

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: P310255

Luminaire Tested: **24FCZ2-50-UNV-L82765-RDP-CP187-W2A-U-6500K**

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: P310255
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: 24FCZ2-50-UNV-L82765-RDP-CP187-W2A-U-6500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" POLYCARB SHEET
Light Source: (168) 6500K 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: 3008.0 lumens
Efficiency: N/A
Efficacy: 67.4 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

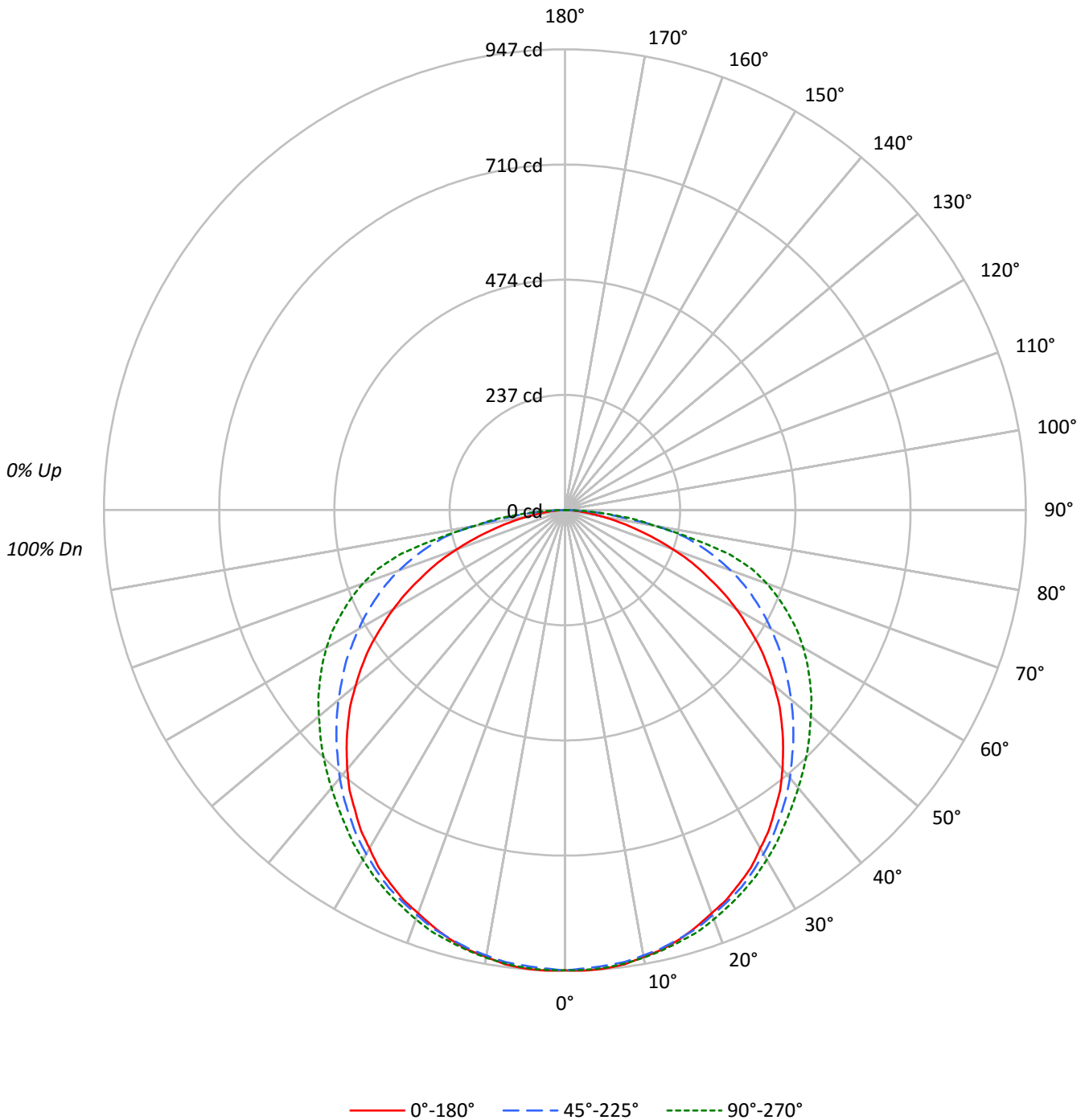
Input Watts (W): 44.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1273	1273	1273
5°	1278	1270	1276
10°	1274	1270	1276
15°	1272	1270	1278
20°	1263	1269	1282
25°	1258	1271	1285
30°	1247	1268	1289
35°	1235	1265	1294
40°	1221	1263	1310
45°	1201	1263	1340
50°	1174	1271	1380
55°	1145	1291	1442
60°	1096	1317	1522
65°	1026	1363	1615
70°	933	1426	1737
75°	791	1504	1815
80°	625	1515	1468
85°	460	1152	1291



