

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: P313633

Luminaire Tested: **24FCZ2-50HE-UNV-L83050-RDP-CP187-W2A-U-4500K**

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: P313633
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-4500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" POLYCARB SHEET
Light Source: (336) 4500K 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: 3065.0 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

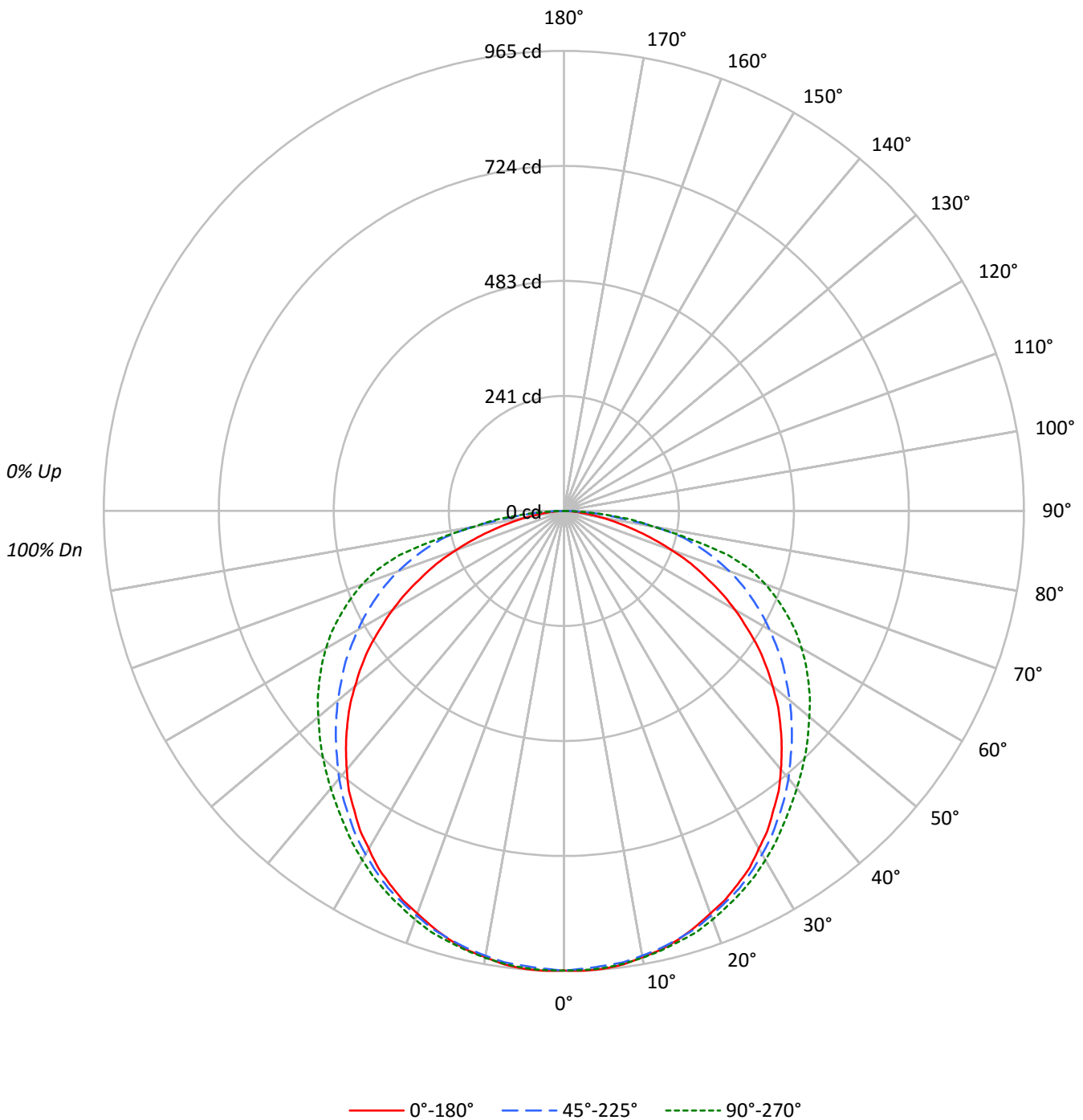
Input Watts (W): 40.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1297	1297	1297
5°	1302	1294	1300
10°	1298	1294	1300
15°	1296	1294	1302
20°	1287	1293	1306
25°	1282	1295	1309
30°	1271	1292	1313
35°	1259	1289	1318
40°	1244	1287	1335
45°	1224	1287	1365
50°	1196	1295	1407
55°	1166	1316	1469
60°	1117	1342	1551
65°	1046	1389	1646
70°	951	1453	1770
75°	806	1533	1849
80°	636	1543	1496
85°	469	1173	1314



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	91.4	3.0
10°-20°	263.1	8.6
20°-30°	402.4	13.1
30°-40°	491.9	16.0
40°-50°	524.3	17.1
50°-60°	501.3	16.4
60°-70°	424.6	13.9
70°-80°	285.4	9.3
80°-90°	80.5	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°	757.0	24.7
0°-40°	1248.9	40.7
0°-60°	2274.5	74.2
0°-90°	3065.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3065.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	964	964	964	964	964	
5°	964	962	958	962	962	92
15°	930	930	929	936	935	262
25°	864	867	873	880	882	398
35°	766	772	784	800	803	480
45°	643	654	676	705	718	496
55°	497	515	561	605	626	443
65°	328	362	436	494	517	326
75°	155	211	295	345	356	166
85°	30	62	76	82	85	38
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	963.9	963.9	963.9	963.9	963.9
2.5°	965.4	965.4	960.8	963.9	963.9
5°	963.9	962.3	957.8	962.3	962.3
7.5°	959.3	957.8	954.7	959.3	957.8
10°	950.2	950.2	947.1	951.7	951.7
12.5°	942.6	941.1	939.5	945.6	944.1
15°	930.4	930.4	928.9	936.5	935.0
17.5°	915.2	916.7	918.2	924.3	925.8
20°	898.5	901.5	903.0	912.2	912.2
22.5°	883.3	884.8	887.8	897.0	897.0
25°	863.5	866.6	872.6	880.2	881.8
27.5°	843.8	845.3	852.9	863.5	865.0
30°	817.9	822.5	831.6	843.8	845.3
32.5°	795.1	799.7	810.3	822.5	825.5
35°	766.2	772.3	784.5	799.7	802.7
37.5°	740.4	744.9	760.1	776.9	781.4
40°	708.4	717.6	732.8	752.5	760.1
42.5°	676.5	685.6	703.9	729.7	738.9
45°	643.1	653.7	676.5	705.4	717.6
47.5°	609.6	621.8	647.6	681.1	694.8
50°	571.6	586.8	618.8	656.8	672.0
52.5°	535.1	553.4	588.3	630.9	650.7
55°	497.1	515.4	561.0	605.1	626.4
57.5°	454.6	478.9	529.1	579.2	602.0
60°	415.0	437.8	498.7	553.4	576.2
62.5°	372.5	402.9	468.2	526.0	548.8
65°	328.4	361.8	436.3	494.1	516.9
67.5°	288.9	325.3	404.4	462.2	485.0
70°	241.7	287.3	369.4	427.2	450.0
72.5°	197.6	247.8	332.9	389.2	410.5
75°	155.1	211.3	294.9	345.1	355.7
77.5°	115.5	174.8	255.4	276.7	269.1
80°	82.1	139.9	199.2	188.5	193.1
82.5°	53.2	106.4	123.1	139.9	144.4
85°	30.4	62.3	76.0	82.1	85.1
87.5°	13.7	22.8	30.4	30.4	28.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)