

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: P313631

Luminaire Tested: **24FCZ2-50HE-UNV-L83050-RDP-CP187-W2A-U-3500K**

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: P313631
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-L83050-RDP-CP187-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" POLYCARB SHEET
Light Source: (336) 3500K 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: 2892.0 lumens
Efficiency: N/A
Efficacy: 75.3 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

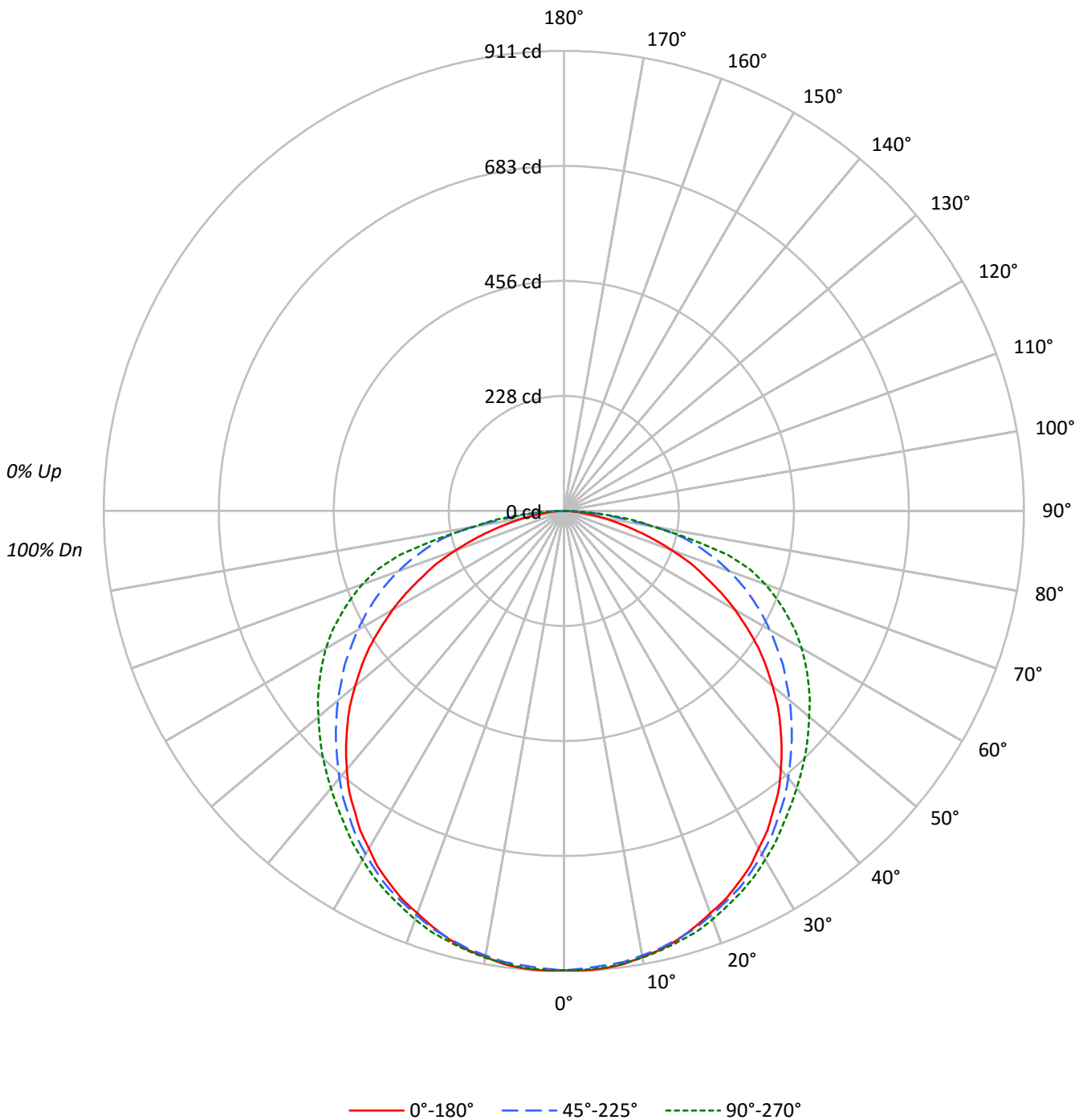
Input Watts (W): 38.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1224	1224	1224
5°	1228	1221	1226
10°	1225	1221	1227
15°	1223	1221	1229
20°	1214	1220	1232
25°	1210	1222	1235
30°	1199	1219	1239
35°	1188	1216	1244
40°	1174	1214	1260
45°	1155	1215	1288
50°	1129	1222	1327
55°	1100	1242	1386
60°	1054	1266	1463
65°	986	1311	1553
70°	897	1371	1670
75°	761	1447	1745
80°	600	1456	1412
85°	443	1107	1240



