

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: P314207

Luminaire Tested: **24FCZ2-30-UNV-L83050-S-CP187-W2A-U-4000K**

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: P314207  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 24FCZ2-30-UNV-L83050-S-CP187-W2A-U-4000K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.187" POLYCARB SHEET  
Light Source: (168) 4000K 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**

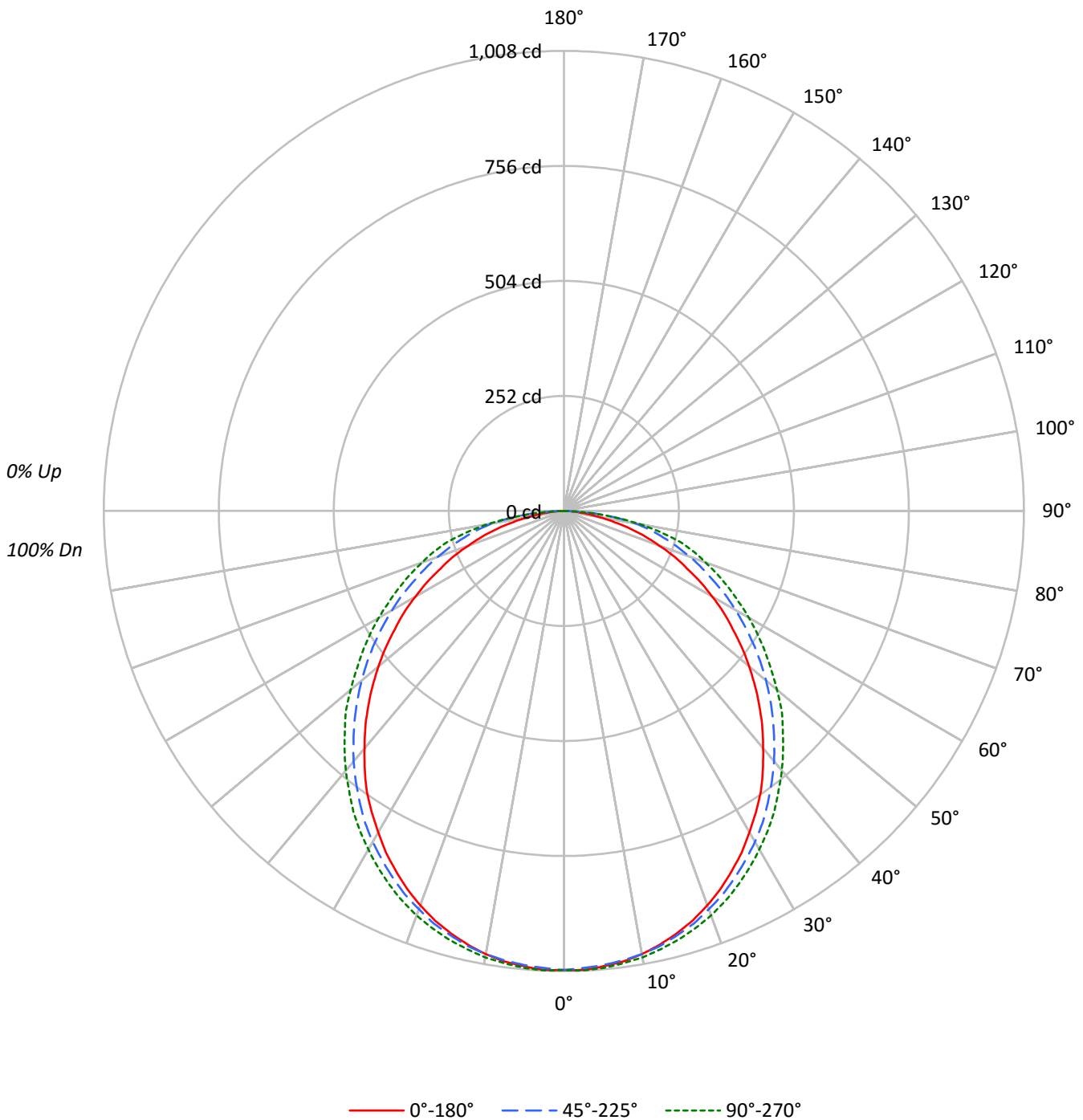
Lumens per Lamp: N/A  
Luminaire Lumens: 2863.0 lumens  
Efficiency: N/A  
Efficacy: 119.8 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 23.9  
Input Voltage (V): NR  
Input Current (A<sub>in</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	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	1353	1353	1353
5°	1352	1349	1357
10°	1347	1347	1357
15°	1334	1340	1354
20°	1316	1329	1350
25°	1292	1316	1342
30°	1263	1301	1331
35°	1235	1280	1320
40°	1193	1259	1305
45°	1154	1234	1291
50°	1110	1211	1275
55°	1060	1188	1263
60°	1011	1170	1260
65°	947	1149	1268
70°	876	1155	1302
75°	785	1177	1376
80°	634	1247	1346
85°	477	1095	1067



