

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: P309222

Luminaire Tested: **24FCZ2-30-UNV-L82765-HRP-CP250-W2A-U-3000K**

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: P309222
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-CP250-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
POLYCARB SHEET
Light Source: (168) 3000K 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: 1843.0 lumens
Efficiency: N/A
Efficacy: 79.4 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

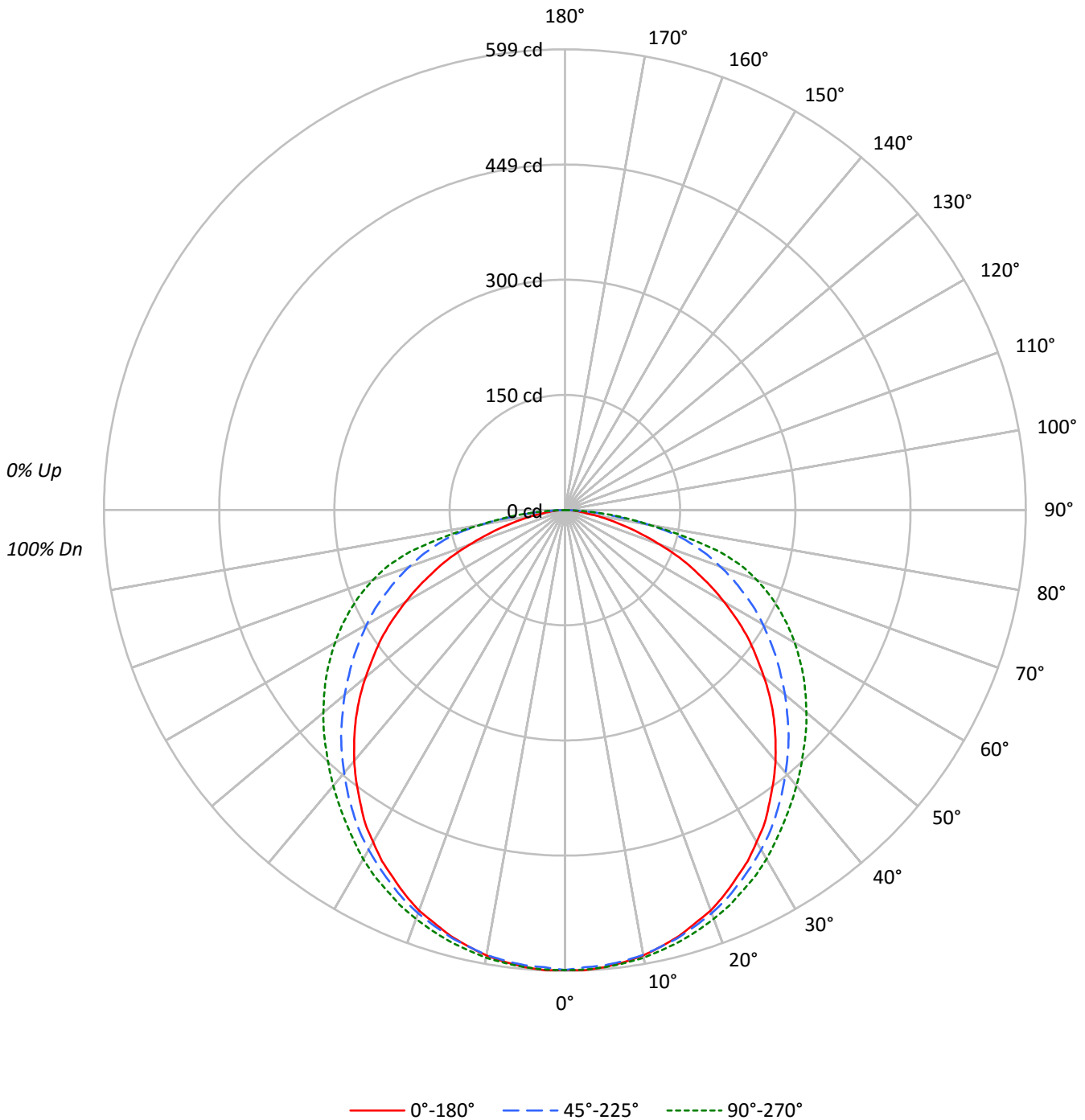
Input Watts (W): 23.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	805	805	805
5°	806	802	806
10°	803	802	807
15°	799	801	808
20°	793	799	810
25°	784	795	811
30°	774	792	814
35°	762	788	815
40°	748	783	823
45°	731	782	835
50°	707	782	858
55°	682	787	889
60°	644	799	928
65°	594	818	980
70°	519	847	1044
75°	421	891	1079
80°	311	872	872
85°	238	644	727



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	56.6	3.1
10°-20°	162.7	8.8
20°-30°	247.6	13.4
30°-40°	300.7	16.3
40°-50°	317.7	17.2
50°-60°	299.8	16.3
60°-70°	249.2	13.5
70°-80°	164.0	8.9
80°-90°	44.7	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°	466.9	25.3
0°-40°	767.6	41.7
0°-60°	1385.1	75.2
0°-90°	1843.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1843.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	598	598	598	598	598	
5°	596	596	594	596	596	57
15°	573	574	575	580	580	162
25°	528	531	536	545	546	243
35°	464	469	480	492	496	290
45°	384	392	411	431	439	296
55°	291	303	336	367	379	259
65°	187	208	257	295	308	185
75°	81	118	171	203	208	87
85°	15	34	42	46	47	19
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	598.0	598.0	598.0	598.0	598.0
2.5°	598.7	598.0	594.9	598.0	598.0
5°	596.4	596.4	594.1	596.4	596.4
7.5°	592.6	592.6	591.0	594.1	594.1
10°	587.9	587.9	587.2	591.0	591.0
12.5°	581.0	581.8	581.0	585.6	585.6
15°	573.3	574.0	574.8	580.2	580.2
17.5°	563.2	564.8	566.3	572.5	573.3
20°	554.0	554.8	557.8	564.8	565.6
22.5°	541.6	544.0	547.8	554.8	557.1
25°	527.8	530.8	535.5	544.7	546.3
27.5°	514.6	516.9	523.1	533.2	536.2
30°	498.4	502.3	510.0	520.0	523.9
32.5°	483.0	486.9	496.1	506.9	510.0
35°	463.7	469.1	479.9	492.3	496.1
37.5°	445.2	450.6	463.7	477.6	482.2
40°	425.9	432.1	446.0	462.2	468.3
42.5°	405.1	413.6	429.0	446.7	453.7
45°	384.2	392.0	411.2	431.3	439.0
47.5°	361.9	371.1	392.0	415.9	425.1
50°	337.9	349.5	373.4	399.7	409.7
52.5°	314.0	327.1	354.1	383.5	394.3
55°	290.9	303.2	335.6	367.3	378.8
57.5°	265.4	280.8	316.3	350.3	361.9
60°	239.2	256.2	297.1	332.5	344.9
62.5°	213.0	232.2	278.5	314.0	327.1
65°	186.7	208.3	256.9	294.7	307.9
67.5°	161.3	185.2	236.9	274.7	287.8
70°	131.9	162.0	215.3	252.3	265.4
72.5°	104.9	139.7	194.4	229.2	240.7
75°	81.0	118.0	171.3	202.9	207.6
77.5°	59.4	96.4	147.4	158.2	158.9
80°	40.1	77.2	112.6	111.1	112.6
82.5°	26.2	57.9	71.0	79.5	80.2
85°	15.4	33.9	41.7	46.3	47.1
87.5°	7.7	11.6	14.7	15.4	17.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)