

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: P313887

Luminaire Tested: **24FCZ2-35-UNV-L83050-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: P313887
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: 24FCZ2-35-UNV-L83050-CP250-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 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: 3169.0 lumens
Efficiency: N/A
Efficacy: 110.8 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

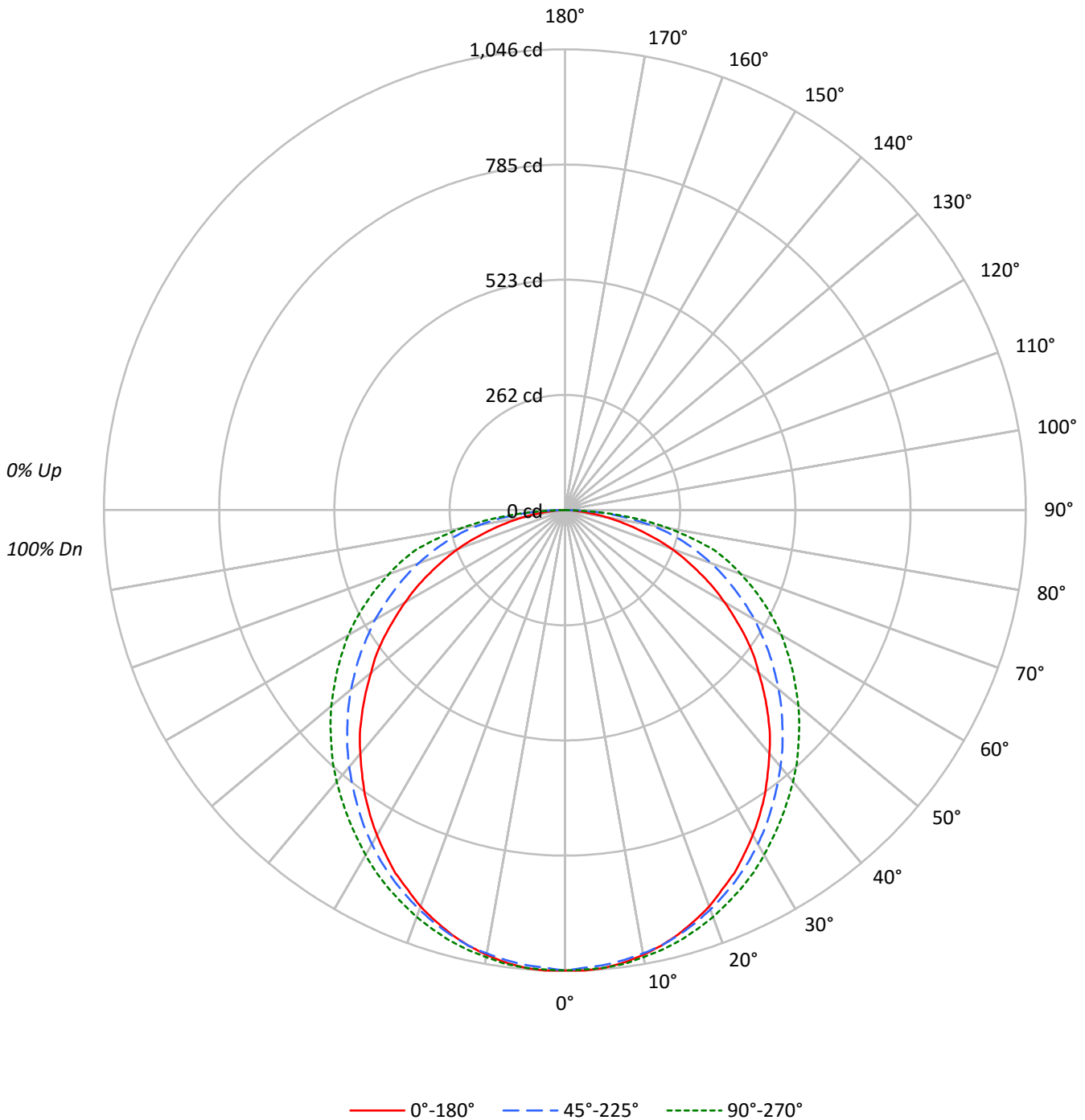
Input Watts (W): 28.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1406	1406	1406
5°	1409	1400	1409
10°	1401	1396	1408
15°	1388	1391	1409
20°	1371	1382	1408
25°	1350	1372	1406
30°	1325	1361	1405
35°	1299	1347	1406
40°	1269	1337	1415
45°	1238	1328	1427
50°	1202	1325	1448
55°	1171	1327	1477
60°	1126	1338	1528
65°	1074	1352	1583
70°	1017	1394	1671
75°	907	1454	1826
80°	774	1540	1866
85°	551	1525	1786