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	95.2	3.3
10°-20°	272.1	9.5
20°-30°	409.0	14.3
30°-40°	487.2	17.0
40°-50°	498.6	17.4
50°-60°	448.9	15.7
60°-70°	352.5	12.3
70°-80°	228.8	8.0
80°-90°	70.8	2.5
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°	776.3	27.1
0°-40°	1263.5	44.1
0°-60°	2210.9	77.2
0°-90°	2863.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2863.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1006	1006	1006	1006	1006	
5°	1001	1003	998	1004	1005	95
15°	958	960	962	970	972	270
25°	870	878	887	901	904	401
35°	752	761	779	798	804	469
45°	607	621	648	673	678	468
55°	452	472	506	533	538	405
65°	297	320	361	391	398	296
75°	151	180	226	257	265	160
85°	31	57	71	69	69	37
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1005.8	1005.8	1005.8	1005.8	1005.8
2.5°	1006.7	1006.7	1002.2	1006.7	1007.6
5°	1001.2	1003.1	998.5	1004.0	1004.9
7.5°	995.8	995.8	993.1	998.5	999.4
10°	985.8	986.7	985.8	992.1	993.1
12.5°	973.1	974.9	975.8	982.1	983.1
15°	957.6	960.3	962.1	970.3	972.1
17.5°	940.3	943.0	947.6	956.7	958.5
20°	919.4	923.0	928.5	940.3	943.0
22.5°	896.7	900.3	909.4	920.3	924.9
25°	870.3	877.6	886.7	901.2	903.9
27.5°	843.9	850.3	862.1	877.6	881.2
30°	813.0	823.0	837.6	853.0	856.6
32.5°	783.0	793.0	810.3	826.6	831.2
35°	752.1	761.2	779.4	798.4	803.9
37.5°	716.6	728.4	748.4	767.5	773.0
40°	679.3	693.9	716.6	736.6	743.0
42.5°	643.9	659.3	682.0	703.9	711.1
45°	606.6	621.1	648.4	673.0	678.4
47.5°	568.4	584.7	613.8	638.4	647.5
50°	530.2	547.5	578.4	603.8	609.3
52.5°	492.0	510.2	542.9	570.2	572.9
55°	452.0	472.0	506.5	532.9	538.4
57.5°	415.6	432.9	470.2	497.4	503.8
60°	375.6	394.7	434.7	460.2	468.3
62.5°	337.4	357.4	399.2	424.7	432.0
65°	297.4	320.1	361.0	391.0	398.3
67.5°	262.8	284.6	328.3	357.4	364.7
70°	222.8	247.4	293.7	323.7	331.0
72.5°	188.2	213.7	260.1	289.2	300.1
75°	151.0	180.1	226.4	257.4	264.6
77.5°	114.6	148.2	195.5	219.2	219.2
80°	81.8	117.3	161.0	171.9	173.7
82.5°	53.7	88.2	119.1	118.2	118.2
85°	30.9	57.3	70.9	69.1	69.1
87.5°	11.8	23.6	25.5	25.5	24.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)