

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: P311242

Luminaire Tested: **24FCZ2-30-UNV-L82765-S-CP187-W2A-U-5000K**

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: P311242
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)
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-L82765-S-CP187-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.187" POLYCARB SHEET
Light Source: (168) 5000K 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: 2807.0 lumens
Efficiency: N/A
Efficacy: 117.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

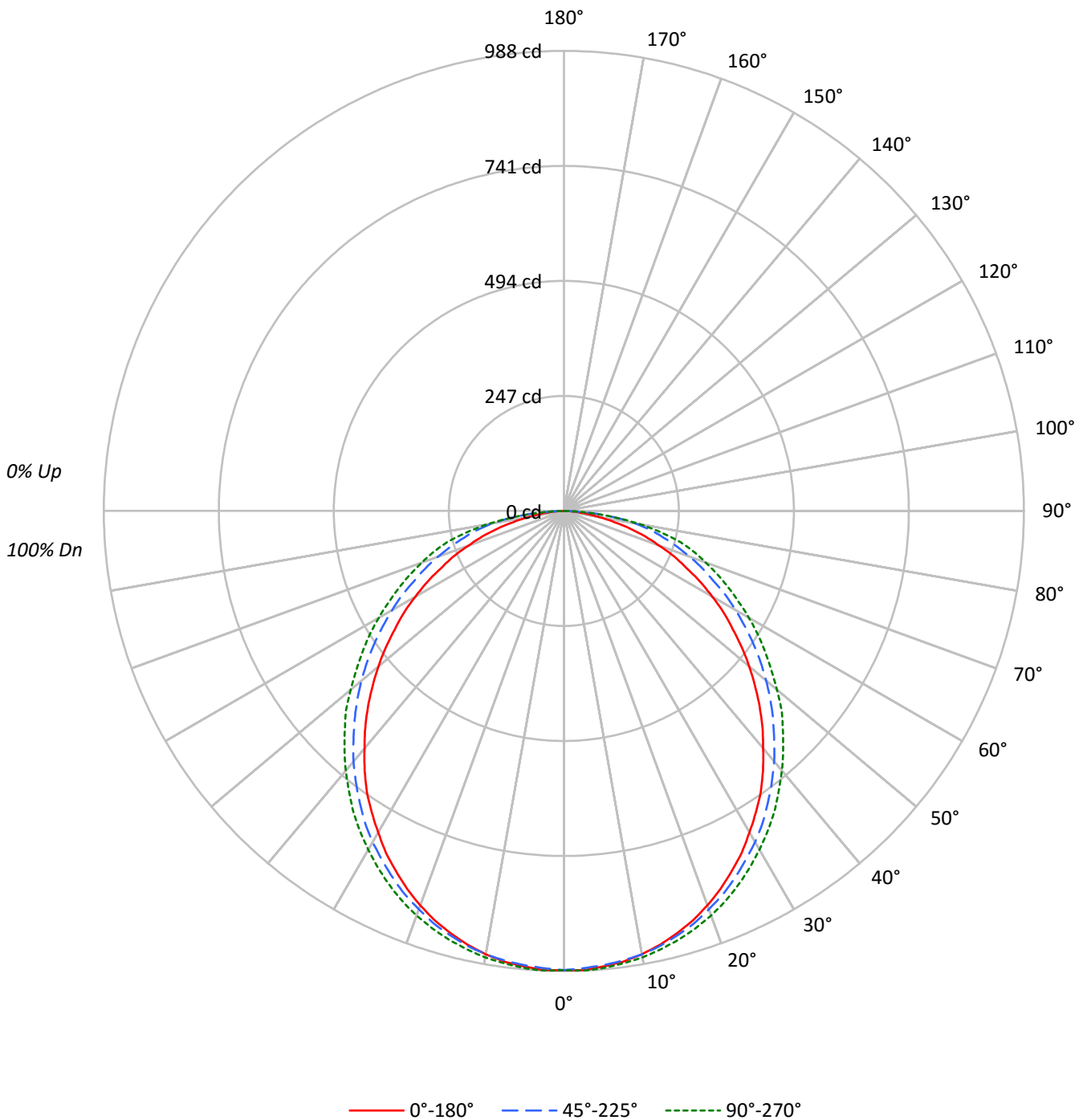
Input Watts (W): 23.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1327	1327	1327
5°	1326	1322	1331
10°	1320	1320	1330
15°	1308	1314	1328
20°	1291	1303	1324
25°	1267	1291	1316
30°	1238	1276	1305
35°	1211	1255	1295
40°	1170	1234	1279
45°	1132	1210	1266
50°	1088	1187	1250
55°	1039	1165	1238
60°	991	1147	1236
65°	928	1127	1243
70°	859	1133	1277
75°	769	1154	1349
80°	621	1223	1320
85°	468	1073	1047



