

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: P309197

Luminaire Tested: **24FCZ2-30-UNV-L82765-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: P309197
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-L82765-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: 2093.0 lumens
Efficiency: N/A
Efficacy: 88.3 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

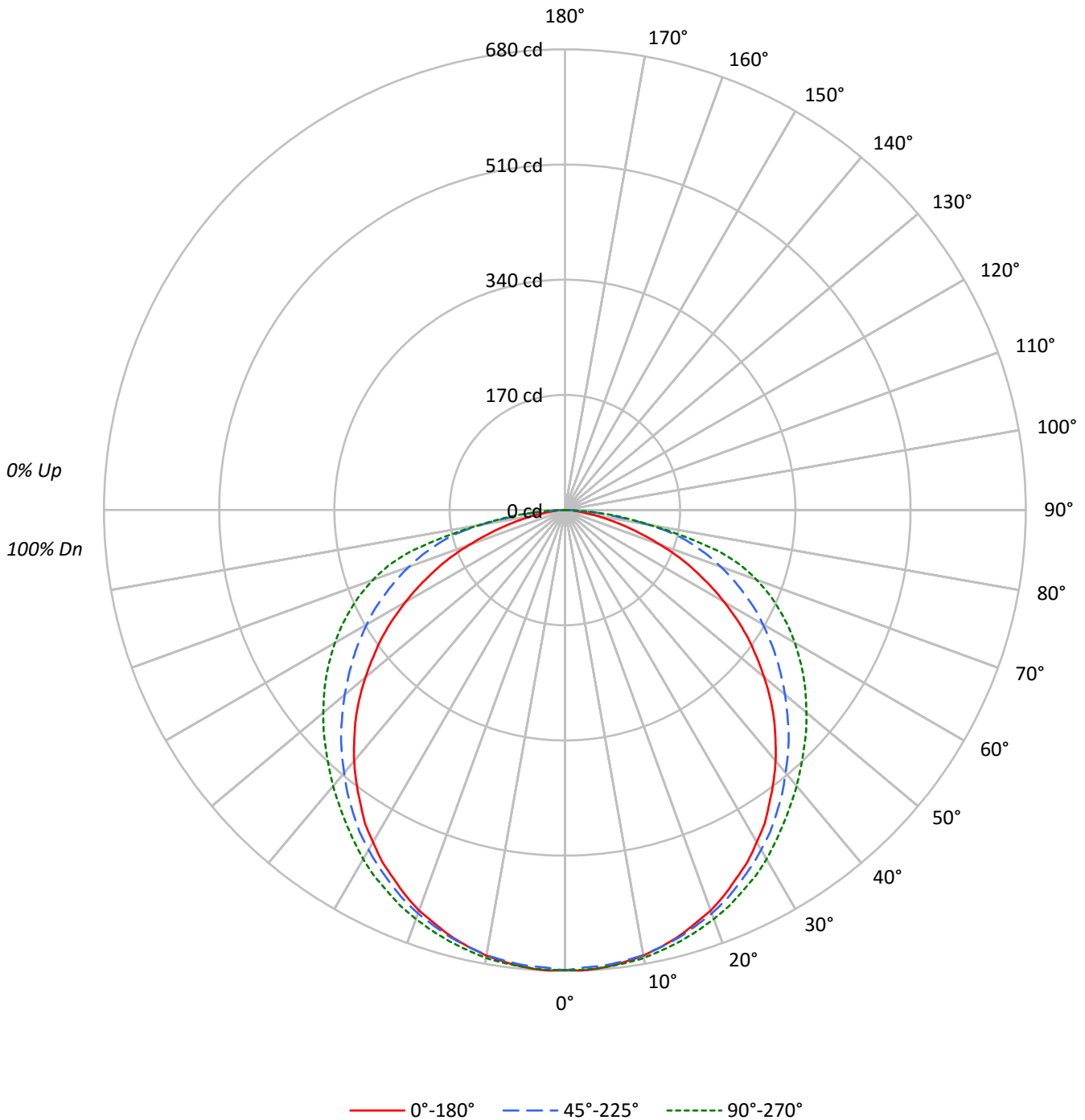
Input Watts (W): 23.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	914	914	914
5°	915	911	915
10°	912	911	917
15°	907	909	918
20°	901	907	920
25°	890	903	921
30°	879	900	924
35°	865	895	925
40°	850	890	934
45°	830	889	949
50°	803	888	974
55°	775	894	1009
60°	731	908	1054
65°	675	929	1113
70°	589	962	1186
75°	478	1011	1225
80°	353	991	991
85°	270	730	824



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	64.3	3.1
10°-20°	184.7	8.8
20°-30°	281.2	13.4
30°-40°	341.5	16.3
40°-50°	360.8	17.2
50°-60°	340.4	16.3
60°-70°	283.0	13.5
70°-80°	186.2	8.9
80°-90°	50.8	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°	530.3	25.3
0°-40°	871.8	41.7
0°-60°	1573.0	75.2
0°-90°	2093.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2093.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	679	679	679	679	679	
5°	677	677	675	677	677	64
15°	651	652	653	659	659	184
25°	599	603	608	619	620	276
35°	527	533	545	559	563	330
45°	436	445	467	490	499	336
55°	330	344	381	417	430	294
65°	212	237	292	335	350	210
75°	92	134	194	230	236	99
85°	18	39	47	53	53	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	679.1	679.1	679.1	679.1	679.1
2.5°	680.0	679.1	675.6	679.1	679.1
5°	677.3	677.3	674.7	677.3	677.3
7.5°	672.9	672.9	671.2	674.7	674.7
10°	667.7	667.7	666.8	671.2	671.2
12.5°	659.8	660.7	659.8	665.1	665.1
15°	651.0	651.9	652.8	658.9	658.9
17.5°	639.6	641.4	643.2	650.2	651.0
20°	629.1	630.0	633.5	641.4	642.3
22.5°	615.1	617.7	622.1	630.0	632.6
25°	599.3	602.8	608.1	618.6	620.4
27.5°	584.4	587.1	594.1	605.5	609.0
30°	566.0	570.4	579.2	590.6	595.0
32.5°	548.5	552.9	563.4	575.7	579.2
35°	526.6	532.7	545.0	559.0	563.4
37.5°	505.6	511.7	526.6	542.4	547.6
40°	483.7	490.7	506.5	524.9	531.9
42.5°	460.0	469.7	487.2	507.3	515.2
45°	436.4	445.1	467.0	489.8	498.6
47.5°	411.0	421.5	445.1	472.3	482.8
50°	383.8	396.9	424.1	453.9	465.3
52.5°	356.6	371.5	402.2	435.5	447.8
55°	330.3	344.4	381.2	417.1	430.2
57.5°	301.4	318.9	359.3	397.8	411.0
60°	271.6	290.9	337.3	377.7	391.7
62.5°	241.8	263.7	316.3	356.6	371.5
65°	212.0	236.6	291.8	334.7	349.6
67.5°	183.1	210.3	269.0	311.9	326.8
70°	149.8	184.0	244.5	286.5	301.4
72.5°	119.2	158.6	220.8	260.2	273.4
75°	92.0	134.1	194.5	230.4	235.7
77.5°	67.5	109.5	167.4	179.6	180.5
80°	45.6	87.6	127.9	126.2	127.9
82.5°	29.8	65.7	80.6	90.3	91.1
85°	17.5	38.6	47.3	52.6	53.4
87.5°	8.8	13.1	16.6	17.5	19.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)