

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: P309196

Luminaire Tested: **24FCZ2-30-UNV-L82765-HRP-CA125-W2A-U-3500K**

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: P309196
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-3500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" ACRYLIC SHEET
Light Source: (168) 3500K 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: 2047.0 lumens
Efficiency: N/A
Efficacy: 87.1 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

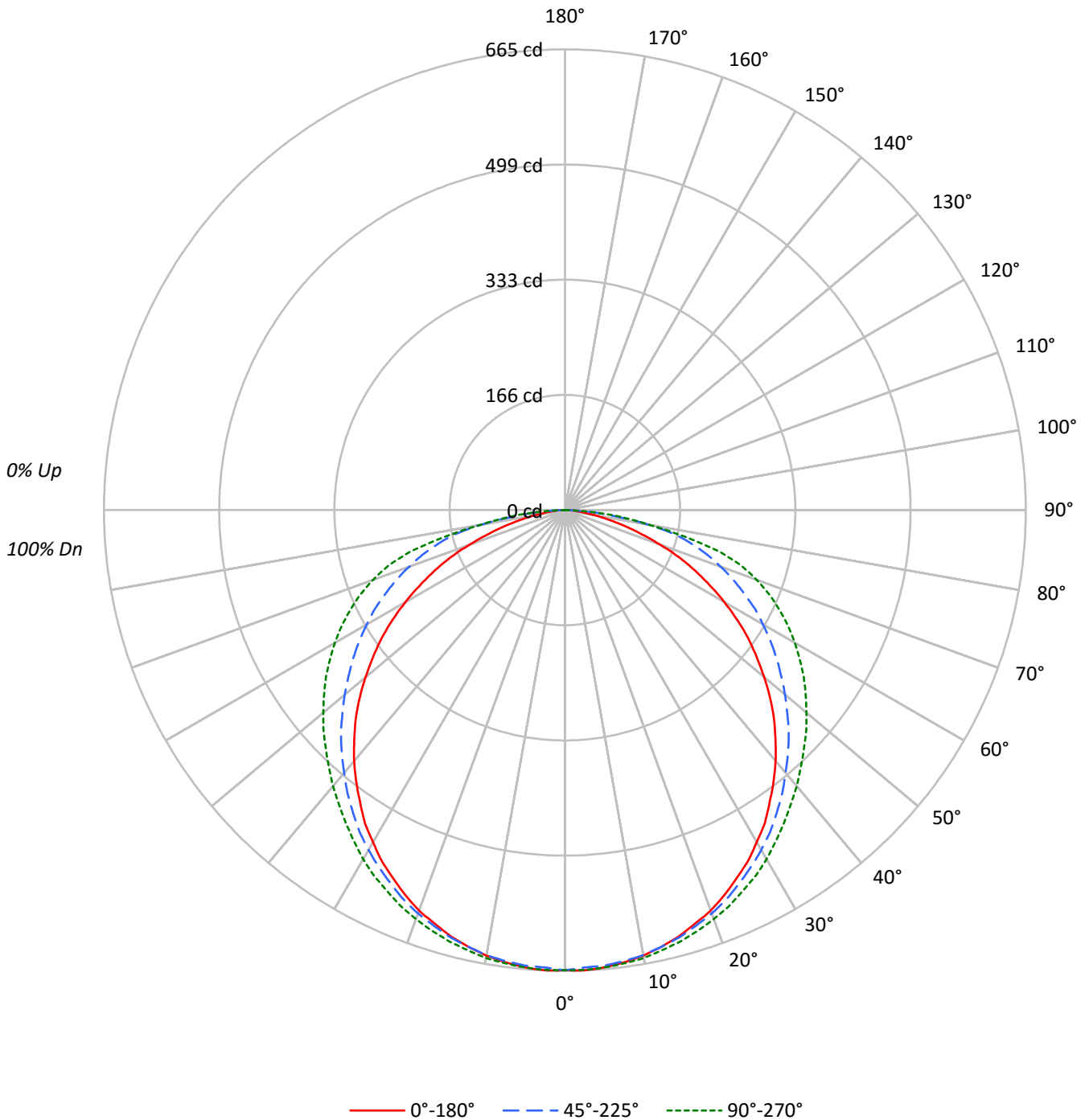
Input Watts (W): 23.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	894	894	894
5°	895	891	895
10°	892	891	897
15°	887	889	898
20°	881	887	899
25°	870	883	901
30°	860	880	904
35°	846	875	905
40°	831	870	914
45°	812	869	928
50°	786	868	953
55°	758	875	987
60°	715	888	1031
65°	660	909	1089
70°	576	941	1160
75°	468	989	1198
80°	346	969	969
85°	264	715	807



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	62.9	3.1
10°-20°	180.7	8.8
20°-30°	275.1	13.4
30°-40°	334.0	16.3
40°-50°	352.8	17.2
50°-60°	333.0	16.3
60°-70°	276.8	13.5
70°-80°	182.1	8.9
80°-90°	49.6	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°	518.6	25.3
0°-40°	852.6	41.7
0°-60°	1538.4	75.2
0°-90°	2047.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2047.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	664	664	664	664	664	
5°	662	662	660	662	662	63
15°	637	638	638	644	644	180
25°	586	590	595	605	607	270
35°	515	521	533	547	551	322
45°	427	435	457	479	488	329
55°	323	337	373	408	421	288
65°	207	231	285	327	342	205
75°	90	131	190	225	230	97
85°	17	38	46	51	52	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	664.2	664.2	664.2	664.2	664.2
2.5°	665.0	664.2	660.7	664.2	664.2
5°	662.4	662.4	659.9	662.4	662.4
7.5°	658.2	658.2	656.4	659.9	659.9
10°	653.0	653.0	652.2	656.4	656.4
12.5°	645.3	646.2	645.3	650.4	650.4
15°	636.7	637.6	638.4	644.4	644.4
17.5°	625.6	627.3	629.0	635.9	636.7
20°	615.3	616.2	619.6	627.3	628.2
22.5°	601.6	604.2	608.4	616.2	618.7
25°	586.2	589.6	594.7	605.0	606.7
27.5°	571.6	574.2	581.0	592.2	595.6
30°	553.6	557.9	566.5	577.6	581.9
32.5°	536.5	540.7	551.0	563.0	566.5
35°	515.0	521.0	533.0	546.7	551.0
37.5°	494.5	500.5	515.0	530.5	535.6
40°	473.0	479.9	495.3	513.3	520.2
42.5°	449.9	459.3	476.5	496.2	503.9
45°	426.8	435.3	456.8	479.0	487.6
47.5°	401.9	412.2	435.3	461.9	472.2
50°	375.4	388.2	414.8	443.9	455.1
52.5°	348.8	363.4	393.3	425.9	437.9
55°	323.1	336.8	372.8	407.9	420.8
57.5°	294.8	311.9	351.4	389.1	401.9
60°	265.7	284.5	329.9	369.4	383.1
62.5°	236.5	257.9	309.4	348.8	363.4
65°	207.4	231.4	285.4	327.4	341.9
67.5°	179.1	205.7	263.1	305.1	319.6
70°	146.5	180.0	239.1	280.2	294.8
72.5°	116.5	155.1	216.0	254.5	267.4
75°	90.0	131.1	190.2	225.4	230.5
77.5°	66.0	107.1	163.7	175.7	176.5
80°	44.6	85.7	125.1	123.4	125.1
82.5°	29.1	64.3	78.8	88.3	89.1
85°	17.1	37.7	46.3	51.4	52.3
87.5°	8.6	12.9	16.3	17.1	18.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)