

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: P310207

Luminaire Tested: **24FCZ2-50HE-UNV-L82765-RDP-CP187-W2A-U-5000K**

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: P310207  
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: 24FCZ2-50HE-UNV-L82765-RDP-CP187-W2A-U-5000K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" POLYCARB SHEET  
Light Source: (336) 5000K 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**

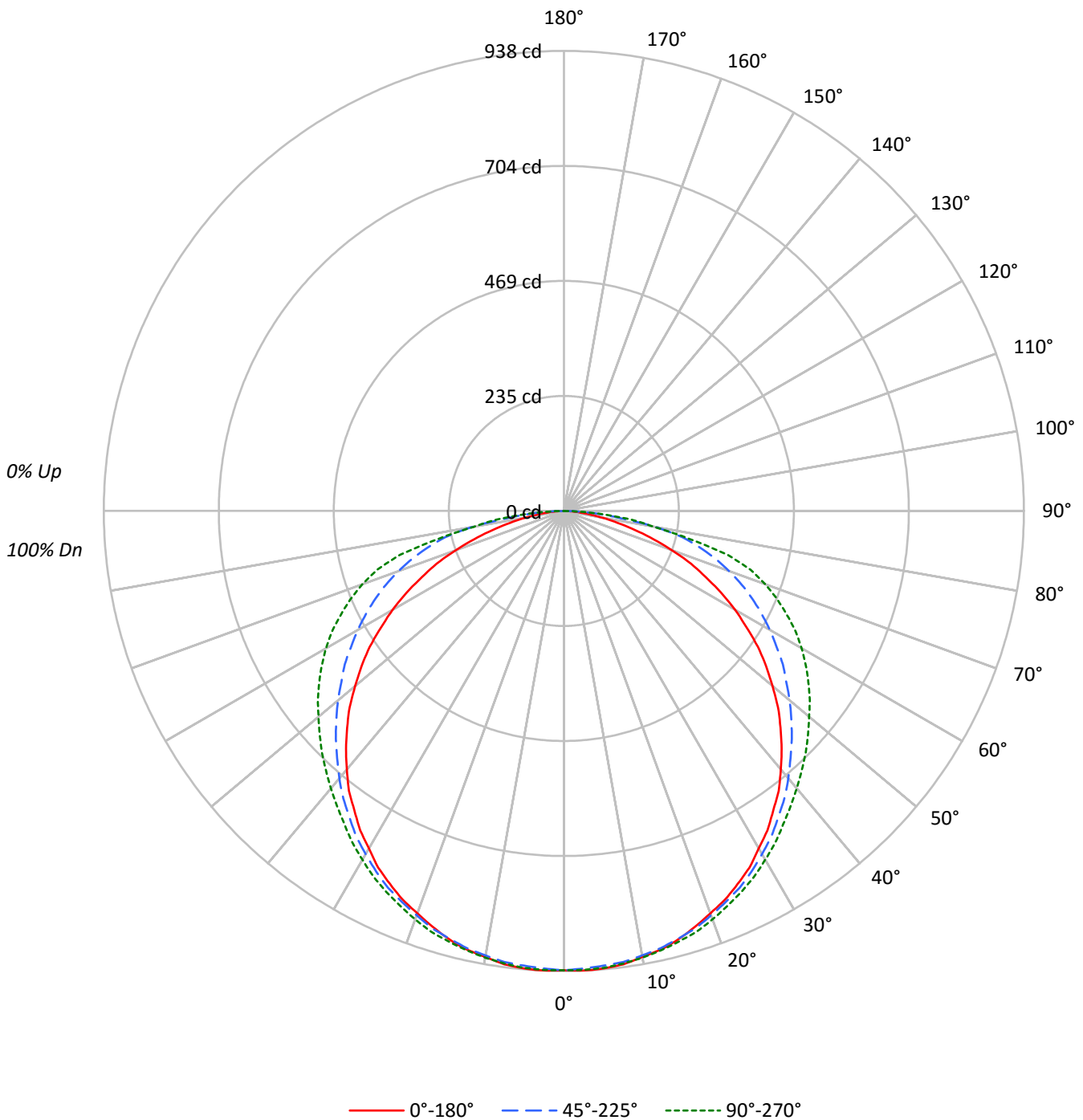
Lumens per Lamp: N/A  
Luminaire Lumens: 2978.0 lumens  
Efficiency: N/A  
Efficacy: 75.8 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 39.3  
Input Voltage (V): NR  
Input Current (Ain): NR  
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°	1260	1260	1260
5°	1265	1257	1263
10°	1261	1257	1263
15°	1259	1257	1265
20°	1250	1256	1269
25°	1246	1259	1272
30°	1235	1255	1276
35°	1223	1252	1281
40°	1209	1251	1297
45°	1189	1251	1327
50°	1163	1258	1367
55°	1133	1279	1428
60°	1085	1304	1506
65°	1016	1350	1599
70°	924	1412	1720
75°	783	1490	1797
80°	618	1499	1454
85°	455	1141	1277



