

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: P313073

Luminaire Tested: **24FCZ2-30-UNV-L83050-HRP-CA125-W2A-U-4500K**

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: P313073
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: 24FCZ2-30-UNV-L83050-HRP-CA125-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" ACRYLIC SHEET
Light Source: (168) 4500K 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: 2275.0 lumens
Efficiency: N/A
Efficacy: 92.9 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

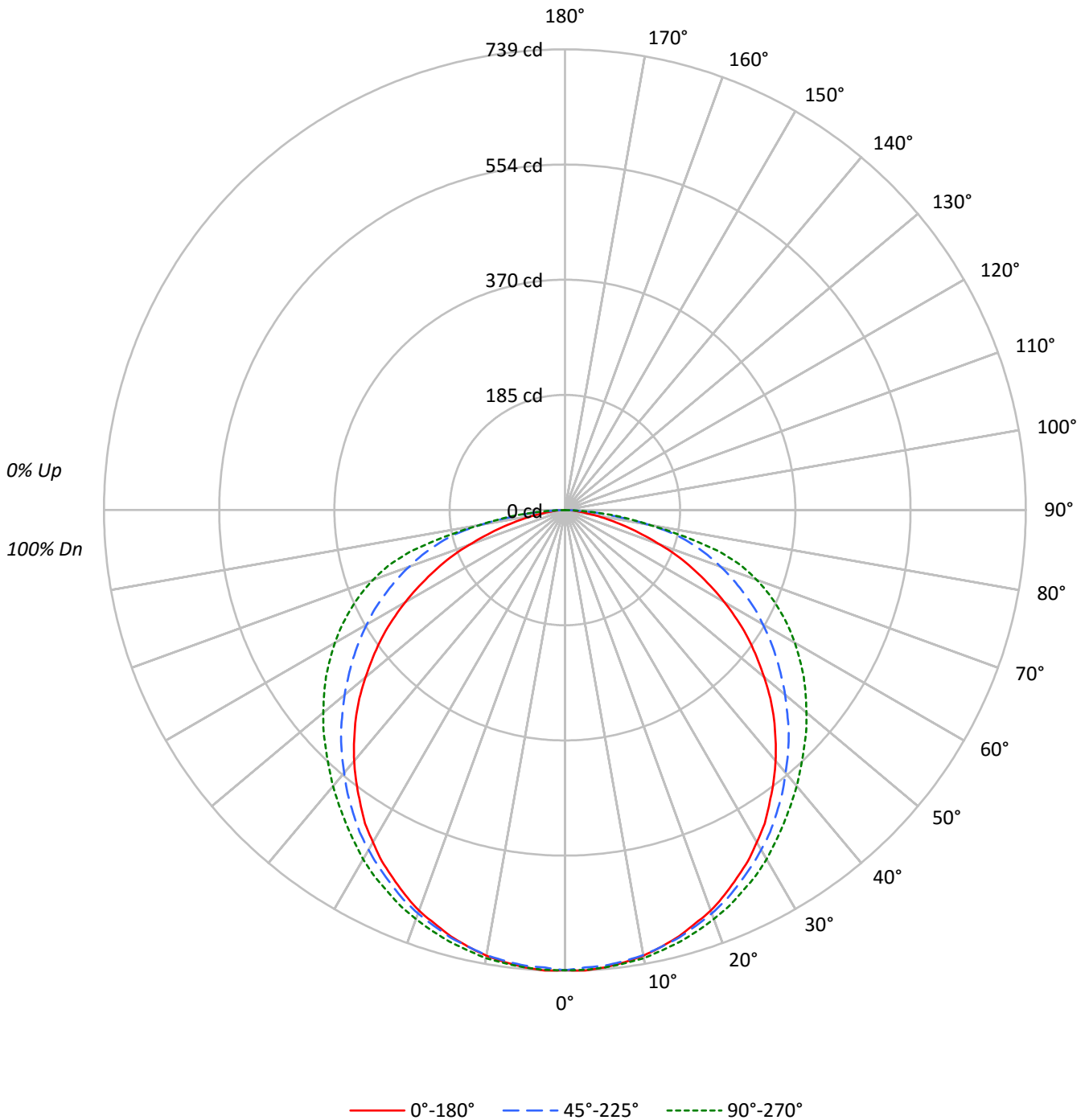
Input Watts (W): 24.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	993	993	993
5°	994	991	994
10°	991	990	997
15°	986	988	998
20°	979	986	1000
25°	967	981	1001
30°	956	978	1005
35°	940	973	1006
40°	923	967	1015
45°	903	966	1031
50°	873	965	1059
55°	842	972	1097
60°	795	987	1146
65°	734	1010	1210
70°	641	1045	1289
75°	520	1099	1332
80°	384	1078	1078
85°	293	794	897



