

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: P313496

Luminaire Tested: **24FCZ2-35-UNV-L83050-RDP-CA125-W2A-U-3500K**

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: P313496
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: 24FCZ2-35-UNV-L83050-RDP-CA125-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" ACRYLIC SHEET
Light Source: (168) 3500K 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: 2179.0 lumens
Efficiency: N/A
Efficacy: 77.8 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

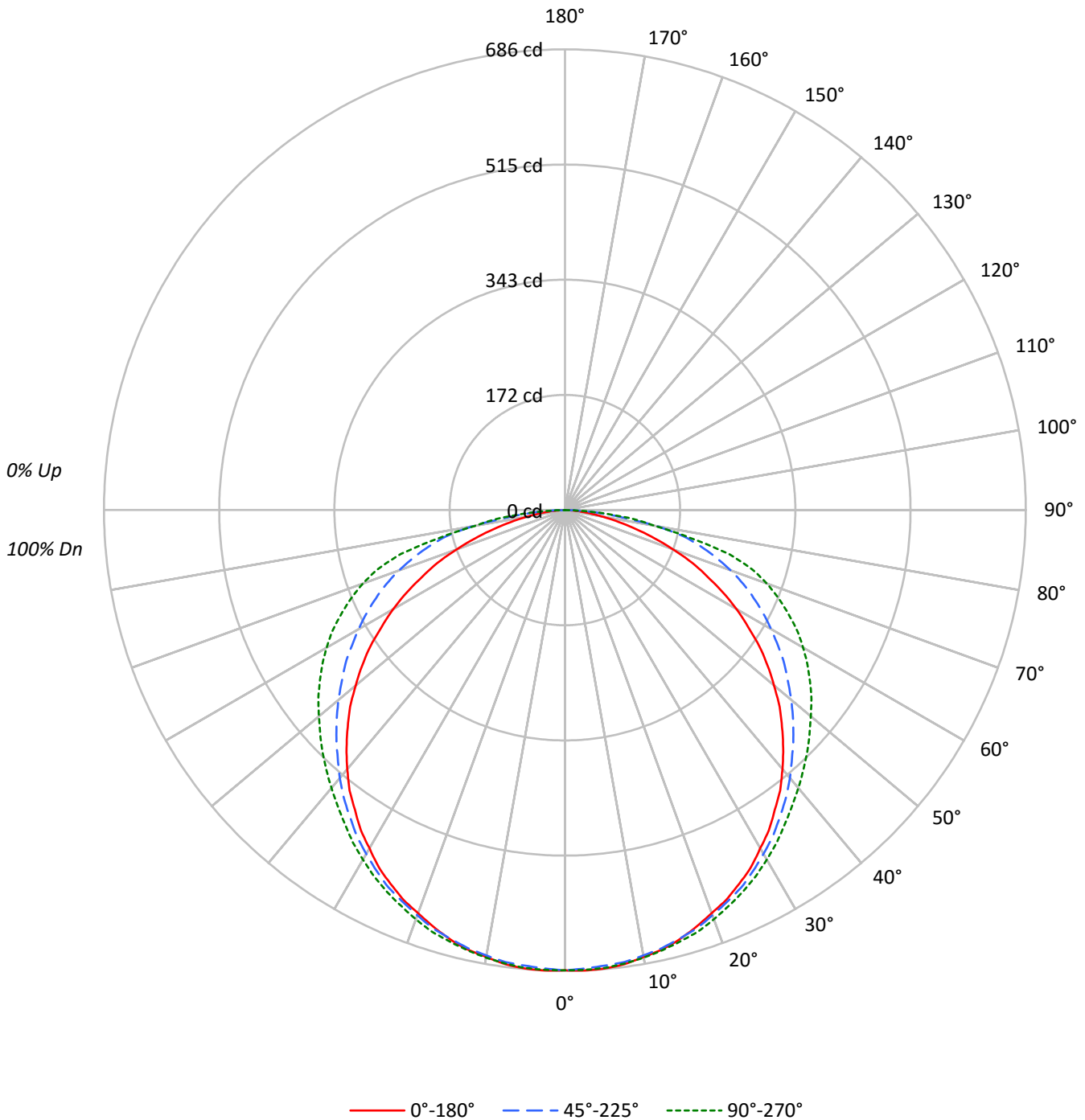
Input Watts (W): 28
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	68	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°	922	922	922
5°	925	920	924
10°	923	920	924
15°	921	920	926
20°	915	919	929
25°	911	921	931
30°	903	919	934
35°	895	916	937
40°	885	915	949
45°	870	915	971
50°	851	921	1000
55°	829	936	1045
60°	794	954	1102
65°	743	988	1170
70°	676	1033	1258
75°	573	1090	1315
80°	453	1097	1064
85°	333	834	934



