

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: P310080

Luminaire Tested: **24FCZ2-40-UNV-L82765-RDP-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: P310080
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-CP250-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 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: 2347.0 lumens
Efficiency: N/A
Efficacy: 70.5 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

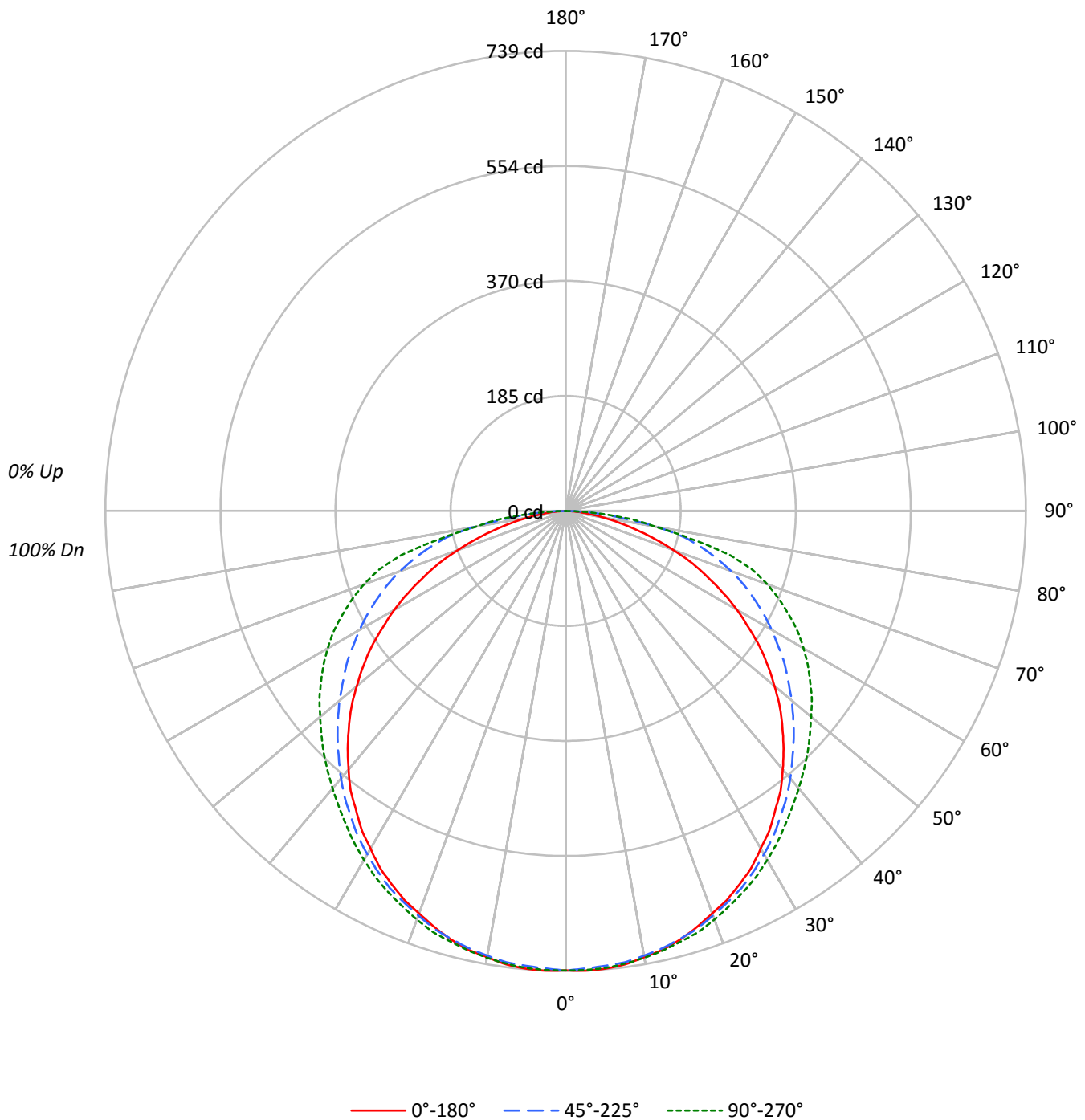
Input Watts (W): 33.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				0
RW	70	50	30	10	70	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		100
1	108	103	98	94	105	100	96	92	96	93	89		92	89	87		82
2	97	89	81	75	95	87	80	74	83	77	72		80	75	71		67
3	88	77	68	62	86	76	67	61	72	66	60		70	64	59		56
4	81	68	59	52	78	67	58	51	64	57	51		62	55	50		47
5	74	60	51	44	72	59	51	44	57	49	43		55	48	43		40
6	68	54	45	38	66	53	45	38	51	44	38		50	43	37		35
7	63	49	40	34	61	48	40	34	47	39	33		45	38	33		31
8	59	45	36	30	57	44	36	30	43	35	30		41	34	29		27
9	55	41	33	27	53	40	32	27	39	32	27		38	31	26		24
10	51	38	30	24	50	37	29	24	36	29	24		35	29	24		22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	993	993	993
5°	997	991	995
10°	994	991	996
15°	992	991	997
20°	985	990	1000
25°	982	992	1002
30°	973	989	1006
35°	964	987	1010
40°	953	986	1022
45°	937	986	1046
50°	916	992	1077
55°	893	1008	1125
60°	855	1027	1187
65°	801	1064	1260
70°	728	1113	1356
75°	617	1174	1416
80°	487	1182	1145
85°	360	898	1007



