

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: P310058

Luminaire Tested: **24FCZ2-40-UNV-L82765-RDP-CP125-W2A-U-2700K**

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: P310058
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-CP125-W2A-U-2700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" POLYCARB SHEET
Light Source: (168) 2700K 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: 2231.0 lumens
Efficiency: N/A
Efficacy: 68.2 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

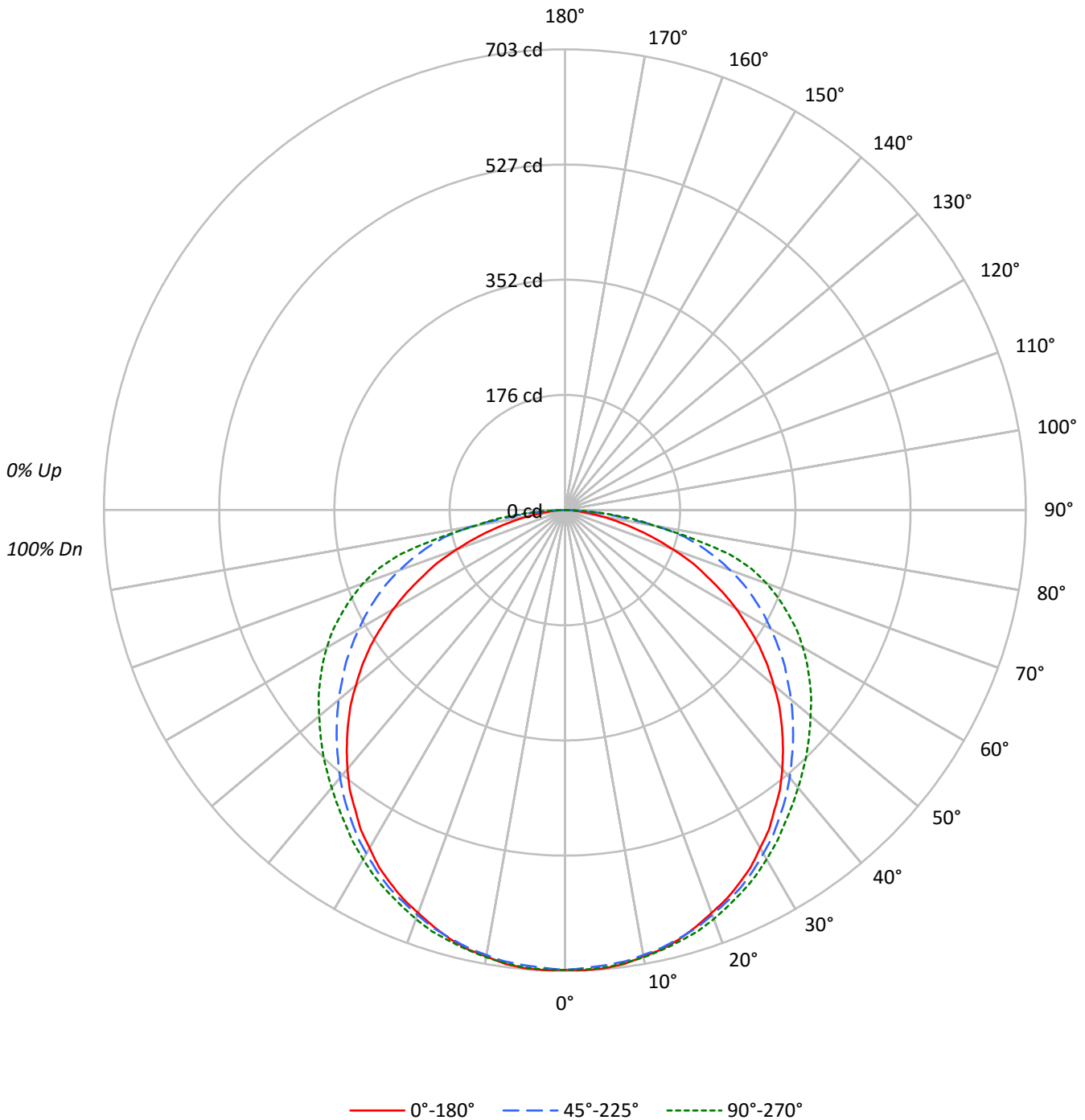
Input Watts (W): 32.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	944	944	944
5°	948	942	946
10°	945	942	946
15°	943	942	948
20°	936	941	951
25°	933	943	953
30°	925	940	956
35°	916	938	960
40°	906	937	972
45°	891	937	994
50°	871	943	1024
55°	849	958	1069
60°	813	977	1129
65°	761	1011	1198
70°	692	1058	1289
75°	587	1116	1346
80°	463	1124	1089
85°	341	854	957



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.6	3.0
10°-20°	191.5	8.6
20°-30°	292.9	13.1
30°-40°	358.1	16.0
40°-50°	381.6	17.1
50°-60°	364.9	16.4
60°-70°	309.1	13.9
70°-80°	207.7	9.3
80°-90°	58.6	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°	551.0	24.7
0°-40°	909.1	40.7
0°-60°	1655.6	74.2
0°-90°	2231.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2231.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	702	702	702	702	702	
5°	702	700	697	700	700	67
15°	677	677	676	682	681	191
25°	629	631	635	641	642	290
35°	558	562	571	582	584	349
45°	468	476	492	514	522	361
55°	362	375	408	440	456	322
65°	239	263	318	360	376	237
75°	113	154	215	251	259	121
85°	22	45	55	60	62	27
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	701.6	701.6	701.6	701.6	701.6
2.5°	702.7	702.7	699.4	701.6	701.6
5°	701.6	700.5	697.2	700.5	700.5
7.5°	698.3	697.2	694.9	698.3	697.2
10°	691.6	691.6	689.4	692.7	692.7
12.5°	686.1	685.0	683.9	688.3	687.2
15°	677.2	677.2	676.1	681.7	680.6
17.5°	666.2	667.3	668.4	672.8	673.9
20°	654.0	656.2	657.3	664.0	664.0
22.5°	642.9	644.0	646.3	652.9	652.9
25°	628.6	630.8	635.2	640.7	641.8
27.5°	614.2	615.3	620.8	628.6	629.7
30°	595.4	598.7	605.3	614.2	615.3
32.5°	578.8	582.1	589.8	598.7	600.9
35°	557.7	562.2	571.0	582.1	584.3
37.5°	538.9	542.2	553.3	565.5	568.8
40°	515.7	522.3	533.4	547.8	553.3
42.5°	492.4	499.1	512.4	531.2	537.8
45°	468.1	475.8	492.4	513.5	522.3
47.5°	443.7	452.6	471.4	495.8	505.7
50°	416.1	427.1	450.4	478.1	489.1
52.5°	389.5	402.8	428.3	459.2	473.6
55°	361.9	375.1	408.3	440.4	455.9
57.5°	330.9	348.6	385.1	421.6	438.2
60°	302.1	318.7	363.0	402.8	419.4
62.5°	271.1	293.2	340.8	382.9	399.5
65°	239.0	263.4	317.6	359.6	376.2
67.5°	210.3	236.8	294.4	336.4	353.0
70°	175.9	209.1	268.9	311.0	327.6
72.5°	143.9	180.4	242.3	283.3	298.8
75°	112.9	153.8	214.7	251.2	258.9
77.5°	84.1	127.3	185.9	201.4	195.9
80°	59.8	101.8	145.0	137.2	140.5
82.5°	38.7	77.5	89.6	101.8	105.1
85°	22.1	45.4	55.3	59.8	62.0
87.5°	10.0	16.6	22.1	22.1	21.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)