

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: P310045

Luminaire Tested: **24FCZ2-40-UNV-L82765-RDP-CA08-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: P310045
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: 24FCZ2-40-UNV-L82765-RDP-CA08-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC 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

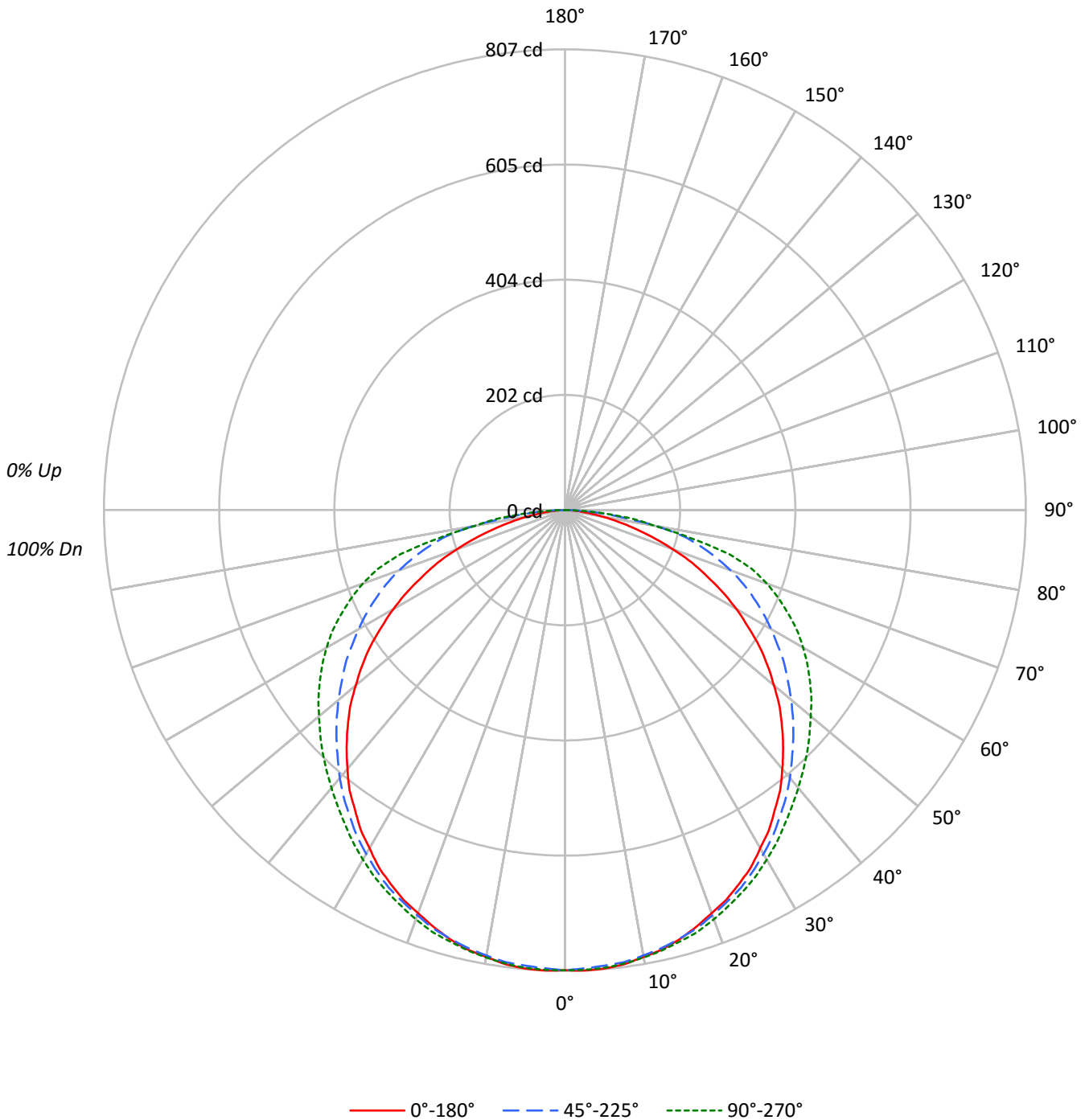
Lumens per Lamp: N/A
Luminaire Lumens: 2563.0 lumens
Efficiency: N/A
Efficacy: 76.5 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 33.5
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°	1084	1084	1084
5°	1089	1082	1087
10°	1085	1082	1087
15°	1084	1082	1089
20°	1076	1081	1092
25°	1072	1083	1095
30°	1063	1080	1098
35°	1052	1078	1102
40°	1040	1076	1116
45°	1023	1076	1142
50°	1001	1083	1176
55°	975	1100	1229
60°	934	1122	1297
65°	874	1162	1376
70°	795	1215	1480
75°	674	1282	1547
80°	532	1290	1251
85°	392	982	1099



