

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: P313122

Luminaire Tested: **24FCZ2-35-UNV-L83050-HRP-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: P313122
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)
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-HRP-CA125-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 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: 2643.0 lumens
Efficiency: N/A
Efficacy: 92.4 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

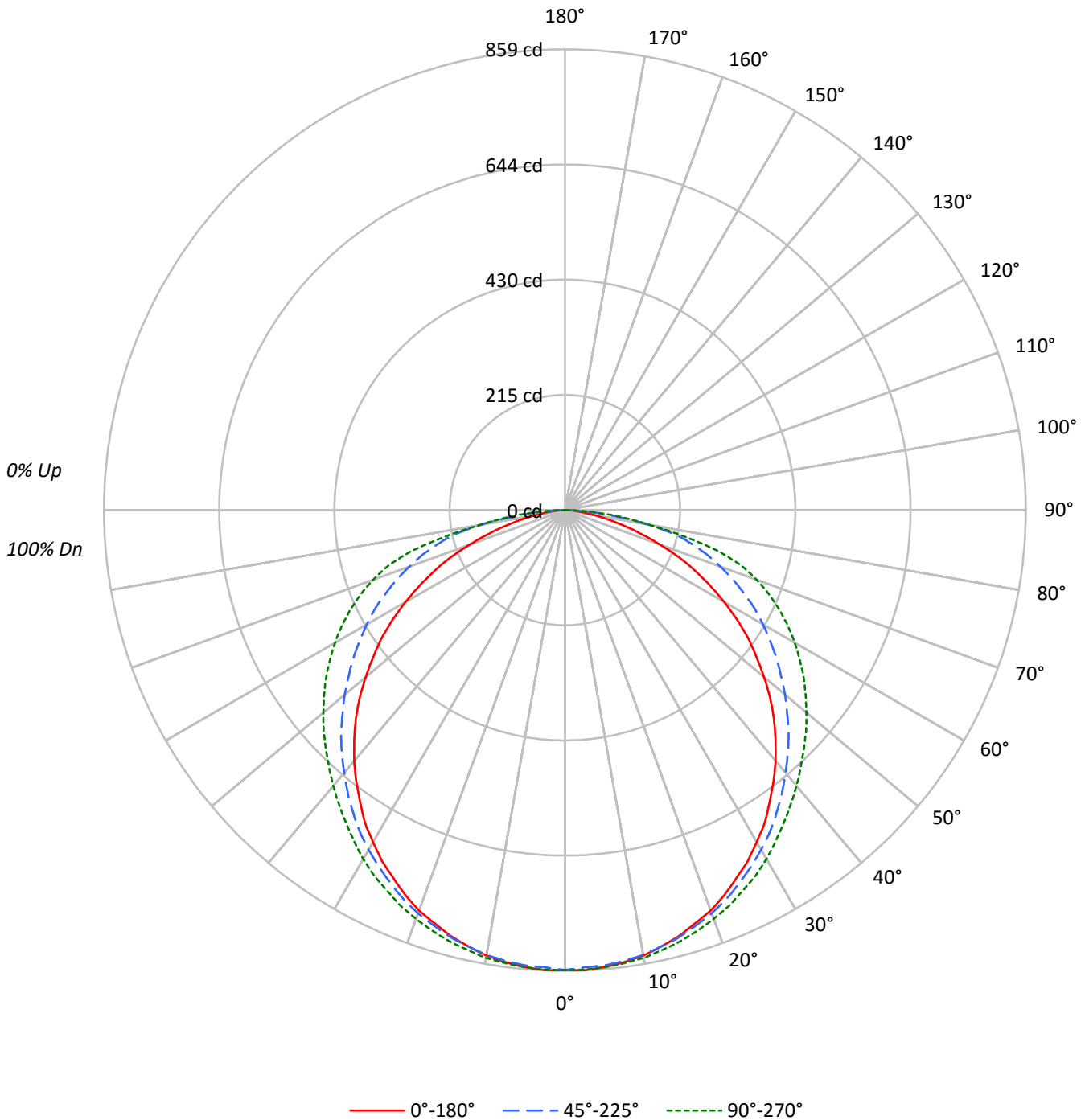
Input Watts (W): 28.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	101	96	93	96	93	90	92	90	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	24	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1154	1154	1154
5°	1155	1151	1155
10°	1152	1150	1158
15°	1145	1148	1159
20°	1138	1145	1161
25°	1124	1140	1163
30°	1111	1136	1167
35°	1092	1130	1169
40°	1073	1123	1180
45°	1048	1122	1198
50°	1014	1121	1230
55°	978	1129	1274
60°	923	1146	1331
65°	853	1173	1406
70°	744	1214	1497
75°	604	1277	1547
80°	446	1251	1251
85°	341	923	1042



