

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: P310208

Luminaire Tested: **24FCZ2-50HE-UNV-L82765-RDP-CP187-W2A-U-5500K**

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: P310208
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-5500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" POLYCARB SHEET
Light Source: (336) 5500K 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: 3007.0 lumens
Efficiency: N/A
Efficacy: 76.1 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

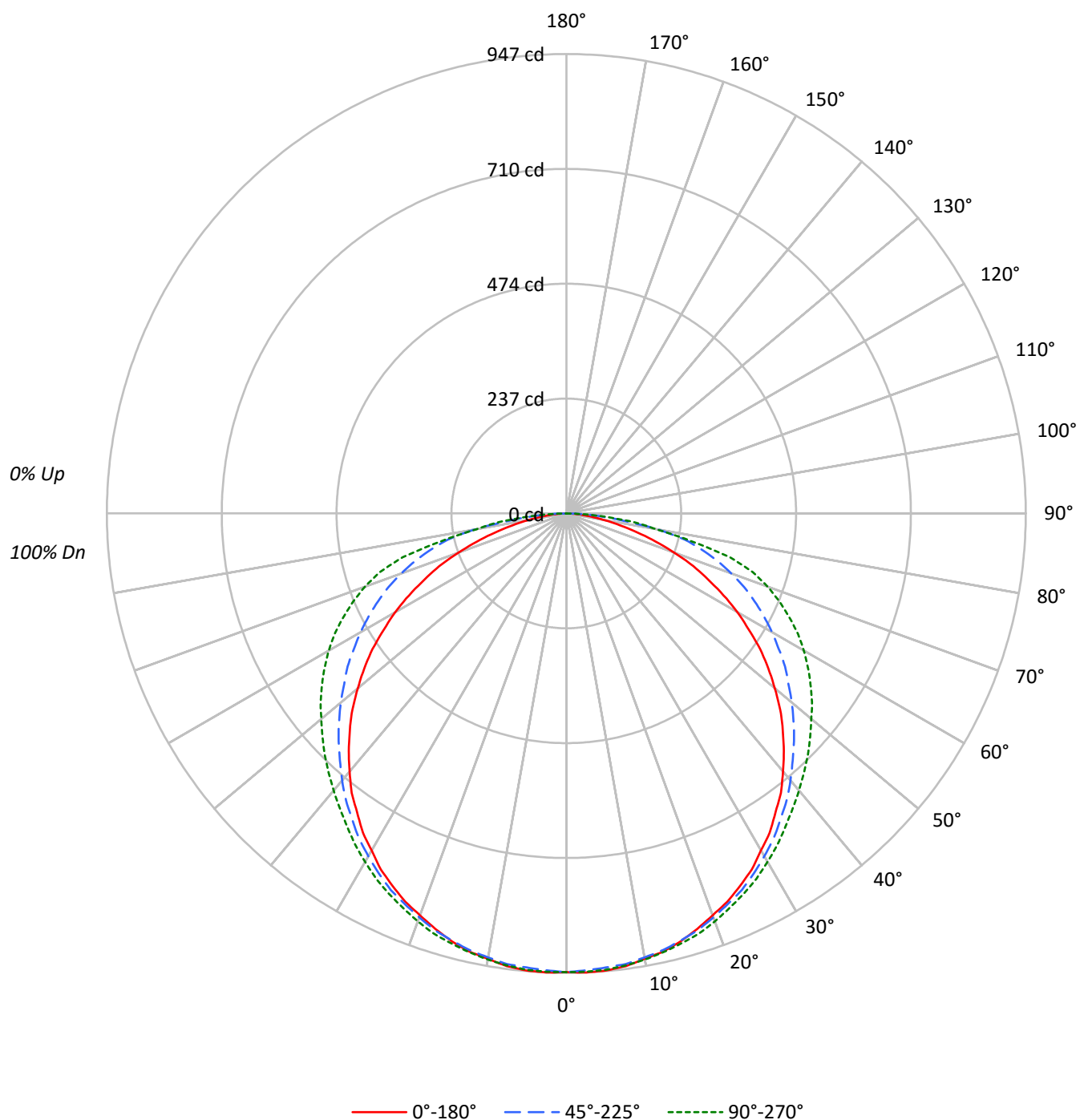
Input Watts (W): 39.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
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°	1272	1272	1272
5°	1277	1269	1275
10°	1274	1270	1276
15°	1271	1269	1278
20°	1262	1269	1281
25°	1258	1271	1284
30°	1247	1268	1288
35°	1235	1264	1293
40°	1221	1263	1310
45°	1200	1263	1340
50°	1174	1271	1380
55°	1144	1291	1441
60°	1096	1316	1521
65°	1026	1363	1614
70°	933	1426	1737
75°	791	1504	1814
80°	624	1514	1468
85°	460	1152	1289



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.7	3.0
10°-20°	258.2	8.6
20°-30°	394.8	13.1
30°-40°	482.6	16.0
40°-50°	514.4	17.1
50°-60°	491.8	16.4
60°-70°	416.6	13.9
70°-80°	280.0	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°	742.6	24.7
0°-40°	1225.2	40.7
0°-60°	2231.4	74.2
0°-90°	3007.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3007.0	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	911	919	917	257
25°	847	850	856	864	865	390
35°	752	758	770	784	788	471
45°	631	641	664	692	704	487
55°	488	506	550	594	614	434
65°	322	355	428	485	507	320
75°	152	207	289	339	349	163
85°	30	61	75	80	84	37
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	945.6	945.6	945.6	945.6	945.6
2.5°	947.1	947.1	942.6	945.6	945.6
5°	945.6	944.1	939.6	944.1	944.1
7.5°	941.1	939.6	936.7	941.1	939.6
10°	932.2	932.2	929.2	933.7	933.7
12.5°	924.7	923.2	921.8	927.7	926.2
15°	912.8	912.8	911.3	918.8	917.3
17.5°	897.9	899.4	900.9	906.8	908.3
20°	881.5	884.5	886.0	894.9	894.9
22.5°	866.6	868.1	871.0	880.0	880.0
25°	847.2	850.2	856.1	863.6	865.1
27.5°	827.8	829.3	836.7	847.2	848.7
30°	802.4	806.9	815.9	827.8	829.3
32.5°	780.1	784.5	795.0	806.9	809.9
35°	751.7	757.7	769.6	784.5	787.5
37.5°	726.4	730.8	745.8	762.2	766.6
40°	695.0	704.0	718.9	738.3	745.8
42.5°	663.7	672.7	690.6	715.9	724.9
45°	630.9	641.3	663.7	692.1	704.0
47.5°	598.1	610.0	635.4	668.2	681.6
50°	560.8	575.7	607.0	644.3	659.2
52.5°	525.0	542.9	577.2	619.0	638.4
55°	487.7	505.6	550.4	593.6	614.5
57.5°	446.0	469.8	519.0	568.3	590.6
60°	407.2	429.6	489.2	542.9	565.3
62.5°	365.4	395.2	459.4	516.1	538.4
65°	322.2	355.0	428.1	484.7	507.1
67.5°	283.4	319.2	396.7	453.4	475.8
70°	237.1	281.9	362.4	419.1	441.5
72.5°	193.9	243.1	326.6	381.8	402.7
75°	152.1	207.3	289.4	338.6	349.0
77.5°	113.4	171.5	250.6	271.5	264.0
80°	80.5	137.2	195.4	184.9	189.4
82.5°	52.2	104.4	120.8	137.2	141.7
85°	29.8	61.2	74.6	80.5	83.5
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)