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.7	3.0
10°-20°	258.2	8.6
20°-30°	394.9	13.1
30°-40°	482.8	16.0
40°-50°	514.5	17.1
50°-60°	492.0	16.4
60°-70°	416.8	13.9
70°-80°	280.1	9.3
80°-90°	79.0	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°	742.9	24.7
0°-40°	1225.7	40.7
0°-60°	2232.1	74.2
0°-90°	3008.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3008.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	946	946	946	946	946	
5°	946	944	940	944	944	90
15°	913	913	912	919	918	257
25°	848	850	856	864	865	391
35°	752	758	770	785	788	471
45°	631	642	664	692	704	487
55°	488	506	550	594	615	435
65°	322	355	428	485	507	320
75°	152	207	289	339	349	163
85°	30	61	75	81	84	37
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	945.9	945.9	945.9	945.9	945.9
2.5°	947.4	947.4	942.9	945.9	945.9
5°	945.9	944.4	940.0	944.4	944.4
7.5°	941.5	940.0	937.0	941.5	940.0
10°	932.5	932.5	929.5	934.0	934.0
12.5°	925.0	923.6	922.1	928.0	926.5
15°	913.1	913.1	911.6	919.1	917.6
17.5°	898.2	899.7	901.2	907.1	908.6
20°	881.8	884.8	886.2	895.2	895.2
22.5°	866.9	868.3	871.3	880.3	880.3
25°	847.5	850.4	856.4	863.9	865.4
27.5°	828.1	829.6	837.0	847.5	848.9
30°	802.7	807.2	816.1	828.1	829.6
32.5°	780.3	784.8	795.2	807.2	810.2
35°	752.0	757.9	769.9	784.8	787.8
37.5°	726.6	731.1	746.0	762.4	766.9
40°	695.3	704.2	719.1	738.5	746.0
42.5°	663.9	672.9	690.8	716.2	725.1
45°	631.1	641.6	663.9	692.3	704.2
47.5°	598.3	610.2	635.6	668.4	681.8
50°	561.0	575.9	607.2	644.5	659.5
52.5°	525.2	543.1	577.4	619.2	638.6
55°	487.9	505.8	550.5	593.8	614.7
57.5°	446.1	470.0	519.2	568.5	590.8
60°	407.3	429.7	489.4	543.1	565.5
62.5°	365.5	395.4	459.5	516.2	538.6
65°	322.3	355.1	428.2	484.9	507.3
67.5°	283.5	319.3	396.9	453.6	475.9
70°	237.2	282.0	362.6	419.3	441.6
72.5°	194.0	243.2	326.7	382.0	402.8
75°	152.2	207.4	289.4	338.7	349.1
77.5°	113.4	171.6	250.7	271.5	264.1
80°	80.6	137.3	195.5	185.0	189.5
82.5°	52.2	104.4	120.9	137.3	141.7
85°	29.8	61.2	74.6	80.6	83.6
87.5°	13.4	22.4	29.8	29.8	28.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)