

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: P309962

Luminaire Tested: **24FCZ2-35-UNV-L82765-RDP-CA125-W2A-U-4000K**

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: P309962
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-L82765-RDP-CA125-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" ACRYLIC SHEET
Light Source: (168) 4000K 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: 2176.0 lumens
Efficiency: N/A
Efficacy: 76.9 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

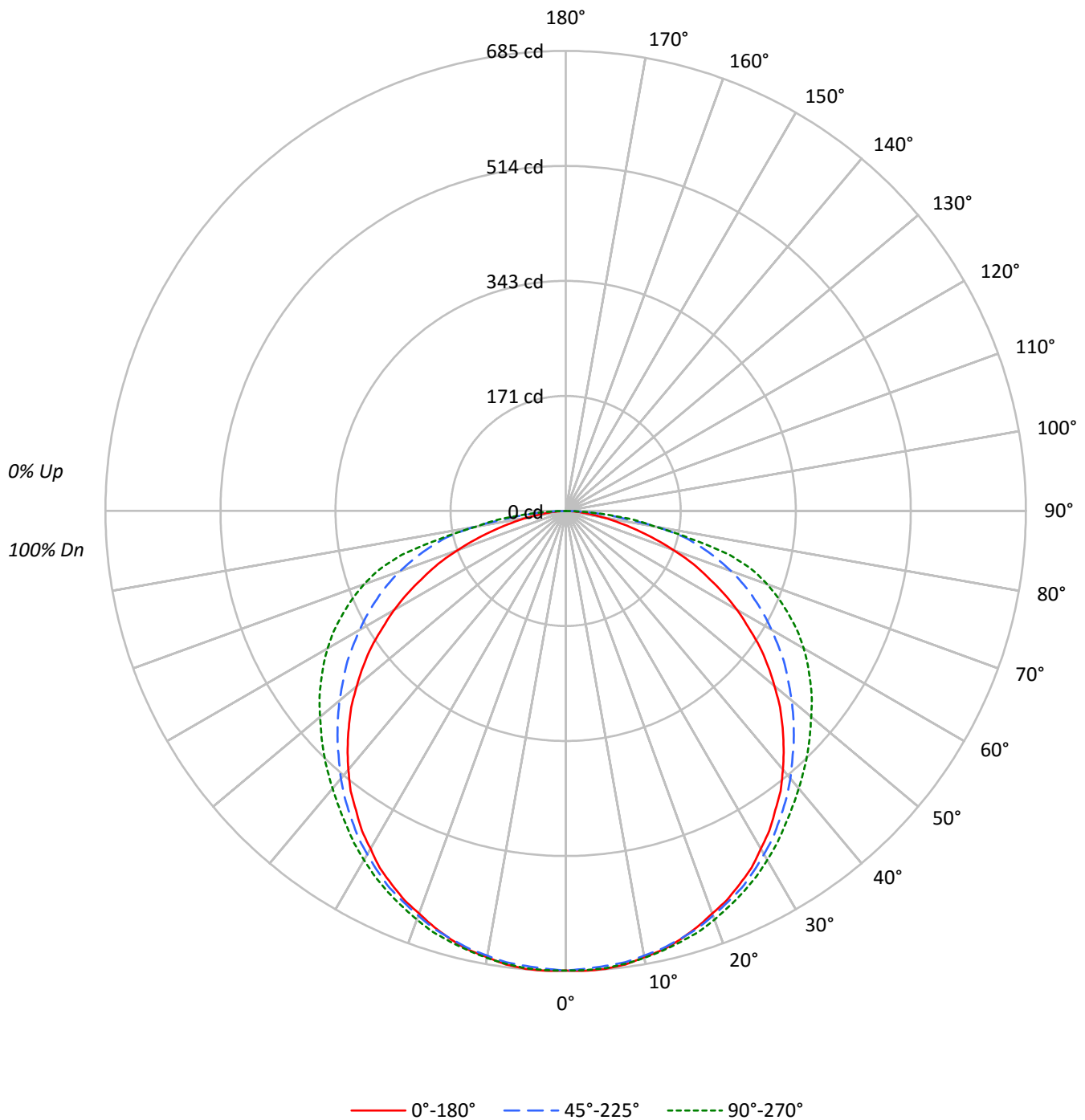
Input Watts (W): 28.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	921	921	921
5°	924	918	923
10°	922	919	923
15°	920	919	925
20°	913	918	927
25°	910	920	929
30°	902	917	932
35°	894	915	936
40°	883	914	948
45°	869	914	969
50°	849	920	999
55°	828	934	1043
60°	793	953	1101
65°	742	986	1168
70°	675	1032	1257
75°	572	1089	1313
80°	452	1096	1062
85°	333	834	932



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	64.9	3.0
10°-20°	186.8	8.6
20°-30°	285.7	13.1
30°-40°	349.2	16.0
40°-50°	372.2	17.1
50°-60°	355.9	16.4
60°-70°	301.5	13.9
70°-80°	202.6	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°	537.4	24.7
0°-40°	886.6	40.7
0°-60°	1614.7	74.2
0°-90°	2176.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2176.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	684	684	684	684	684	
5°	684	683	680	683	683	65
15°	660	660	660	665	664	186
25°	613	615	620	625	626	283
35°	544	548	557	568	570	341
45°	457	464	480	501	509	352
55°	353	366	398	430	445	314
65°	233	257	310	351	367	231
75°	110	150	209	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°	684.3	684.3	684.3	684.3	684.3
2.5°	685.4	685.4	682.1	684.3	684.3
5°	684.3	683.2	680.0	683.2	683.2
7.5°	681.1	680.0	677.8	681.1	680.0
10°	674.6	674.6	672.4	675.7	675.7
12.5°	669.2	668.1	667.0	671.3	670.3
15°	660.5	660.5	659.5	664.9	663.8
17.5°	649.8	650.8	651.9	656.2	657.3
20°	637.9	640.0	641.1	647.6	647.6
22.5°	627.1	628.2	630.3	636.8	636.8
25°	613.1	615.2	619.5	624.9	626.0
27.5°	599.0	600.1	605.5	613.1	614.1
30°	580.7	583.9	590.4	599.0	600.1
32.5°	564.5	567.7	575.3	583.9	586.1
35°	544.0	548.3	556.9	567.7	569.9
37.5°	525.6	528.9	539.7	551.5	554.8
40°	503.0	509.4	520.2	534.3	539.7
42.5°	480.3	486.8	499.7	518.1	524.6
45°	456.6	464.1	480.3	500.8	509.4
47.5°	432.8	441.4	459.8	483.5	493.2
50°	405.8	416.6	439.3	466.3	477.1
52.5°	379.9	392.9	417.7	447.9	461.9
55°	352.9	365.9	398.3	429.6	444.7
57.5°	322.7	340.0	375.6	411.2	427.4
60°	294.7	310.8	354.0	392.9	409.1
62.5°	264.4	286.0	332.4	373.4	389.6
65°	233.1	256.9	309.8	350.8	367.0
67.5°	205.1	231.0	287.1	328.1	344.3
70°	171.6	204.0	262.3	303.3	319.5
72.5°	140.3	175.9	236.4	276.3	291.4
75°	110.1	150.0	209.4	245.0	252.6
77.5°	82.0	124.1	181.3	196.4	191.0
80°	58.3	99.3	141.4	133.8	137.1
82.5°	37.8	75.6	87.4	99.3	102.5
85°	21.6	44.3	54.0	58.3	60.4
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)