

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: P310081

Luminaire Tested: **24FCZ2-40-UNV-L82765-RDP-CP250-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: P310081
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-5000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" 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: 2379.0 lumens
Efficiency: N/A
Efficacy: 71.0 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

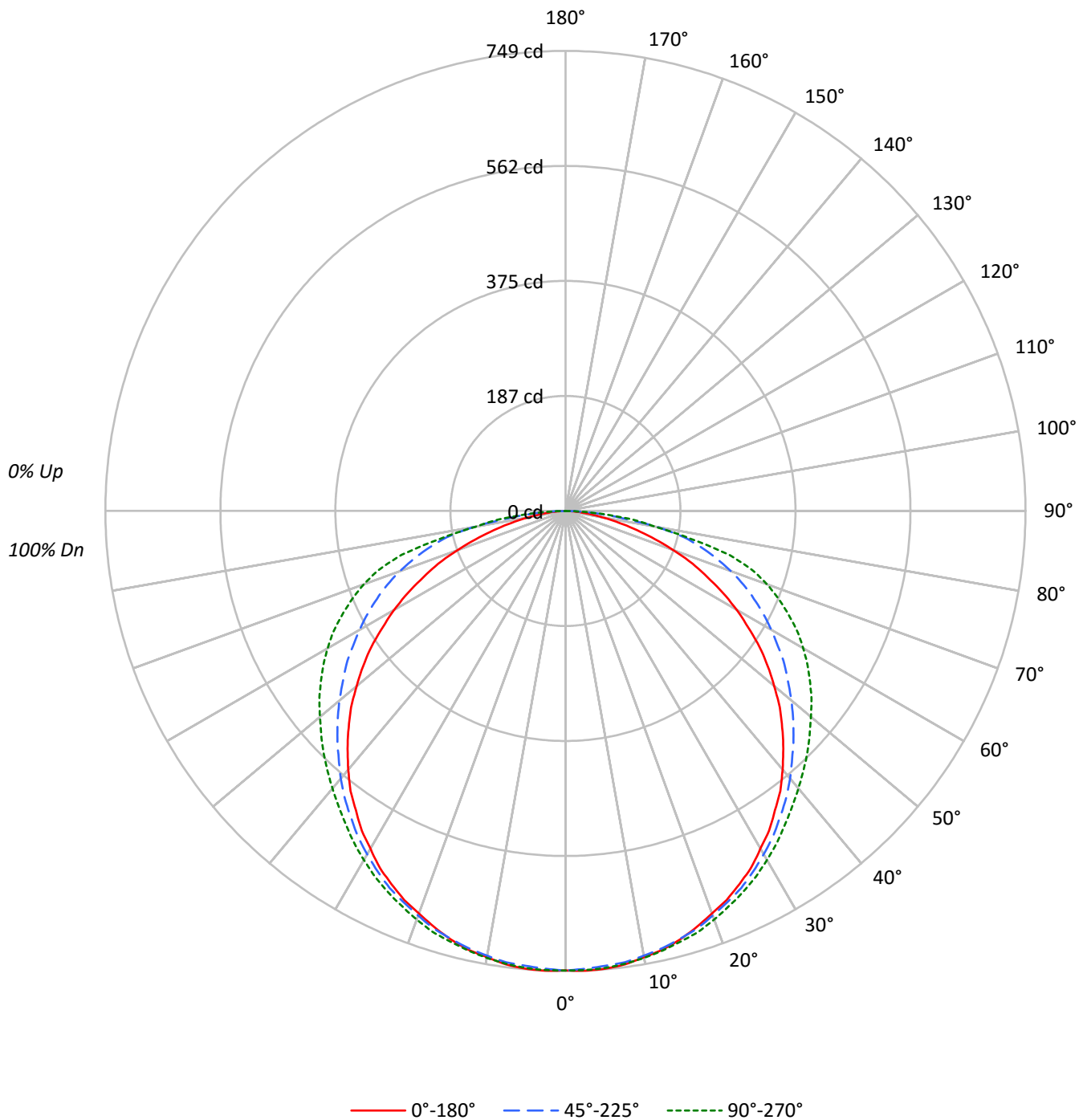
Input Watts (W): 33.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				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°	1007	1007	1007
5°	1010	1004	1009
10°	1008	1004	1009
15°	1006	1004	1011
20°	999	1004	1014
25°	995	1006	1016
30°	986	1003	1019
35°	977	1000	1023
40°	966	999	1036
45°	950	999	1060
50°	929	1005	1092
55°	905	1021	1141
60°	867	1041	1203
65°	812	1078	1277
70°	738	1128	1374
75°	626	1190	1435
80°	494	1198	1161
85°	364	911	1020



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	71.0	3.0
10°-20°	204.2	8.6
20°-30°	312.3	13.1
30°-40°	381.8	16.0
40°-50°	406.9	17.1
50°-60°	389.1	16.4
60°-70°	329.6	13.9
70°-80°	221.5	9.3
80°-90°	62.5	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°	587.5	24.7
0°-40°	969.3	40.7
0°-60°	1765.4	74.2
0°-90°	2379.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2379.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	748	748	748	748	748	
5°	748	747	743	747	747	71
15°	722	722	721	727	726	204
25°	670	673	677	683	684	309
35°	595	599	609	621	623	373
45°	499	507	525	548	557	385
55°	386	400	435	470	486	344
65°	255	281	339	384	401	253
75°	120	164	229	268	276	129
85°	24	48	59	64	66	29
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	748.1	748.1	748.1	748.1	748.1
2.5°	749.3	749.3	745.8	748.1	748.1
5°	748.1	746.9	743.4	746.9	746.9
7.5°	744.6	743.4	741.0	744.6	743.4
10°	737.5	737.5	735.1	738.7	738.7
12.5°	731.6	730.4	729.2	734.0	732.8
15°	722.2	722.2	721.0	726.9	725.7
17.5°	710.4	711.5	712.7	717.4	718.6
20°	697.4	699.7	700.9	708.0	708.0
22.5°	685.6	686.8	689.1	696.2	696.2
25°	670.2	672.6	677.3	683.2	684.4
27.5°	654.9	656.1	662.0	670.2	671.4
30°	634.8	638.4	645.5	654.9	656.1
32.5°	617.1	620.7	628.9	638.4	640.7
35°	594.7	599.4	608.9	620.7	623.0
37.5°	574.7	578.2	590.0	603.0	606.5
40°	549.9	557.0	568.8	584.1	590.0
42.5°	525.1	532.2	546.3	566.4	573.5
45°	499.1	507.4	525.1	547.5	557.0
47.5°	473.2	482.6	502.7	528.6	539.3
50°	443.7	455.5	480.3	509.8	521.6
52.5°	415.4	429.5	456.7	489.7	505.0
55°	385.9	400.0	435.4	469.6	486.2
57.5°	352.8	371.7	410.6	449.6	467.3
60°	322.1	339.8	387.0	429.5	447.2
62.5°	289.1	312.7	363.4	408.3	426.0
65°	254.9	280.8	338.7	383.5	401.2
67.5°	224.2	252.5	313.9	358.7	376.4
70°	187.6	223.0	286.7	331.6	349.3
72.5°	153.4	192.3	258.4	302.1	318.6
75°	120.4	164.0	228.9	267.9	276.1
77.5°	89.7	135.7	198.2	214.8	208.9
80°	63.7	108.6	154.6	146.3	149.9
82.5°	41.3	82.6	95.6	108.6	112.1
85°	23.6	48.4	59.0	63.7	66.1
87.5°	10.6	17.7	23.6	23.6	22.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)