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	88.8	3.0
10°-20°	255.7	8.6
20°-30°	391.0	13.1
30°-40°	478.0	16.0
40°-50°	509.4	17.1
50°-60°	487.1	16.4
60°-70°	412.6	13.9
70°-80°	277.3	9.3
80°-90°	78.2	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°	735.5	24.7
0°-40°	1213.4	40.7
0°-60°	2209.9	74.2
0°-90°	2978.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2978.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	936	936	936	936	936	
5°	936	935	931	935	935	89
15°	904	904	902	910	908	255
25°	839	842	848	855	857	387
35°	744	750	762	777	780	466
45°	625	635	657	685	697	482
55°	483	501	545	588	609	430
65°	319	352	424	480	502	317
75°	151	205	287	335	346	161
85°	30	61	74	80	83	37
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	936.5	936.5	936.5	936.5	936.5
2.5°	938.0	938.0	933.5	936.5	936.5
5°	936.5	935.0	930.6	935.0	935.0
7.5°	932.1	930.6	927.6	932.1	930.6
10°	923.2	923.2	920.2	924.7	924.7
12.5°	915.8	914.3	912.9	918.8	917.3
15°	904.0	904.0	902.5	909.9	908.4
17.5°	889.2	890.7	892.2	898.1	899.6
20°	873.0	875.9	877.4	886.3	886.3
22.5°	858.2	859.7	862.6	871.5	871.5
25°	839.0	842.0	847.9	855.3	856.7
27.5°	819.8	821.3	828.7	839.0	840.5
30°	794.7	799.1	808.0	819.8	821.3
32.5°	772.5	777.0	787.3	799.1	802.1
35°	744.5	750.4	762.2	777.0	779.9
37.5°	719.4	723.8	738.6	754.8	759.2
40°	688.3	697.2	712.0	731.2	738.6
42.5°	657.3	666.2	683.9	709.0	717.9
45°	624.8	635.2	657.3	685.4	697.2
47.5°	592.3	604.1	629.3	661.8	675.0
50°	555.4	570.2	601.2	638.1	652.9
52.5°	519.9	537.7	571.6	613.0	632.2
55°	483.0	500.7	545.1	587.9	608.6
57.5°	441.7	465.3	514.0	562.8	584.9
60°	403.3	425.4	484.5	537.7	559.8
62.5°	361.9	391.4	455.0	511.1	533.2
65°	319.1	351.6	423.9	480.1	502.2
67.5°	280.7	316.1	392.9	449.0	471.2
70°	234.9	279.2	358.9	415.1	437.2
72.5°	192.0	240.8	323.5	378.1	398.8
75°	150.7	205.3	286.6	335.3	345.6
77.5°	112.3	169.9	248.2	268.8	261.5
80°	79.8	135.9	193.5	183.2	187.6
82.5°	51.7	103.4	119.6	135.9	140.3
85°	29.5	60.6	73.9	79.8	82.7
87.5°	13.3	22.2	29.5	29.5	28.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)