

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: P313480

Luminaire Tested: **24FCZ2-35HE-UNV-L83050-RDP-CP187-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: P313480
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: 24FCZ2-35HE-UNV-L83050-RDP-CP187-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" POLYCARB SHEET
Light Source: (336) 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: 1913.0 lumens
Efficiency: N/A
Efficacy: 73.9 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

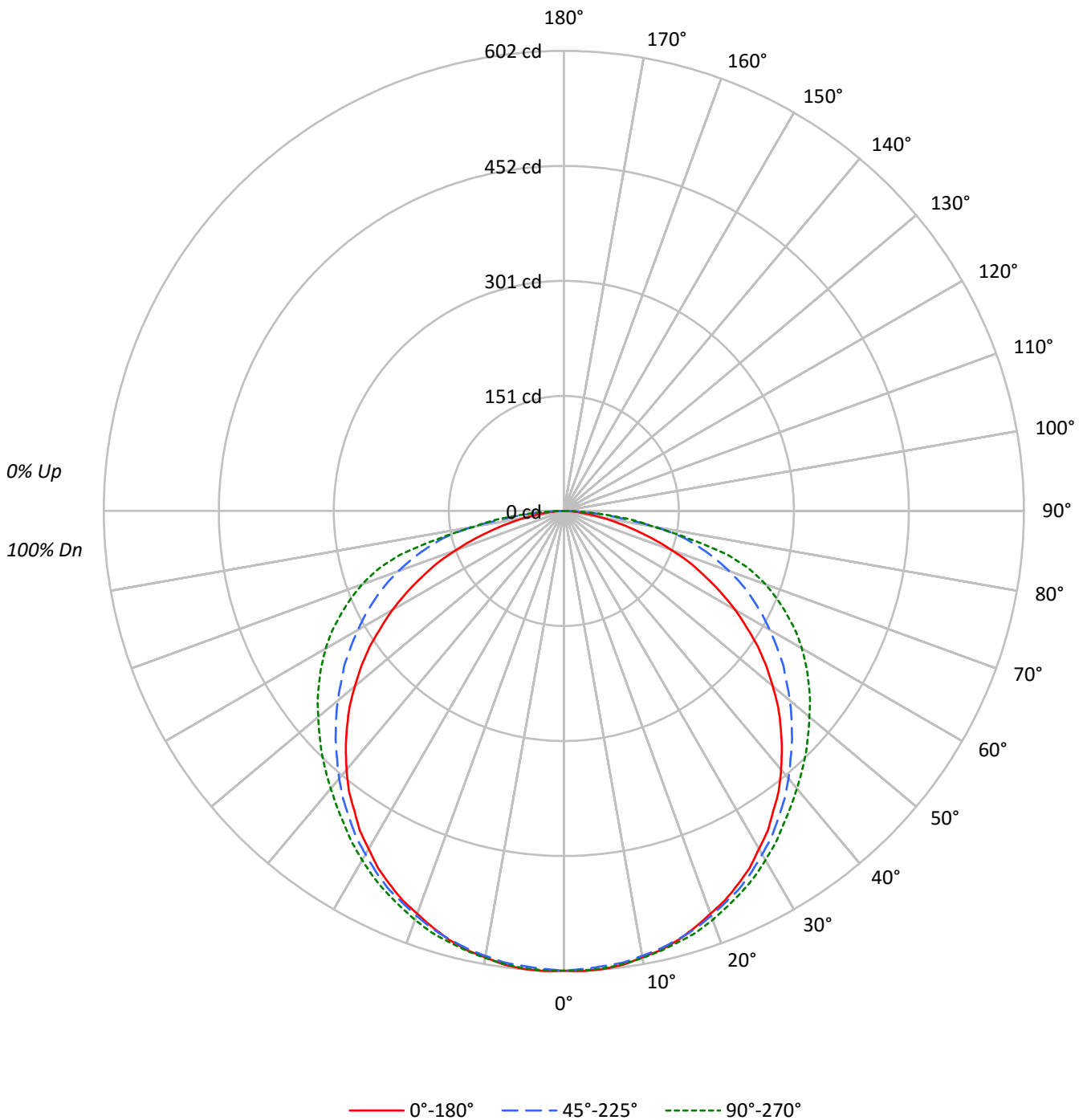
Input Watts (W): 25.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	100	96	92	96	93	89	92	89	87	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	809	809	809
5°	813	807	811
10°	810	808	812
15°	809	808	813
20°	803	807	815
25°	800	809	817
30°	793	806	820
35°	785	804	823
40°	777	803	833
45°	764	803	852
50°	747	808	878
55°	728	821	917
60°	697	837	968
65°	653	867	1027
70°	594	907	1105
75°	503	957	1154
80°	397	963	934
85°	293	732	820



