

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: P313655

Luminaire Tested: **24FCZ2-50-UNV-L83050-RDP-CP187-W2A-U-3000K**

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: P313655
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-L83050-RDP-CP187-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" POLYCARB SHEET
Light Source: (168) 3000K 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: 2720.0 lumens
Efficiency: N/A
Efficacy: 63.8 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

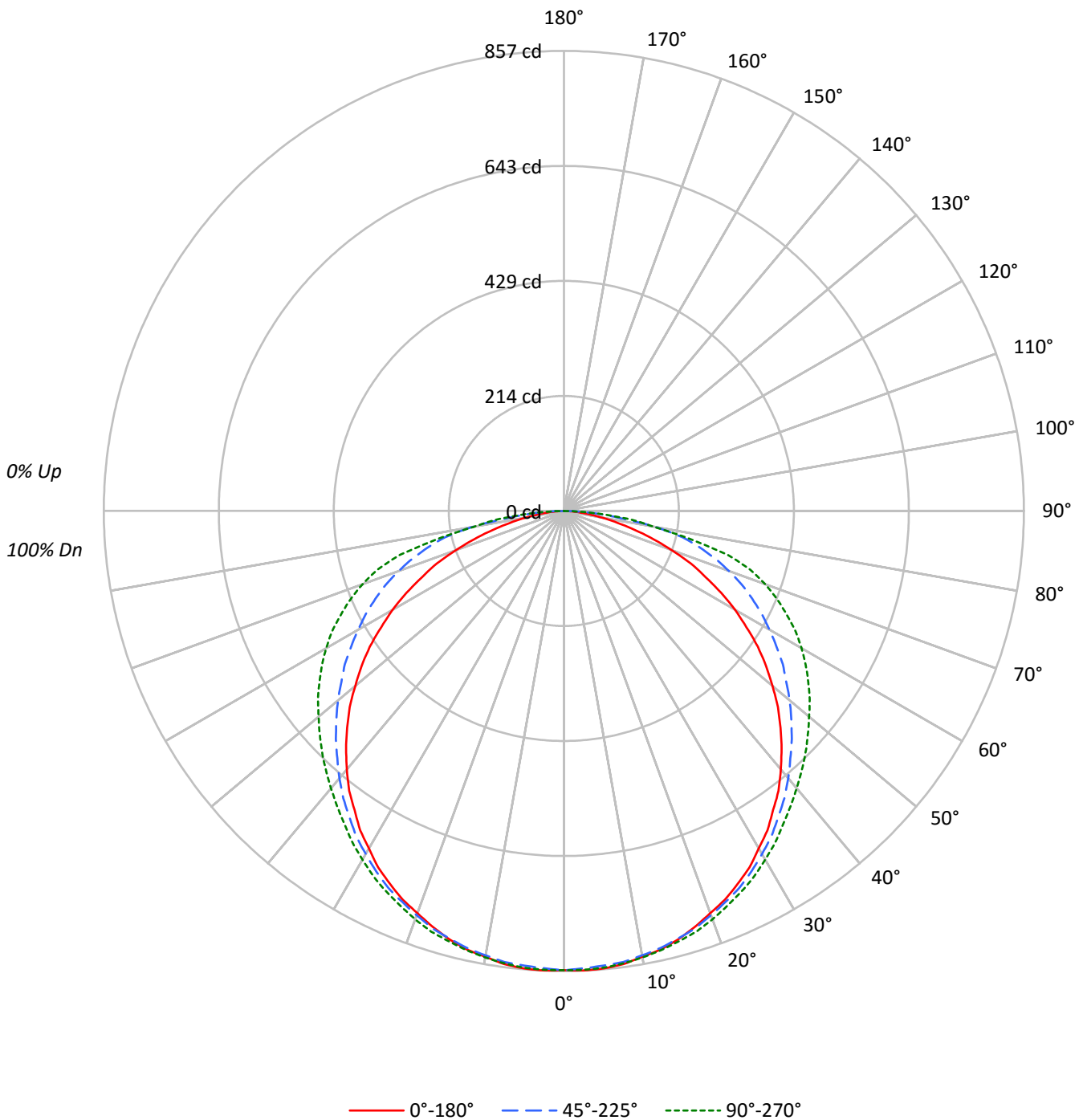
Input Watts (W): 42.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1151	1151	1151
5°	1155	1148	1153
10°	1152	1148	1154
15°	1150	1148	1156
20°	1142	1147	1159
25°	1138	1150	1162
30°	1128	1147	1165
35°	1117	1144	1170
40°	1104	1142	1185
45°	1086	1142	1212
50°	1062	1149	1248
55°	1035	1168	1304
60°	991	1191	1376
65°	928	1233	1460
70°	844	1290	1571
75°	715	1360	1641
80°	565	1369	1327
85°	417	1042	1167