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.2	3.1
10°-20°	233.3	8.8
20°-30°	355.1	13.4
30°-40°	431.2	16.3
40°-50°	455.6	17.2
50°-60°	429.9	16.3
60°-70°	357.4	13.5
70°-80°	235.1	8.9
80°-90°	64.1	2.4
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°	669.6	25.3
0°-40°	1100.9	41.7
0°-60°	1986.3	75.2
0°-90°	2643.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2643.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	858	858	858	858	858	
5°	855	855	852	855	855	81
15°	822	823	824	832	832	232
25°	757	761	768	781	783	349
35°	665	673	688	706	712	416
45°	551	562	590	618	630	424
55°	417	435	481	527	543	372
65°	268	299	368	423	442	265
75°	116	169	246	291	298	125
85°	22	49	60	66	68	27
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	857.5	857.5	857.5	857.5	857.5
2.5°	858.6	857.5	853.1	857.5	857.5
5°	855.3	855.3	852.0	855.3	855.3
7.5°	849.8	849.8	847.6	852.0	852.0
10°	843.1	843.1	842.0	847.6	847.6
12.5°	833.2	834.3	833.2	839.8	839.8
15°	822.1	823.2	824.3	832.1	832.1
17.5°	807.7	809.9	812.2	821.0	822.1
20°	794.5	795.6	800.0	809.9	811.1
22.5°	776.8	780.1	785.6	795.6	798.9
25°	756.8	761.3	767.9	781.2	783.4
27.5°	738.0	741.3	750.2	764.6	769.0
30°	714.8	720.3	731.4	745.8	751.3
32.5°	692.7	698.2	711.5	727.0	731.4
35°	665.0	672.7	688.2	705.9	711.5
37.5°	638.4	646.2	665.0	684.9	691.6
40°	610.8	619.6	639.5	662.8	671.6
42.5°	580.9	593.1	615.2	640.7	650.6
45°	551.0	562.1	589.8	618.5	629.6
47.5°	518.9	532.2	562.1	596.4	609.7
50°	484.6	501.2	535.5	573.2	587.5
52.5°	450.3	469.1	507.9	549.9	565.4
55°	417.1	434.8	481.3	526.7	543.3
57.5°	380.6	402.8	453.7	502.3	518.9
60°	343.0	367.4	426.0	476.9	494.6
62.5°	305.4	333.1	399.4	450.3	469.1
65°	267.8	298.8	368.5	422.7	441.5
67.5°	231.3	265.6	339.7	393.9	412.7
70°	189.2	232.4	308.7	361.8	380.6
72.5°	150.5	200.3	278.8	328.6	345.2
75°	116.2	169.3	245.6	291.0	297.6
77.5°	85.2	138.3	211.3	226.8	227.9
80°	57.5	110.6	161.5	159.3	161.5
82.5°	37.6	83.0	101.8	114.0	115.1
85°	22.1	48.7	59.8	66.4	67.5
87.5°	11.1	16.6	21.0	22.1	24.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)