

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: P313662

Luminaire Tested: **24FCZ2-50-UNV-L83050-RDP-CP250-W2A-U-4000K**

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: P313662
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-CP250-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" POLYCARB SHEET
Light Source: (168) 4000K 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: 2997.0 lumens
Efficiency: N/A
Efficacy: 68.6 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

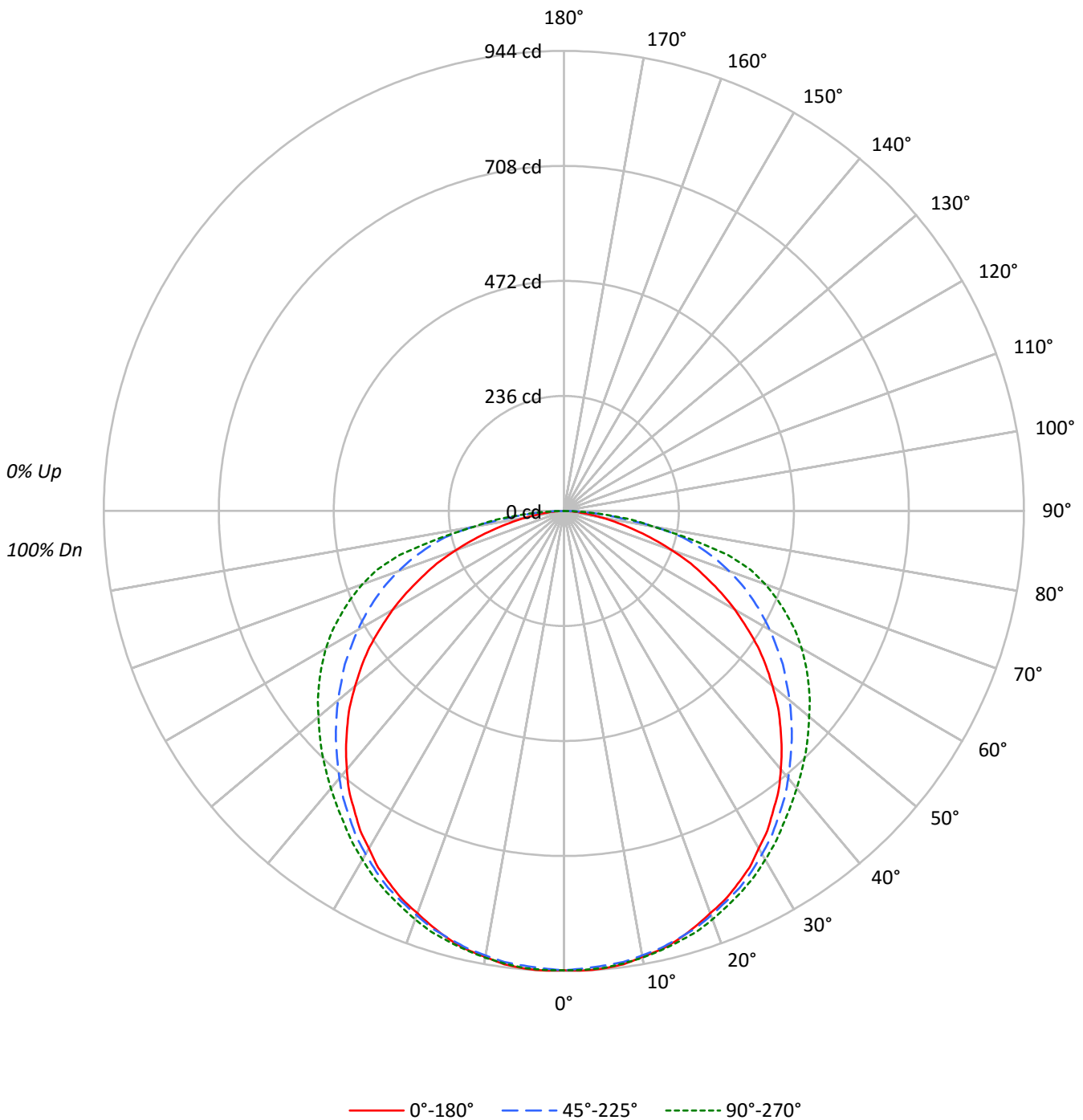
Input Watts (W): 43.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1268	1268	1268
5°	1273	1265	1271
10°	1269	1265	1271
15°	1267	1265	1273
20°	1258	1264	1277
25°	1254	1267	1280
30°	1243	1263	1284
35°	1231	1260	1289
40°	1217	1258	1306
45°	1196	1259	1335
50°	1170	1266	1375
55°	1140	1287	1437
60°	1092	1312	1516
65°	1022	1358	1609
70°	930	1421	1731
75°	788	1499	1809
80°	622	1509	1463
85°	459	1147	1284