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	69.9	3.1
10°-20°	200.8	8.8
20°-30°	305.7	13.4
30°-40°	371.2	16.3
40°-50°	392.1	17.2
50°-60°	370.0	16.3
60°-70°	307.7	13.5
70°-80°	202.4	8.9
80°-90°	55.2	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°	576.4	25.3
0°-40°	947.6	41.7
0°-60°	1709.7	75.2
0°-90°	2275.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2275.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	738	738	738	738	738	
5°	736	736	733	736	736	70
15°	708	709	710	716	716	200
25°	652	655	661	672	674	301
35°	572	579	592	608	612	358
45°	474	484	508	532	542	365
55°	359	374	414	453	468	320
65°	230	257	317	364	380	228
75°	100	146	211	250	256	108
85°	19	42	51	57	58	23
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	738.1	738.1	738.1	738.1	738.1
2.5°	739.1	738.1	734.3	738.1	738.1
5°	736.2	736.2	733.4	736.2	736.2
7.5°	731.5	731.5	729.6	733.4	733.4
10°	725.7	725.7	724.8	729.6	729.6
12.5°	717.2	718.1	717.2	722.9	722.9
15°	707.6	708.6	709.6	716.2	716.2
17.5°	695.3	697.2	699.1	706.7	707.6
20°	683.8	684.8	688.6	697.2	698.1
22.5°	668.6	671.5	676.2	684.8	687.6
25°	651.5	655.3	661.0	672.4	674.3
27.5°	635.3	638.1	645.7	658.1	661.9
30°	615.3	620.0	629.5	641.9	646.7
32.5°	596.2	601.0	612.4	625.7	629.5
35°	572.4	579.1	592.4	607.6	612.4
37.5°	549.5	556.2	572.4	589.5	595.3
40°	525.7	533.4	550.5	570.5	578.1
42.5°	500.0	510.5	529.5	551.5	560.0
45°	474.3	483.8	507.6	532.4	541.9
47.5°	446.7	458.1	483.8	513.4	524.8
50°	417.2	431.4	461.0	493.4	505.7
52.5°	387.6	403.8	437.2	473.4	486.7
55°	359.1	374.3	414.3	453.4	467.6
57.5°	327.6	346.7	390.5	432.4	446.7
60°	295.3	316.2	366.7	410.5	425.7
62.5°	262.9	286.7	343.8	387.6	403.8
65°	230.5	257.2	317.2	363.8	380.0
67.5°	199.1	228.6	292.4	339.1	355.3
70°	162.9	200.0	265.7	311.4	327.6
72.5°	129.5	172.4	240.0	282.9	297.2
75°	100.0	145.7	211.4	250.5	256.2
77.5°	73.3	119.1	181.9	195.2	196.2
80°	49.5	95.2	139.1	137.1	139.1
82.5°	32.4	71.4	87.6	98.1	99.1
85°	19.0	41.9	51.4	57.1	58.1
87.5°	9.5	14.3	18.1	19.0	21.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)