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	98.9	3.1
10°-20°	282.8	8.9
20°-30°	427.2	13.5
30°-40°	514.8	16.2
40°-50°	540.5	17.1
50°-60°	505.7	16.0
60°-70°	417.6	13.2
70°-80°	284.5	9.0
80°-90°	97.0	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°	808.9	25.5
0°-40°	1323.7	41.8
0°-60°	2369.8	74.8
0°-90°	3169.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3169.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1045	1045	1045	1045	1045	
5°	1043	1042	1037	1043	1043	99
15°	997	998	999	1009	1012	281
25°	910	914	924	942	947	418
35°	791	799	820	847	856	494
45°	651	664	698	736	750	502
55°	499	519	566	612	630	446
65°	338	366	425	478	497	335
75°	174	214	280	332	351	186
85°	36	70	99	112	116	45
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1045.1	1045.1	1045.1	1045.1	1045.1
2.5°	1046.2	1045.1	1039.9	1045.1	1044.1
5°	1043.0	1042.0	1036.7	1043.0	1043.0
7.5°	1035.6	1035.6	1030.4	1037.7	1038.8
10°	1025.1	1025.1	1022.0	1030.4	1030.4
12.5°	1012.5	1012.5	1012.5	1020.9	1022.0
15°	996.7	997.8	998.8	1009.4	1011.5
17.5°	977.8	979.9	983.1	995.7	997.8
20°	957.8	959.9	965.2	979.9	983.1
22.5°	932.6	937.9	945.2	962.0	965.2
25°	909.5	913.7	924.2	942.1	947.3
27.5°	881.1	887.4	901.1	920.0	927.3
30°	852.7	859.0	875.8	897.9	904.2
32.5°	822.2	831.7	849.5	872.7	880.0
35°	790.7	799.1	820.1	847.4	855.9
37.5°	756.0	767.5	790.7	820.1	830.6
40°	722.3	734.9	761.2	792.8	805.4
42.5°	688.7	701.3	730.7	766.5	779.1
45°	650.8	664.5	698.1	736.0	749.7
47.5°	613.0	629.8	666.6	706.6	721.3
50°	574.1	593.0	633.0	675.0	691.8
52.5°	539.4	557.3	599.3	644.5	660.3
55°	499.4	519.4	565.7	611.9	629.8
57.5°	458.4	480.5	529.9	580.4	598.3
60°	418.5	442.6	497.3	547.8	567.8
62.5°	379.6	403.7	460.5	513.1	533.1
65°	337.5	365.9	424.8	478.4	497.3
67.5°	297.6	328.0	390.1	442.6	461.6
70°	258.6	288.1	354.3	405.8	424.8
72.5°	216.6	250.2	316.5	370.1	390.1
75°	174.5	214.5	279.7	332.2	351.2
77.5°	135.6	176.6	241.8	284.9	294.4
80°	99.9	141.9	198.7	229.2	240.8
82.5°	64.1	106.2	151.4	173.5	182.9
85°	35.7	70.4	98.8	111.5	115.7
87.5°	14.7	30.5	40.0	45.2	45.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)