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	93.4	3.3
10°-20°	266.8	9.5
20°-30°	401.0	14.3
30°-40°	477.6	17.0
40°-50°	488.8	17.4
50°-60°	440.1	15.7
60°-70°	345.6	12.3
70°-80°	224.3	8.0
80°-90°	69.4	2.5
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°	761.1	27.1
0°-40°	1238.7	44.1
0°-60°	2167.7	77.2
0°-90°	2807.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2807.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	986	986	986	986	986	
5°	982	983	979	984	985	93
15°	939	942	943	951	953	265
25°	853	860	869	884	886	393
35°	737	746	764	783	788	460
45°	595	609	636	660	665	459
55°	443	463	497	522	528	397
65°	292	314	354	383	390	290
75°	148	176	222	252	260	157
85°	30	56	70	68	68	37
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	986.1	986.1	986.1	986.1	986.1
2.5°	987.0	987.0	982.6	987.0	987.9
5°	981.7	983.4	979.0	984.3	985.2
7.5°	976.3	976.3	973.6	979.0	979.9
10°	966.5	967.4	966.5	972.7	973.6
12.5°	954.0	955.8	956.7	962.9	963.8
15°	938.9	941.5	943.3	951.3	953.1
17.5°	921.9	924.6	929.1	938.0	939.8
20°	901.4	905.0	910.3	921.9	924.6
22.5°	879.1	882.7	891.6	902.3	906.8
25°	853.3	860.4	869.3	883.6	886.3
27.5°	827.4	833.7	845.2	860.4	864.0
30°	797.1	806.9	821.2	836.3	839.9
32.5°	767.7	777.5	794.4	810.5	814.9
35°	737.4	746.3	764.1	782.8	788.2
37.5°	702.6	714.2	733.8	752.5	757.9
40°	666.0	680.3	702.6	722.2	728.4
42.5°	631.3	646.4	668.7	690.1	697.2
45°	594.7	609.0	635.7	659.8	665.1
47.5°	557.3	573.3	601.8	625.9	634.8
50°	519.8	536.7	567.1	592.0	597.4
52.5°	482.4	500.2	532.3	559.0	561.7
55°	443.1	462.7	496.6	522.5	527.8
57.5°	407.5	424.4	461.0	487.7	494.0
60°	368.2	387.0	426.2	451.2	459.2
62.5°	330.8	350.4	391.4	416.4	423.5
65°	291.6	313.8	354.0	383.4	390.5
67.5°	257.7	279.1	321.9	350.4	357.5
70°	218.4	242.5	288.0	317.4	324.5
72.5°	184.6	209.5	255.0	283.5	294.2
75°	148.0	176.5	222.0	252.3	259.5
77.5°	112.3	145.3	191.7	214.9	214.9
80°	80.2	115.0	157.8	168.5	170.3
82.5°	52.6	86.5	116.8	115.9	115.9
85°	30.3	56.2	69.5	67.8	67.8
87.5°	11.6	23.2	25.0	25.0	24.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)