

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: P310035

Luminaire Tested: **24FCZ2-40HE-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: P310035
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: 24FCZ2-40HE-UNV-L82765-RDP-CP250-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" POLYCARB SHEET
Light Source: (336) 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: 2361.0 lumens
Efficiency: N/A
Efficacy: 76.2 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

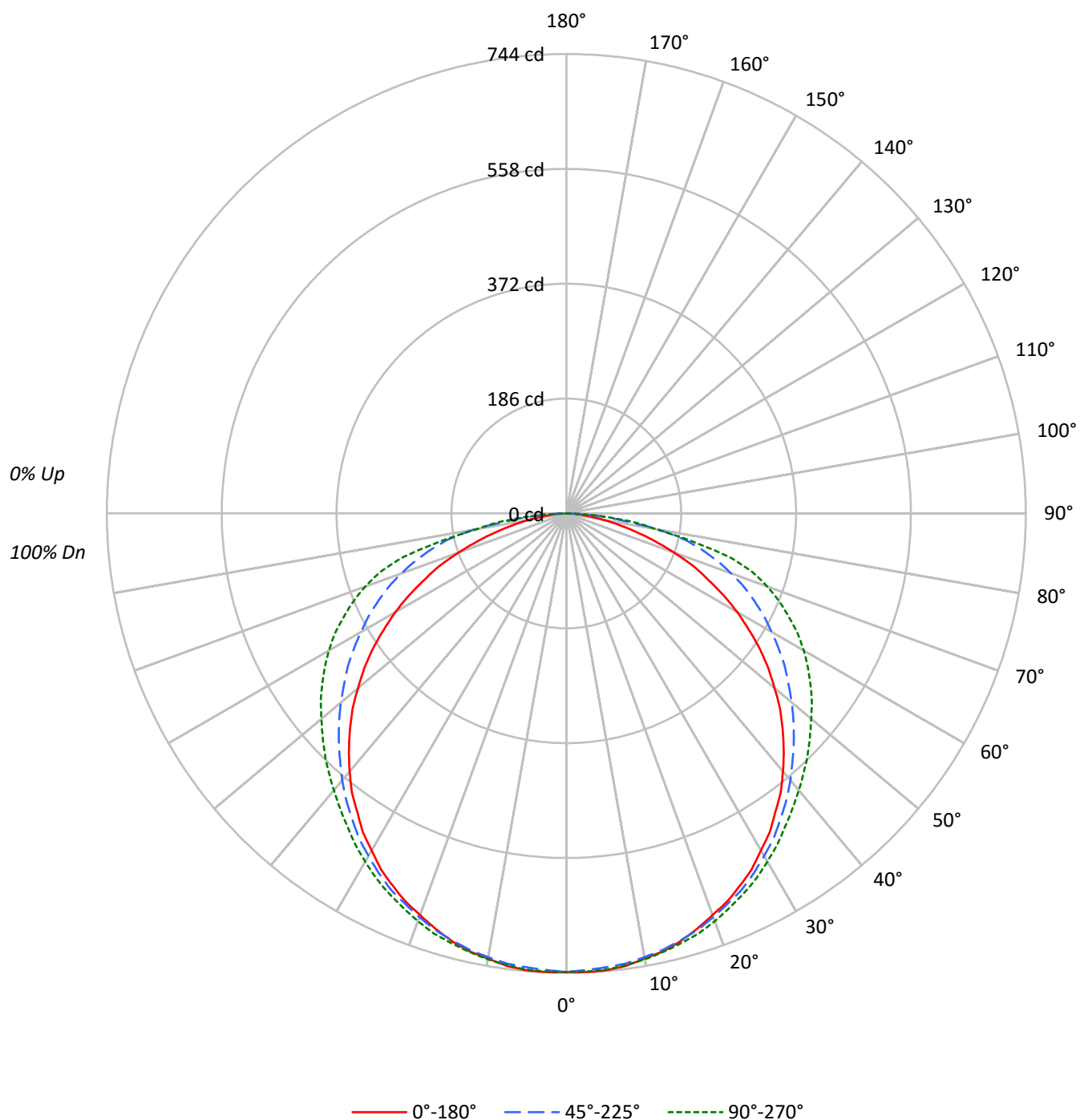
Input Watts (W): 31
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	999	999	999
5°	1003	996	1001
10°	1000	997	1002
15°	998	997	1003
20°	991	996	1006
25°	988	998	1008
30°	979	995	1012
35°	969	993	1016
40°	958	991	1028
45°	943	992	1052
50°	922	998	1083
55°	898	1014	1132
60°	860	1034	1194
65°	805	1070	1268
70°	733	1120	1364
75°	621	1181	1424
80°	490	1189	1152
85°	361	905	1013



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	70.4	3.0
10°-20°	202.7	8.6
20°-30°	310.0	13.1
30°-40°	378.9	16.0
40°-50°	403.9	17.1
50°-60°	386.1	16.4
60°-70°	327.1	13.9
70°-80°	219.8	9.3
80°-90°	62.0	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°	583.1	24.7
0°-40°	962.0	40.7
0°-60°	1752.0	74.2
0°-90°	2361.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2361.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	742	742	742	742	742	
5°	742	741	738	741	741	71
15°	717	717	716	721	720	202
25°	665	668	672	678	679	307
35°	590	595	604	616	618	370
45°	495	504	521	543	553	382
55°	383	397	432	466	482	341
65°	253	279	336	381	398	251
75°	120	163	227	266	274	128
85°	23	48	59	63	66	29
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	742.5	742.5	742.5	742.5	742.5
2.5°	743.6	743.6	740.1	742.5	742.5
5°	742.5	741.3	737.8	741.3	741.3
7.5°	739.0	737.8	735.4	739.0	737.8
10°	731.9	731.9	729.6	733.1	733.1
12.5°	726.1	724.9	723.7	728.4	727.2
15°	716.7	716.7	715.5	721.4	720.2
17.5°	705.0	706.2	707.3	712.0	713.2
20°	692.1	694.5	695.6	702.7	702.7
22.5°	680.4	681.6	683.9	690.9	690.9
25°	665.2	667.5	672.2	678.1	679.2
27.5°	650.0	651.1	657.0	665.2	666.3
30°	630.0	633.6	640.6	650.0	651.1
32.5°	612.5	616.0	624.2	633.6	635.9
35°	590.2	594.9	604.3	616.0	618.3
37.5°	570.3	573.8	585.5	598.4	601.9
40°	545.7	552.8	564.5	579.7	585.5
42.5°	521.1	528.2	542.2	562.1	569.1
45°	495.4	503.6	521.1	543.4	552.8
47.5°	469.6	479.0	498.9	524.6	535.2
50°	440.3	452.0	476.6	505.9	517.6
52.5°	412.2	426.3	453.2	486.0	501.2
55°	382.9	397.0	432.1	466.1	482.5
57.5°	350.2	368.9	407.5	446.2	463.7
60°	319.7	337.3	384.1	426.3	443.8
62.5°	286.9	310.3	360.7	405.2	422.8
65°	253.0	278.7	336.1	380.6	398.2
67.5°	222.5	250.6	311.5	356.0	373.6
70°	186.2	221.3	284.6	329.1	346.6
72.5°	152.2	190.9	256.5	299.8	316.2
75°	119.5	162.8	227.2	265.8	274.0
77.5°	89.0	134.7	196.7	213.1	207.3
80°	63.2	107.7	153.4	145.2	148.7
82.5°	41.0	82.0	94.9	107.7	111.3
85°	23.4	48.0	58.6	63.2	65.6
87.5°	10.5	17.6	23.4	23.4	22.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)