

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: P309190

Luminaire Tested: **24FCZ2-30-UNV-L82765-HRP-CA08-W2A-U-5000K**

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: P309190
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-CA08-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" ACRYLIC SHEET
Light Source: (168) 5000K 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: 2166.0 lumens
Efficiency: N/A
Efficacy: 90.6 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

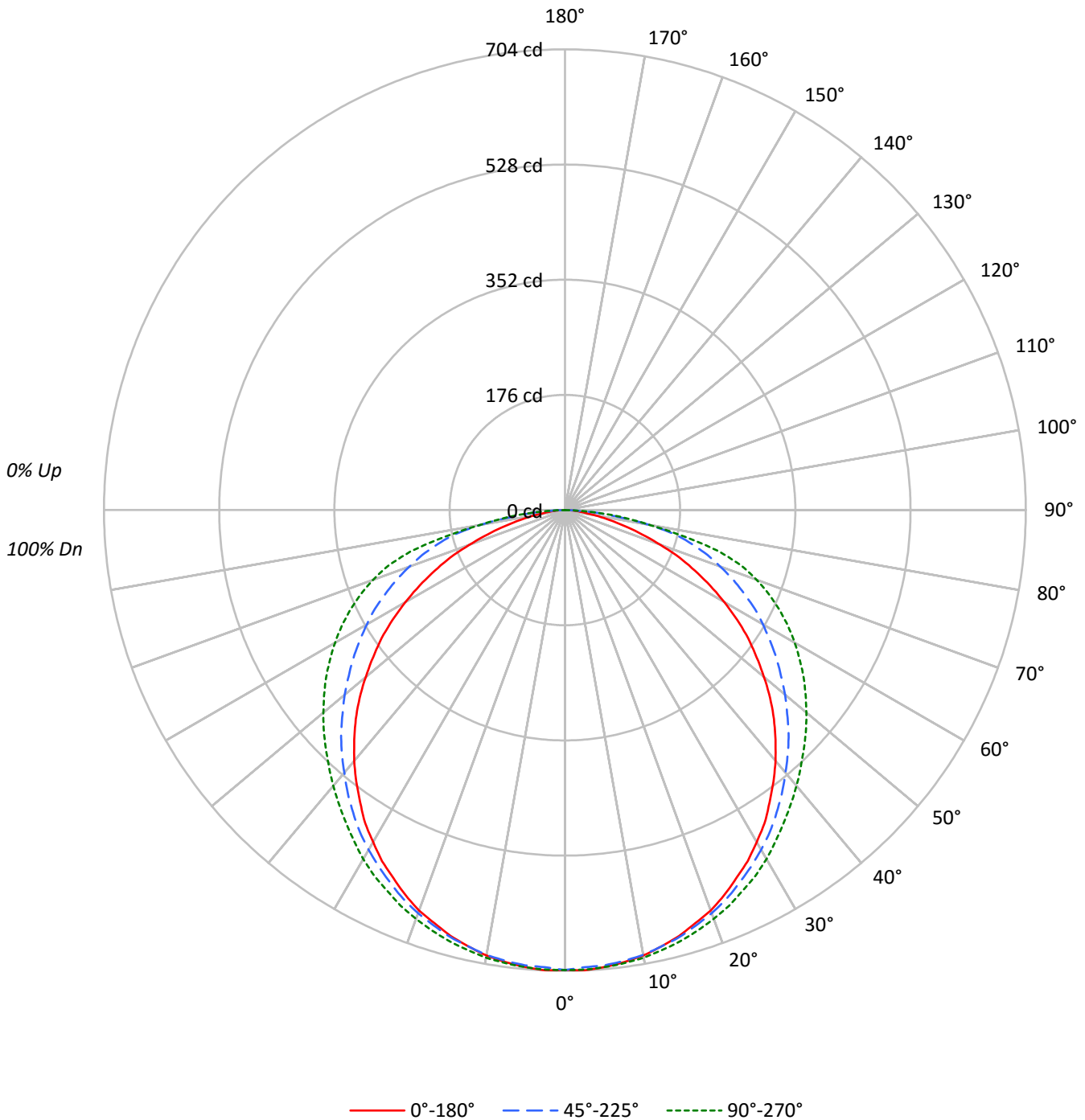
Input Watts (W): 23.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				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°	946	946	946
5°	947	943	947
10°	944	943	949
15°	938	941	950
20°	932	939	952
25°	921	934	953
30°	910	931	957
35°	895	926	958
40°	879	921	967
45°	859	920	982
50°	831	919	1008
55°	802	925	1044
60°	756	939	1091
65°	699	961	1152
70°	610	995	1227
75°	495	1046	1268
80°	366	1026	1026
85°	279	756	854



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.6	3.1
10°-20°	191.2	8.8
20°-30°	291.0	13.4
30°-40°	353.4	16.3
40°-50°	373.4	17.2
50°-60°	352.3	16.3
60°-70°	292.9	13.5
70°-80°	192.7	8.9
80°-90°	52.5	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°	548.8	25.3
0°-40°	902.2	41.7
0°-60°	1627.8	75.2
0°-90°	2166.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2166.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	703	703	703	703	703	
5°	701	701	698	701	701	67
15°	674	675	676	682	682	190
25°	620	624	629	640	642	286
35°	545	551	564	578	583	341
45°	452	461	483	507	516	348
55°	342	356	394	432	445	305
65°	219	245	302	346	362	217
75°	95	139	201	238	244	103
85°	18	40	49	54	55	22
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	702.8	702.8	702.8	702.8	702.8
2.5°	703.7	702.8	699.1	702.8	702.8
5°	700.9	700.9	698.2	700.9	700.9
7.5°	696.4	696.4	694.6	698.2	698.2
10°	691.0	691.0	690.1	694.6	694.6
12.5°	682.8	683.7	682.8	688.3	688.3
15°	673.7	674.6	675.6	681.9	681.9
17.5°	662.0	663.8	665.6	672.8	673.7
20°	651.1	652.0	655.6	663.8	664.7
22.5°	636.6	639.3	643.8	652.0	654.7
25°	620.2	623.9	629.3	640.2	642.0
27.5°	604.8	607.5	614.8	626.6	630.2
30°	585.8	590.3	599.4	611.2	615.7
32.5°	567.6	572.2	583.1	595.8	599.4
35°	545.0	551.3	564.0	578.5	583.1
37.5°	523.2	529.6	545.0	561.3	566.7
40°	500.5	507.8	524.1	543.2	550.4
42.5°	476.1	486.0	504.2	525.0	533.2
45°	451.6	460.6	483.3	506.9	516.0
47.5°	425.3	436.2	460.6	488.8	499.6
50°	397.2	410.8	438.9	469.7	481.5
52.5°	369.1	384.5	416.2	450.7	463.4
55°	341.9	356.4	394.5	431.6	445.2
57.5°	311.9	330.1	371.8	411.7	425.3
60°	281.1	301.1	349.1	390.8	405.3
62.5°	250.3	272.9	327.4	369.1	384.5
65°	219.4	244.8	302.0	346.4	361.8
67.5°	189.5	217.6	278.4	322.8	338.2
70°	155.1	190.4	253.0	296.5	311.9
72.5°	123.3	164.1	228.5	269.3	282.9
75°	95.2	138.7	201.3	238.5	243.9
77.5°	69.8	113.3	173.2	185.9	186.8
80°	47.2	90.7	132.4	130.6	132.4
82.5°	30.8	68.0	83.4	93.4	94.3
85°	18.1	39.9	49.0	54.4	55.3
87.5°	9.1	13.6	17.2	18.1	19.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)