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	86.3	3.0
10°-20°	248.3	8.6
20°-30°	379.7	13.1
30°-40°	464.1	16.0
40°-50°	494.7	17.1
50°-60°	473.0	16.4
60°-70°	400.7	13.9
70°-80°	269.3	9.3
80°-90°	76.0	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°	714.2	24.7
0°-40°	1178.4	40.7
0°-60°	2146.1	74.2
0°-90°	2892.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2892.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	910	910	910	910	910	
5°	910	908	904	908	908	86
15°	878	878	876	884	882	248
25°	815	818	823	831	832	376
35°	723	729	740	754	757	453
45°	607	617	638	666	677	468
55°	469	486	529	571	591	418
65°	310	341	412	466	488	308
75°	146	199	278	326	336	157
85°	29	59	72	78	80	36
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	909.5	909.5	909.5	909.5	909.5
2.5°	910.9	910.9	906.6	909.5	909.5
5°	909.5	908.0	903.7	908.0	908.0
7.5°	905.1	903.7	900.8	905.1	903.7
10°	896.5	896.5	893.7	898.0	898.0
12.5°	889.4	887.9	886.5	892.2	890.8
15°	877.9	877.9	876.5	883.6	882.2
17.5°	863.5	865.0	866.4	872.2	873.6
20°	847.8	850.6	852.1	860.7	860.7
22.5°	833.4	834.9	837.7	846.3	846.3
25°	814.8	817.6	823.4	830.6	832.0
27.5°	796.1	797.6	804.7	814.8	816.2
30°	771.7	776.0	784.7	796.1	797.6
32.5°	750.2	754.5	764.6	776.0	778.9
35°	723.0	728.7	740.2	754.5	757.4
37.5°	698.6	702.9	717.2	733.0	737.3
40°	668.5	677.1	691.4	710.1	717.2
42.5°	638.3	646.9	664.2	688.5	697.2
45°	606.8	616.8	638.3	665.6	677.1
47.5°	575.2	586.7	611.1	642.6	655.6
50°	539.4	553.7	583.8	619.7	634.0
52.5°	504.9	522.1	555.1	595.3	614.0
55°	469.1	486.3	529.3	570.9	591.0
57.5°	428.9	451.9	499.2	546.5	568.0
60°	391.6	413.1	470.5	522.1	543.7
62.5°	351.4	380.1	441.8	496.3	517.8
65°	309.8	341.4	411.7	466.2	487.7
67.5°	272.5	307.0	381.6	436.1	457.6
70°	228.1	271.1	348.6	403.1	424.6
72.5°	186.5	233.8	314.1	367.2	387.3
75°	146.3	199.4	278.3	325.6	335.7
77.5°	109.0	165.0	241.0	261.1	253.9
80°	77.5	132.0	187.9	177.9	182.2
82.5°	50.2	100.4	116.2	132.0	136.3
85°	28.7	58.8	71.7	77.5	80.3
87.5°	12.9	21.5	28.7	28.7	27.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)