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.4	3.0
10°-20°	257.3	8.6
20°-30°	393.5	13.1
30°-40°	481.0	16.0
40°-50°	512.7	17.1
50°-60°	490.2	16.4
60°-70°	415.2	13.9
70°-80°	279.1	9.3
80°-90°	78.7	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°	740.2	24.7
0°-40°	1221.2	40.7
0°-60°	2224.0	74.2
0°-90°	2997.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2997.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	942	942	942	942	942	
5°	942	941	936	941	941	90
15°	910	910	908	916	914	257
25°	844	847	853	861	862	389
35°	749	755	767	782	785	469
45°	629	639	662	690	702	485
55°	486	504	548	592	612	433
65°	321	354	427	483	505	319
75°	152	207	288	337	348	162
85°	30	61	74	80	83	37
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	942.5	942.5	942.5	942.5	942.5
2.5°	944.0	944.0	939.5	942.5	942.5
5°	942.5	941.0	936.5	941.0	941.0
7.5°	938.0	936.5	933.6	938.0	936.5
10°	929.1	929.1	926.1	930.6	930.6
12.5°	921.7	920.2	918.7	924.6	923.1
15°	909.8	909.8	908.3	915.7	914.2
17.5°	894.9	896.4	897.9	903.8	905.3
20°	878.5	881.5	883.0	891.9	891.9
22.5°	863.7	865.2	868.1	877.1	877.1
25°	844.4	847.3	853.3	860.7	862.2
27.5°	825.0	826.5	834.0	844.4	845.8
30°	799.8	804.2	813.1	825.0	826.5
32.5°	777.5	781.9	792.3	804.2	807.2
35°	749.2	755.2	767.1	781.9	784.9
37.5°	723.9	728.4	743.3	759.6	764.1
40°	692.7	701.7	716.5	735.8	743.3
42.5°	661.5	670.4	688.3	713.5	722.5
45°	628.8	639.2	661.5	689.8	701.7
47.5°	596.1	608.0	633.3	666.0	679.4
50°	558.9	573.8	605.0	642.2	657.1
52.5°	523.3	541.1	575.3	616.9	636.2
55°	486.1	503.9	548.5	591.6	612.5
57.5°	444.5	468.3	517.3	566.4	588.7
60°	405.8	428.1	487.6	541.1	563.4
62.5°	364.2	393.9	457.9	514.3	536.6
65°	321.1	353.8	426.6	483.1	505.4
67.5°	282.4	318.1	395.4	451.9	474.2
70°	236.4	281.0	361.2	417.7	440.0
72.5°	193.3	242.3	325.6	380.6	401.4
75°	151.6	206.6	288.4	337.4	347.9
77.5°	113.0	171.0	249.7	270.6	263.1
80°	80.3	136.8	194.7	184.3	188.8
82.5°	52.0	104.1	120.4	136.8	141.2
85°	29.7	60.9	74.3	80.3	83.2
87.5°	13.4	22.3	29.7	29.7	28.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)