

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: P313838

Luminaire Tested: **24FCZ2-30-UNV-L83050-CP250-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: P313838
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-15)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-30-UNV-L83050-CP250-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.250" POLYCARB SHEET
Light Source: (168) 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: 2728.0 lumens
Efficiency: N/A
Efficacy: 111.3 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

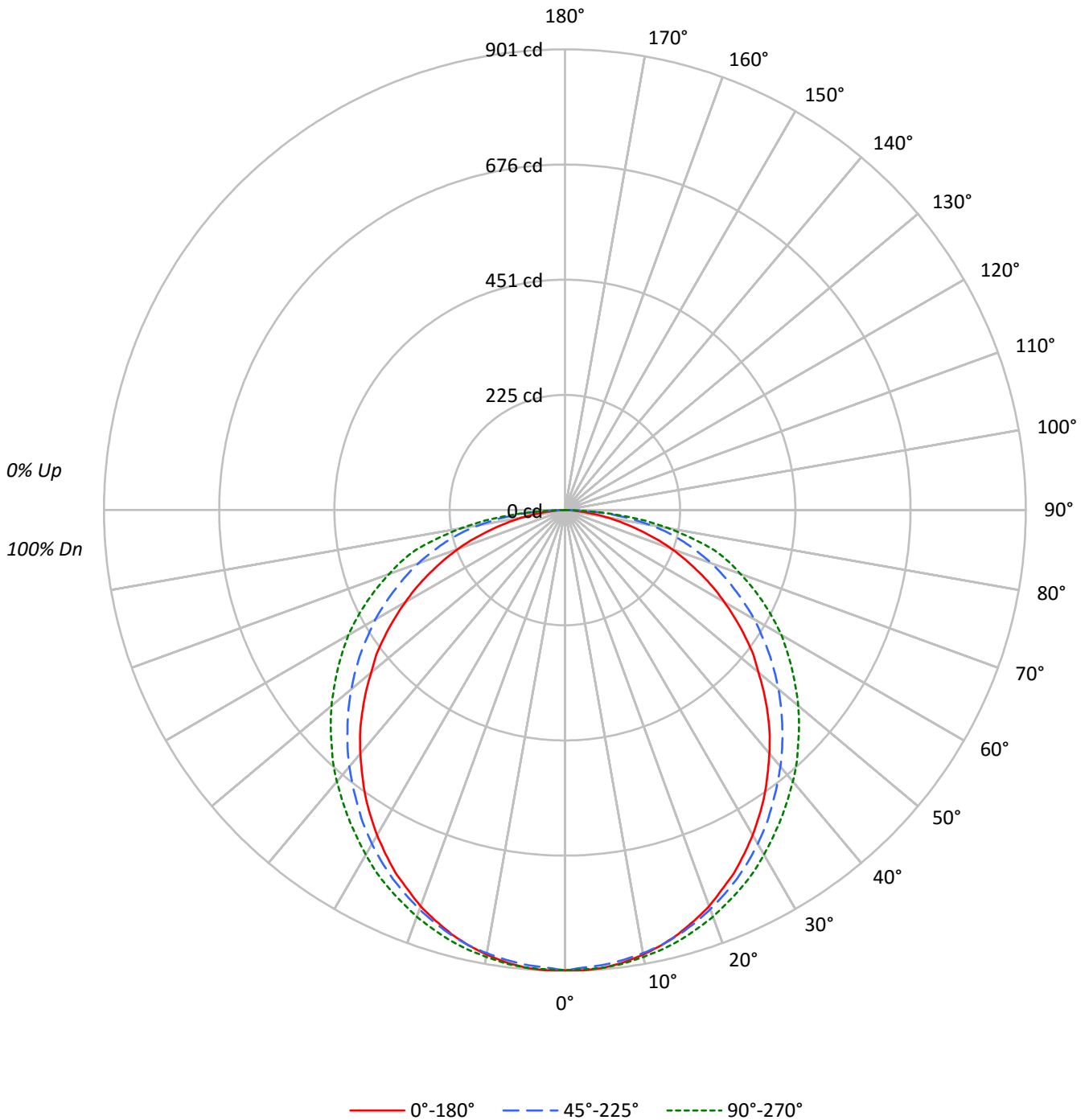
Input Watts (W): 24.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100
1	108	103	98	94	105	100	96	92	96	92	89	92	89	87	88	86	84	82				82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67				67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56				56
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47				47
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41				41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36				36
7	64	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31				31
8	59	45	37	31	57	45	36	30	43	36	30	42	35	30	41	34	30	28				28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25				25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23				23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1211	1211	1211
5°	1213	1205	1213
10°	1206	1202	1212
15°	1195	1198	1213
20°	1181	1190	1212
25°	1162	1181	1211
30°	1140	1171	1209
35°	1118	1160	1210
40°	1092	1151	1218
45°	1066	1144	1228
50°	1034	1141	1247
55°	1008	1142	1272
60°	969	1152	1315
65°	925	1164	1363
70°	876	1200	1439
75°	781	1252	1572
80°	666	1326	1606
85°	475	1314	1538



