

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: P313502

Luminaire Tested: **24FCZ2-35-UNV-L83050-RDP-CP125-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: P313502
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-CP125-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" POLYCARB 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: 2244.0 lumens
Efficiency: N/A
Efficacy: 78.5 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

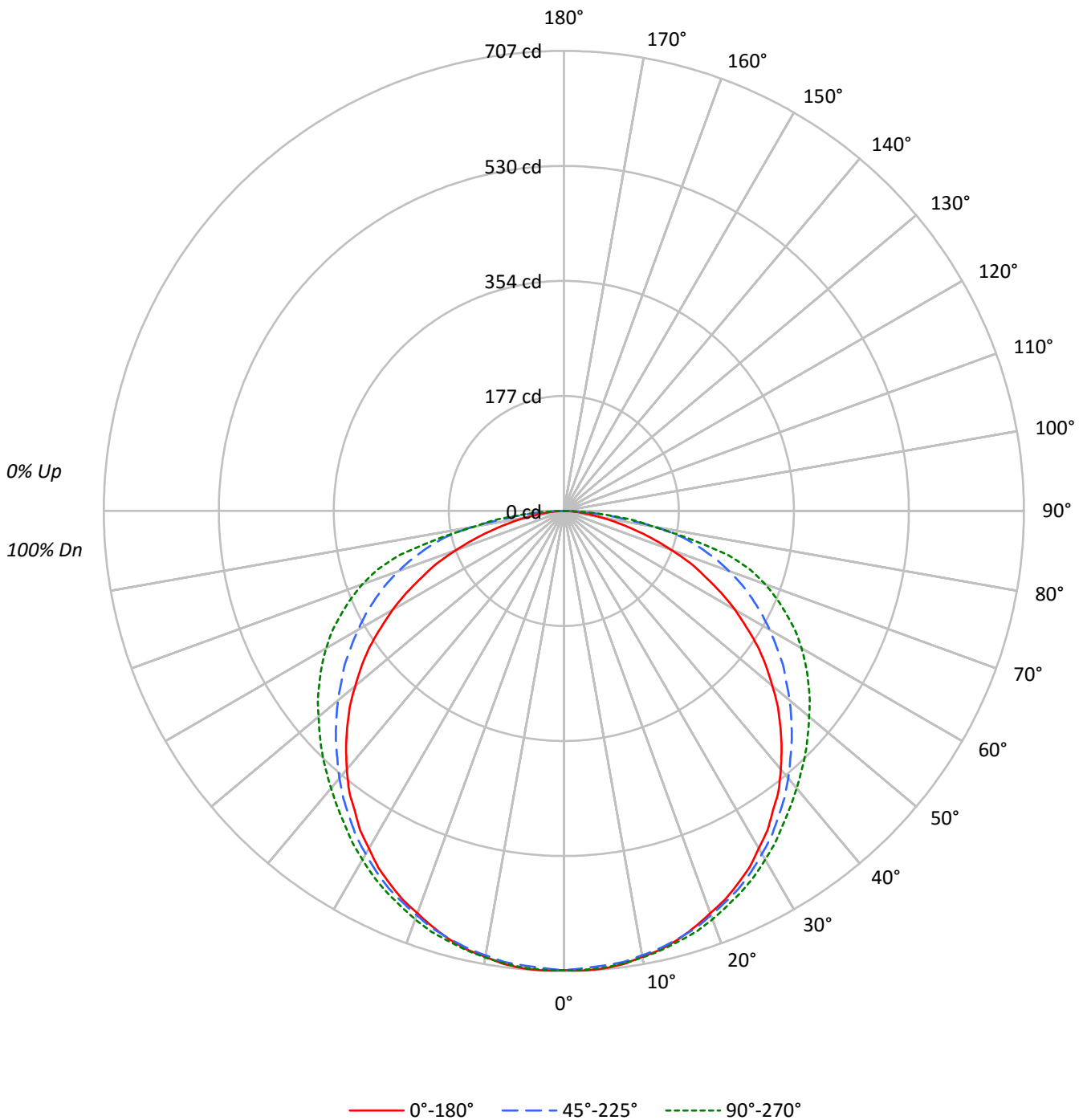
Input Watts (W): 28.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	950	950	950
5°	953	947	952
10°	950	947	952
15°	949	947	953
20°	942	947	956
25°	939	949	958
30°	930	946	962
35°	921	943	965
40°	911	942	977
45°	896	942	1000
50°	876	948	1030
55°	854	963	1076
60°	818	982	1135
65°	765	1017	1205
70°	696	1064	1296
75°	590	1122	1354
80°	466	1130	1096
85°	344	860	962



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.9	3.0
10°-20°	192.7	8.6
20°-30°	294.6	13.1
30°-40°	360.2	16.0
40°-50°	383.8	17.1
50°-60°	367.0	16.4
60°-70°	310.9	13.9
70°-80°	209.0	9.3
80°-90°	58.9	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°	554.2	24.7
0°-40°	914.4	40.7
0°-60°	1665.2	74.2
0°-90°	2244.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2244.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	706	706	706	706	706	
5°	706	705	701	705	705	67
15°	681	681	680	686	684	192
25°	632	634	639	644	646	291
35°	561	565	574	586	588	351
45°	471	479	495	516	525	363
55°	364	377	411	443	459	324
65°	240	265	319	362	378	239
75°	114	155	216	253	260	122
85°	22	46	56	60	62	28
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	705.7	705.7	705.7	705.7	705.7
2.5°	706.8	706.8	703.4	705.7	705.7
5°	705.7	704.6	701.2	704.6	704.6
7.5°	702.3	701.2	699.0	702.3	701.2
10°	695.7	695.7	693.4	696.8	696.8
12.5°	690.1	689.0	687.9	692.3	691.2
15°	681.2	681.2	680.1	685.6	684.5
17.5°	670.1	671.2	672.3	676.7	677.8
20°	657.8	660.0	661.2	667.8	667.8
22.5°	646.7	647.8	650.0	656.7	656.7
25°	632.2	634.4	638.9	644.5	645.6
27.5°	617.7	618.9	624.4	632.2	633.3
30°	598.8	602.2	608.8	617.7	618.9
32.5°	582.1	585.5	593.3	602.2	604.4
35°	561.0	565.4	574.3	585.5	587.7
37.5°	542.1	545.4	556.5	568.8	572.1
40°	518.7	525.4	536.5	551.0	556.5
42.5°	495.3	502.0	515.3	534.3	540.9
45°	470.8	478.6	495.3	516.5	525.4
47.5°	446.3	455.2	474.2	498.6	508.7
50°	418.5	429.6	453.0	480.8	492.0
52.5°	391.8	405.2	430.8	461.9	476.4
55°	364.0	377.3	410.7	443.0	458.6
57.5°	332.8	350.6	387.3	424.1	440.8
60°	303.9	320.6	365.1	405.2	421.8
62.5°	272.7	295.0	342.8	385.1	401.8
65°	240.4	264.9	319.4	361.7	378.4
67.5°	211.5	238.2	296.1	338.4	355.1
70°	177.0	210.4	270.5	312.8	329.5
72.5°	144.7	181.4	243.8	284.9	300.5
75°	113.5	154.7	215.9	252.7	260.5
77.5°	84.6	128.0	187.0	202.6	197.0
80°	60.1	102.4	145.8	138.0	141.4
82.5°	39.0	77.9	90.2	102.4	105.7
85°	22.3	45.6	55.7	60.1	62.3
87.5°	10.0	16.7	22.3	22.3	21.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)