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.1	3.0
10°-20°	233.5	8.6
20°-30°	357.1	13.1
30°-40°	436.6	16.0
40°-50°	465.3	17.1
50°-60°	444.9	16.4
60°-70°	376.8	13.9
70°-80°	253.3	9.3
80°-90°	71.4	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°	671.8	24.7
0°-40°	1108.3	40.7
0°-60°	2018.4	74.2
0°-90°	2720.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2720.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	855	855	855	855	855	
5°	855	854	850	854	854	81
15°	826	826	824	831	830	233
25°	766	769	774	781	782	353
35°	680	685	696	710	712	426
45°	571	580	600	626	637	440
55°	441	457	498	537	556	393
65°	291	321	387	438	459	289
75°	138	188	262	306	316	147
85°	27	55	68	73	76	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	855.4	855.4	855.4	855.4	855.4
2.5°	856.7	856.7	852.7	855.4	855.4
5°	855.4	854.0	850.0	854.0	854.0
7.5°	851.3	850.0	847.3	851.3	850.0
10°	843.2	843.2	840.5	844.6	844.6
12.5°	836.5	835.1	833.8	839.2	837.8
15°	825.7	825.7	824.3	831.1	829.7
17.5°	812.2	813.5	814.9	820.3	821.6
20°	797.3	800.0	801.4	809.5	809.5
22.5°	783.9	785.2	787.9	796.0	796.0
25°	766.3	769.0	774.4	781.2	782.5
27.5°	748.8	750.1	756.9	766.3	767.7
30°	725.8	729.9	738.0	748.8	750.1
32.5°	705.6	709.7	719.1	729.9	732.6
35°	680.0	685.4	696.2	709.7	712.4
37.5°	657.0	661.1	674.6	689.4	693.5
40°	628.7	636.8	650.3	667.8	674.6
42.5°	600.4	608.5	624.7	647.6	655.7
45°	570.7	580.1	600.4	626.0	636.8
47.5°	541.0	551.8	574.7	604.4	616.6
50°	507.3	520.8	549.1	582.8	596.3
52.5°	474.9	491.1	522.1	559.9	577.4
55°	441.2	457.4	497.8	537.0	555.9
57.5°	403.4	425.0	469.5	514.0	534.3
60°	368.3	388.6	442.5	491.1	511.3
62.5°	330.5	357.5	415.5	466.8	487.0
65°	291.4	321.1	387.2	438.5	458.7
67.5°	256.3	288.7	358.9	410.1	430.4
70°	214.5	255.0	327.8	379.1	399.3
72.5°	175.4	219.9	295.5	345.4	364.3
75°	137.6	187.5	261.7	306.3	315.7
77.5°	102.5	155.2	226.7	245.5	238.8
80°	72.9	124.1	176.7	167.3	171.3
82.5°	47.2	94.4	109.3	124.1	128.2
85°	27.0	55.3	67.5	72.9	75.6
87.5°	12.1	20.2	27.0	27.0	25.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)