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	65.0	3.0
10°-20°	187.1	8.6
20°-30°	286.1	13.1
30°-40°	349.7	16.0
40°-50°	372.7	17.1
50°-60°	356.4	16.4
60°-70°	301.9	13.9
70°-80°	202.9	9.3
80°-90°	57.2	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°	538.1	24.7
0°-40°	887.9	40.7
0°-60°	1617.0	74.2
0°-90°	2179.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2179.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	685	685	685	685	685	
5°	685	684	681	684	684	65
15°	662	662	660	666	665	186
25°	614	616	620	626	627	283
35°	545	549	558	568	571	341
45°	457	465	481	502	510	353
55°	353	366	399	430	445	315
65°	234	257	310	351	368	232
75°	110	150	210	245	253	118
85°	22	44	54	58	60	27
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	685.2	685.2	685.2	685.2	685.2
2.5°	686.3	686.3	683.1	685.2	685.2
5°	685.2	684.2	680.9	684.2	684.2
7.5°	682.0	680.9	678.7	682.0	680.9
10°	675.5	675.5	673.3	676.6	676.6
12.5°	670.1	669.0	667.9	672.3	671.2
15°	661.5	661.5	660.4	665.8	664.7
17.5°	650.6	651.7	652.8	657.1	658.2
20°	638.8	640.9	642.0	648.5	648.5
22.5°	628.0	629.0	631.2	637.7	637.7
25°	613.9	616.1	620.4	625.8	626.9
27.5°	599.8	600.9	606.3	613.9	615.0
30°	581.5	584.7	591.2	599.8	600.9
32.5°	565.3	568.5	576.1	584.7	586.9
35°	544.7	549.1	557.7	568.5	570.7
37.5°	526.4	529.6	540.4	552.3	555.5
40°	503.7	510.1	521.0	535.0	540.4
42.5°	481.0	487.4	500.4	518.8	525.3
45°	457.2	464.7	481.0	501.5	510.1
47.5°	433.4	442.1	460.4	484.2	493.9
50°	406.4	417.2	439.9	466.9	477.7
52.5°	380.4	393.4	418.3	448.5	462.6
55°	353.4	366.4	398.8	430.2	445.3
57.5°	323.2	340.5	376.1	411.8	428.0
60°	295.1	311.3	354.5	393.4	409.6
62.5°	264.8	286.4	332.9	374.0	390.2
65°	233.5	257.2	310.2	351.3	367.5
67.5°	205.4	231.3	287.5	328.6	344.8
70°	171.8	204.3	262.6	303.7	319.9
72.5°	140.5	176.2	236.7	276.7	291.8
75°	110.2	150.2	209.7	245.3	252.9
77.5°	82.1	124.3	181.6	196.7	191.3
80°	58.4	99.4	141.6	134.0	137.3
82.5°	37.8	75.7	87.5	99.4	102.7
85°	21.6	44.3	54.0	58.4	60.5
87.5°	9.7	16.2	21.6	21.6	20.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)