	461	318
55°	319	331	360	388	402	284
65°	211	232	280	317	332	209
75°	100	136	189	222	228	107
85°	20	40	49	53	55	24
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	618.9	618.9	618.9	618.9	618.9
2.5°	619.9	619.9	616.9	618.9	618.9
5°	618.9	617.9	615.0	617.9	617.9
7.5°	616.0	615.0	613.0	616.0	615.0
10°	610.1	610.1	608.1	611.1	611.1
12.5°	605.2	604.2	603.3	607.2	606.2
15°	597.4	597.4	596.4	601.3	600.3
17.5°	587.6	588.6	589.6	593.5	594.5
20°	576.9	578.9	579.8	585.7	585.7
22.5°	567.1	568.1	570.1	575.9	575.9
25°	554.5	556.4	560.3	565.2	566.2
27.5°	541.8	542.7	547.6	554.5	555.4
30°	525.2	528.1	534.0	541.8	542.7
32.5°	510.5	513.5	520.3	528.1	530.1
35°	492.0	495.9	503.7	513.5	515.4
37.5°	475.4	478.3	488.1	498.8	501.7
40°	454.9	460.7	470.5	483.2	488.1
42.5°	434.4	440.2	452.0	468.6	474.4
45°	412.9	419.7	434.4	452.9	460.7
47.5°	391.4	399.2	415.8	437.3	446.1
50°	367.0	376.8	397.3	421.7	431.5
52.5°	343.6	355.3	377.8	405.1	417.8
55°	319.2	330.9	360.2	388.5	402.2
57.5°	291.9	307.5	339.7	371.9	386.6
60°	266.5	281.1	320.2	355.3	370.0
62.5°	239.2	258.7	300.7	337.7	352.4
65°	210.8	232.3	280.2	317.2	331.9
67.5°	185.5	208.9	259.7	296.7	311.4
70°	155.2	184.5	237.2	274.3	288.9
72.5°	126.9	159.1	213.8	249.9	263.6
75°	99.6	135.7	189.4	221.6	228.4
77.5°	74.2	112.3	164.0	177.7	172.8
80°	52.7	89.8	127.9	121.0	124.0
82.5°	34.2	68.3	79.1	89.8	92.7
85°	19.5	40.0	48.8	52.7	54.7
87.5°	8.8	14.6	19.5	19.5	18.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)