

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: P309990

Luminaire Tested: **24FCZ2-35-UNV-L82765-RDP-CP250-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: P309990
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-35-UNV-L82765-RDP-CP250-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" POLYCARB 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: 2062.0 lumens
Efficiency: N/A
Efficacy: 72.4 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

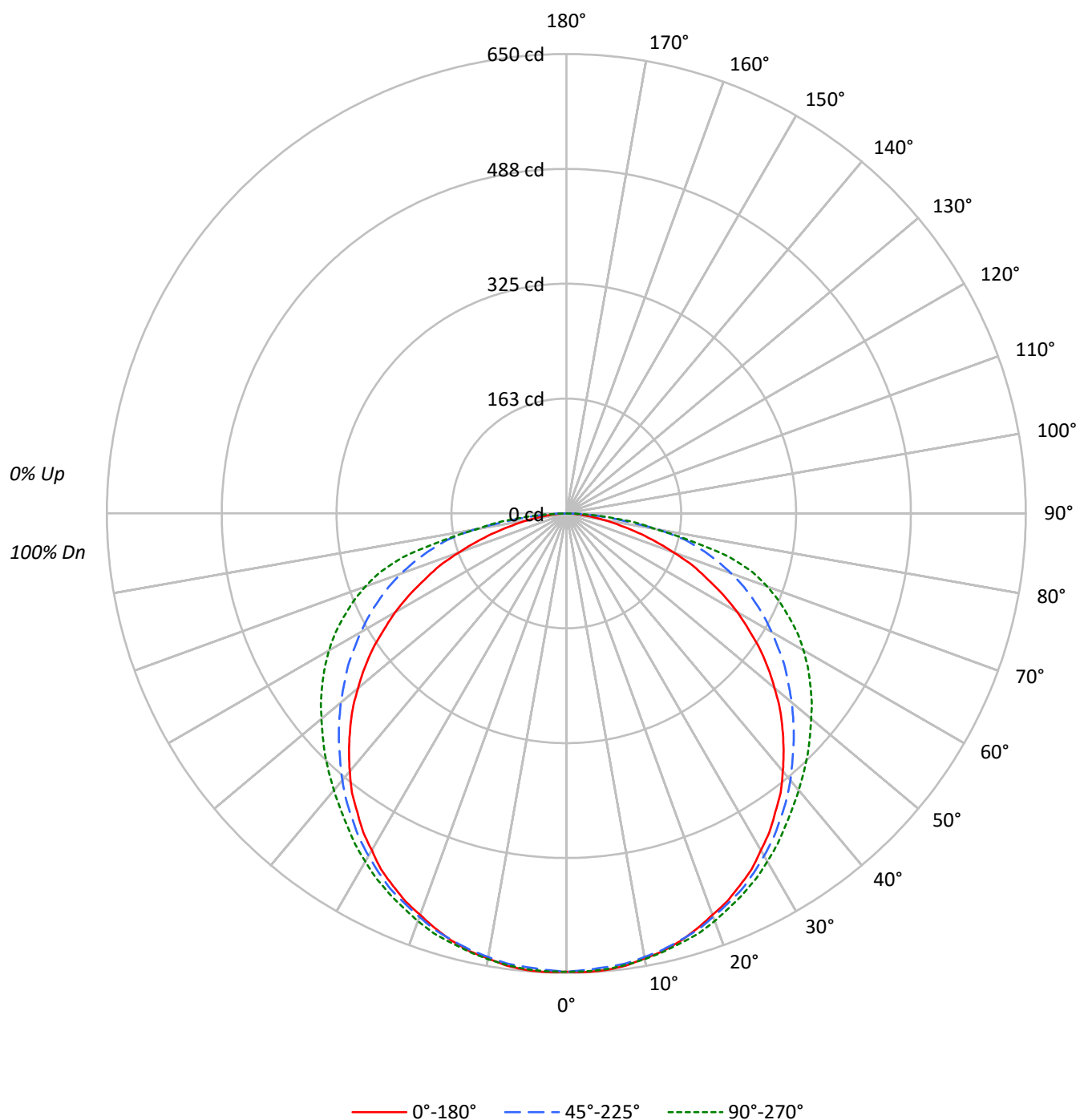
Input Watts (W): 28.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				0
RW	70	50	30	10	70	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		100
1	108	103	98	94	105	100	96	92	96	93	89		92	89	87		82
2	97	89	81	75	95	87	80	74	83	77	72		80	75	71		67
3	88	77	68	62	86	76	68	61	72	66	60		70	64	59		56
4	81	68	59	52	78	67	58	51	64	57	51		62	55	50		47
5	74	60	51	44	72	59	51	44	57	49	43		55	48	43		40
6	68	54	45	38	66	53	45	38	51	44	38		50	43	37		35
7	63	49	40	34	61	48	40	34	47	39	33		45	38	33		31
8	59	45	36	30	57	44	36	30	43	35	30		41	34	29		27
9	55	41	33	27	53	40	32	27	39	32	27		38	31	26		24
10	51	38	30	24	50	37	29	24	36	29	24		35	29	24		22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	872	872	872
5°	876	870	874
10°	873	871	875
15°	872	870	876
20°	866	870	879
25°	862	872	881
30°	855	869	884
35°	847	867	887
40°	837	866	898
45°	823	866	919
50°	805	871	946
55°	784	885	989
60°	751	903	1043
65°	703	934	1107
70°	640	978	1191
75°	542	1031	1244
80°	428	1038	1007
85°	316	789	885