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	57.1	3.0
10°-20°	164.2	8.6
20°-30°	251.1	13.1
30°-40°	307.0	16.0
40°-50°	327.2	17.1
50°-60°	312.9	16.4
60°-70°	265.1	13.9
70°-80°	178.1	9.3
80°-90°	50.2	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°	472.4	24.7
0°-40°	779.5	40.7
0°-60°	1419.6	74.2
0°-90°	1913.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1913.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	602	602	602	602	602	
5°	602	601	598	601	601	57
15°	581	581	580	584	584	164
25°	539	541	545	549	550	248
35°	478	482	490	499	501	300
45°	401	408	422	440	448	310
55°	310	322	350	378	391	276
65°	205	226	272	308	323	203
75°	97	132	184	215	222	104
85°	19	39	47	51	53	23
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	601.6	601.6	601.6	601.6	601.6
2.5°	602.5	602.5	599.7	601.6	601.6
5°	601.6	600.6	597.8	600.6	600.6
7.5°	598.7	597.8	595.9	598.7	597.8
10°	593.0	593.0	591.1	594.0	594.0
12.5°	588.3	587.4	586.4	590.2	589.2
15°	580.7	580.7	579.8	584.5	583.6
17.5°	571.2	572.2	573.1	576.9	577.9
20°	560.8	562.7	563.6	569.3	569.3
22.5°	551.3	552.2	554.1	559.8	559.8
25°	539.0	540.9	544.7	549.4	550.3
27.5°	526.6	527.6	532.3	539.0	539.9
30°	510.5	513.3	519.0	526.6	527.6
32.5°	496.3	499.1	505.7	513.3	515.2
35°	478.2	482.0	489.6	499.1	501.0
37.5°	462.1	464.9	474.4	484.9	487.7
40°	442.2	447.9	457.4	469.7	474.4
42.5°	422.2	427.9	439.3	455.5	461.2
45°	401.4	408.0	422.2	440.3	447.9
47.5°	380.5	388.1	404.2	425.1	433.6
50°	356.8	366.3	386.2	409.9	419.4
52.5°	334.0	345.4	367.2	393.8	406.1
55°	310.3	321.7	350.1	377.7	390.9
57.5°	283.7	298.9	330.2	361.5	375.8
60°	259.0	273.3	311.2	345.4	359.6
62.5°	232.5	251.5	292.3	328.3	342.5
65°	205.0	225.8	272.3	308.4	322.6
67.5°	180.3	203.1	252.4	288.5	302.7
70°	150.9	179.3	230.6	266.6	280.9
72.5°	123.4	154.7	207.8	242.9	256.2
75°	96.8	131.9	184.1	215.4	222.0
77.5°	72.1	109.1	159.4	172.7	168.0
80°	51.2	87.3	124.3	117.7	120.5
82.5°	33.2	66.4	76.9	87.3	90.1
85°	19.0	38.9	47.4	51.2	53.1
87.5°	8.5	14.2	19.0	19.0	18.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)