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	85.1	3.1
10°-20°	243.5	8.9
20°-30°	367.7	13.5
30°-40°	443.2	16.2
40°-50°	465.3	17.1
50°-60°	435.3	16.0
60°-70°	359.5	13.2
70°-80°	245.0	9.0
80°-90°	83.5	3.1
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°	696.3	25.5
0°-40°	1139.5	41.8
0°-60°	2040.1	74.8
0°-90°	2728.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2728.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	900	900	900	900	900	
5°	898	897	892	898	898	85
15°	858	859	860	869	871	242
25°	783	786	796	811	816	360
35°	681	688	706	730	737	425
45°	560	572	601	634	645	432
55°	430	447	487	527	542	384
65°	290	315	366	412	428	288
75°	150	185	241	286	302	160
85°	31	61	85	96	100	39
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	899.7	899.7	899.7	899.7	899.7
2.5°	900.6	899.7	895.1	899.7	898.8
5°	897.9	897.0	892.4	897.9	897.9
7.5°	891.5	891.5	887.0	893.3	894.2
10°	882.5	882.5	879.8	887.0	887.0
12.5°	871.6	871.6	871.6	878.9	879.8
15°	858.0	858.9	859.8	868.9	870.7
17.5°	841.7	843.6	846.3	857.1	858.9
20°	824.5	826.4	830.9	843.6	846.3
22.5°	802.8	807.4	813.7	828.2	830.9
25°	782.9	786.5	795.6	811.0	815.5
27.5°	758.5	763.9	775.7	792.0	798.3
30°	734.0	739.5	753.9	773.0	778.4
32.5°	707.8	715.9	731.3	751.2	757.6
35°	680.6	687.9	706.0	729.5	736.8
37.5°	650.8	660.7	680.6	706.0	715.0
40°	621.8	632.7	655.3	682.4	693.3
42.5°	592.8	603.7	629.0	659.8	670.7
45°	560.3	572.0	601.0	633.6	645.3
47.5°	527.7	542.2	573.8	608.2	620.9
50°	494.2	510.5	544.9	581.1	595.6
52.5°	464.3	479.7	515.9	554.8	568.4
55°	429.9	447.1	486.9	526.8	542.2
57.5°	394.6	413.6	456.2	499.6	515.0
60°	360.2	381.0	428.1	471.6	488.8
62.5°	326.7	347.6	396.4	441.7	458.9
65°	290.5	315.0	365.7	411.8	428.1
67.5°	256.1	282.4	335.8	381.0	397.3
70°	222.7	248.0	305.0	349.4	365.7
72.5°	186.5	215.4	272.4	318.6	335.8
75°	150.2	184.6	240.8	286.0	302.3
77.5°	116.8	152.1	208.2	245.3	253.4
80°	86.0	122.2	171.1	197.3	207.3
82.5°	55.2	91.4	130.3	149.3	157.5
85°	30.8	60.6	85.1	95.9	99.6
87.5°	12.7	26.2	34.4	38.9	38.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)