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	61.5	3.0
10°-20°	177.0	8.6
20°-30°	270.7	13.1
30°-40°	330.9	16.0
40°-50°	352.7	17.1
50°-60°	337.2	16.4
60°-70°	285.7	13.9
70°-80°	192.0	9.3
80°-90°	54.2	2.6
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°	509.2	24.7
0°-40°	840.2	40.7
0°-60°	1530.2	74.2
0°-90°	2062.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2062.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	648	648	648	648	648	
5°	648	647	644	647	647	62
15°	626	626	625	630	629	176
25°	581	583	587	592	593	268
35°	516	520	528	538	540	323
45°	433	440	455	475	483	334
55°	334	347	377	407	421	298
65°	221	243	294	332	348	219
75°	104	142	198	232	239	112
85°	20	42	51	55	57	25
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	648.4	648.4	648.4	648.4	648.4
2.5°	649.5	649.5	646.4	648.4	648.4
5°	648.4	647.4	644.3	647.4	647.4
7.5°	645.4	644.3	642.3	645.4	644.3
10°	639.2	639.2	637.2	640.3	640.3
12.5°	634.1	633.1	632.1	636.2	635.1
15°	625.9	625.9	624.9	630.0	629.0
17.5°	615.7	616.7	617.8	621.8	622.9
20°	604.5	606.5	607.5	613.7	613.7
22.5°	594.2	595.3	597.3	603.4	603.4
25°	580.9	583.0	587.1	592.2	593.2
27.5°	567.6	568.7	573.8	580.9	582.0
30°	550.3	553.3	559.5	567.6	568.7
32.5°	534.9	538.0	545.1	553.3	555.4
35°	515.5	519.6	527.8	538.0	540.0
37.5°	498.1	501.2	511.4	522.6	525.7
40°	476.6	482.8	493.0	506.3	511.4
42.5°	455.1	461.3	473.5	490.9	497.1
45°	432.6	439.8	455.1	474.6	482.8
47.5°	410.1	418.3	435.7	458.2	467.4
50°	384.6	394.8	416.3	441.8	452.1
52.5°	360.0	372.3	395.8	424.5	437.7
55°	334.4	346.7	377.4	407.1	421.4
57.5°	305.8	322.2	355.9	389.7	405.0
60°	279.2	294.6	335.5	372.3	387.6
62.5°	250.6	271.0	315.0	353.9	369.2
65°	220.9	243.4	293.5	332.4	347.7
67.5°	194.3	218.9	272.1	310.9	326.3
70°	162.6	193.3	248.5	287.4	302.7
72.5°	133.0	166.7	224.0	261.8	276.1
75°	104.3	142.2	198.4	232.2	239.3
77.5°	77.7	117.6	171.8	186.1	181.0
80°	55.2	94.1	134.0	126.8	129.9
82.5°	35.8	71.6	82.8	94.1	97.2
85°	20.5	41.9	51.1	55.2	57.3
87.5°	9.2	15.3	20.5	20.5	19.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)