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	70.0	3.0
10°-20°	201.5	8.6
20°-30°	308.1	13.1
30°-40°	376.7	16.0
40°-50°	401.5	17.1
50°-60°	383.8	16.4
60°-70°	325.2	13.9
70°-80°	218.5	9.3
80°-90°	61.7	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°	579.6	24.7
0°-40°	956.3	40.7
0°-60°	1741.6	74.2
0°-90°	2347.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2347.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	738	738	738	738	738	
5°	738	737	733	737	737	70
15°	712	712	711	717	716	201
25°	661	664	668	674	675	305
35°	587	591	601	612	615	368
45°	492	501	518	540	550	380
55°	381	395	430	463	480	339
65°	252	277	334	378	396	250
75°	119	162	226	264	272	127
85°	23	48	58	63	65	29
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	738.1	738.1	738.1	738.1	738.1
2.5°	739.2	739.2	735.7	738.1	738.1
5°	738.1	736.9	733.4	736.9	736.9
7.5°	734.6	733.4	731.1	734.6	733.4
10°	727.6	727.6	725.3	728.8	728.8
12.5°	721.8	720.6	719.4	724.1	722.9
15°	712.5	712.5	711.3	717.1	715.9
17.5°	700.8	702.0	703.1	707.8	709.0
20°	688.0	690.3	691.5	698.5	698.5
22.5°	676.4	677.5	679.9	686.8	686.8
25°	661.2	663.6	668.2	674.0	675.2
27.5°	646.1	647.3	653.1	661.2	662.4
30°	626.3	629.8	636.8	646.1	647.3
32.5°	608.8	612.3	620.5	629.8	632.1
35°	586.7	591.4	600.7	612.3	614.7
37.5°	566.9	570.4	582.1	594.9	598.4
40°	542.5	549.5	561.1	576.2	582.1
42.5°	518.0	525.0	539.0	558.8	565.8
45°	492.4	500.6	518.0	540.2	549.5
47.5°	466.8	476.1	495.9	521.5	532.0
50°	437.7	449.4	473.8	502.9	514.5
52.5°	409.8	423.7	450.5	483.1	498.3
55°	380.7	394.6	429.6	463.3	479.6
57.5°	348.1	366.7	405.1	443.5	461.0
60°	317.8	335.3	381.8	423.7	441.2
62.5°	285.2	308.5	358.6	402.8	420.3
65°	251.5	277.1	334.1	378.3	395.8
67.5°	221.2	249.1	309.7	353.9	371.4
70°	185.1	220.0	282.9	327.1	344.6
72.5°	151.3	189.8	254.9	298.0	314.3
75°	118.7	161.8	225.8	264.3	272.4
77.5°	88.5	133.9	195.6	211.9	206.1
80°	62.9	107.1	152.5	144.4	147.8
82.5°	40.7	81.5	94.3	107.1	110.6
85°	23.3	47.7	58.2	62.9	65.2
87.5°	10.5	17.5	23.3	23.3	22.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)