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	76.5	3.0
10°-20°	220.0	8.6
20°-30°	336.5	13.1
30°-40°	411.3	16.0
40°-50°	438.4	17.1
50°-60°	419.2	16.4
60°-70°	355.1	13.9
70°-80°	238.7	9.3
80°-90°	67.3	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°	633.0	24.7
0°-40°	1044.3	40.7
0°-60°	1901.9	74.2
0°-90°	2563.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2563.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	806	806	806	806	806	
5°	806	805	801	805	805	77
15°	778	778	777	783	782	219
25°	722	725	730	736	737	333
35°	641	646	656	669	671	401
45°	538	547	566	590	600	415
55°	416	431	469	506	524	370
65°	275	303	365	413	432	273
75°	130	177	247	289	298	139
85°	25	52	64	69	71	31
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	806.0	806.0	806.0	806.0	806.0
2.5°	807.3	807.3	803.4	806.0	806.0
5°	806.0	804.7	800.9	804.7	804.7
7.5°	802.2	800.9	798.4	802.2	800.9
10°	794.5	794.5	792.0	795.8	795.8
12.5°	788.2	786.9	785.6	790.7	789.5
15°	778.0	778.0	776.8	783.1	781.8
17.5°	765.3	766.6	767.9	772.9	774.2
20°	751.3	753.9	755.1	762.8	762.8
22.5°	738.6	739.9	742.4	750.1	750.1
25°	722.1	724.6	729.7	736.1	737.3
27.5°	705.6	706.8	713.2	722.1	723.4
30°	683.9	687.8	695.4	705.6	706.8
32.5°	664.9	668.7	677.6	687.8	690.3
35°	640.7	645.8	656.0	668.7	671.2
37.5°	619.1	622.9	635.6	649.6	653.4
40°	592.4	600.0	612.8	629.3	635.6
42.5°	565.7	573.3	588.6	610.2	617.8
45°	537.8	546.6	565.7	589.9	600.0
47.5°	509.8	520.0	541.6	569.5	581.0
50°	478.0	490.7	517.4	549.2	561.9
52.5°	447.5	462.7	492.0	527.6	544.1
55°	415.7	431.0	469.1	506.0	523.8
57.5°	380.1	400.5	442.4	484.4	503.4
60°	347.1	366.1	417.0	462.7	481.8
62.5°	311.5	336.9	391.6	439.9	458.9
65°	274.6	302.6	364.9	413.2	432.2
67.5°	241.5	272.1	338.2	386.5	405.5
70°	202.1	240.3	308.9	357.2	376.3
72.5°	165.3	207.2	278.4	325.4	343.2
75°	129.7	176.7	246.6	288.6	297.5
77.5°	96.6	146.2	213.6	231.4	225.0
80°	68.6	117.0	166.5	157.6	161.5
82.5°	44.5	89.0	103.0	117.0	120.8
85°	25.4	52.1	63.6	68.6	71.2
87.5°	11.4	19.1	25.4	25.4	24.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)