

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: P313530

Luminaire Tested: **24FCZ2-40HE-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: P313530
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: 24FCZ2-40HE-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: 2215.0 lumens
Efficiency: N/A
Efficacy: 73.1 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

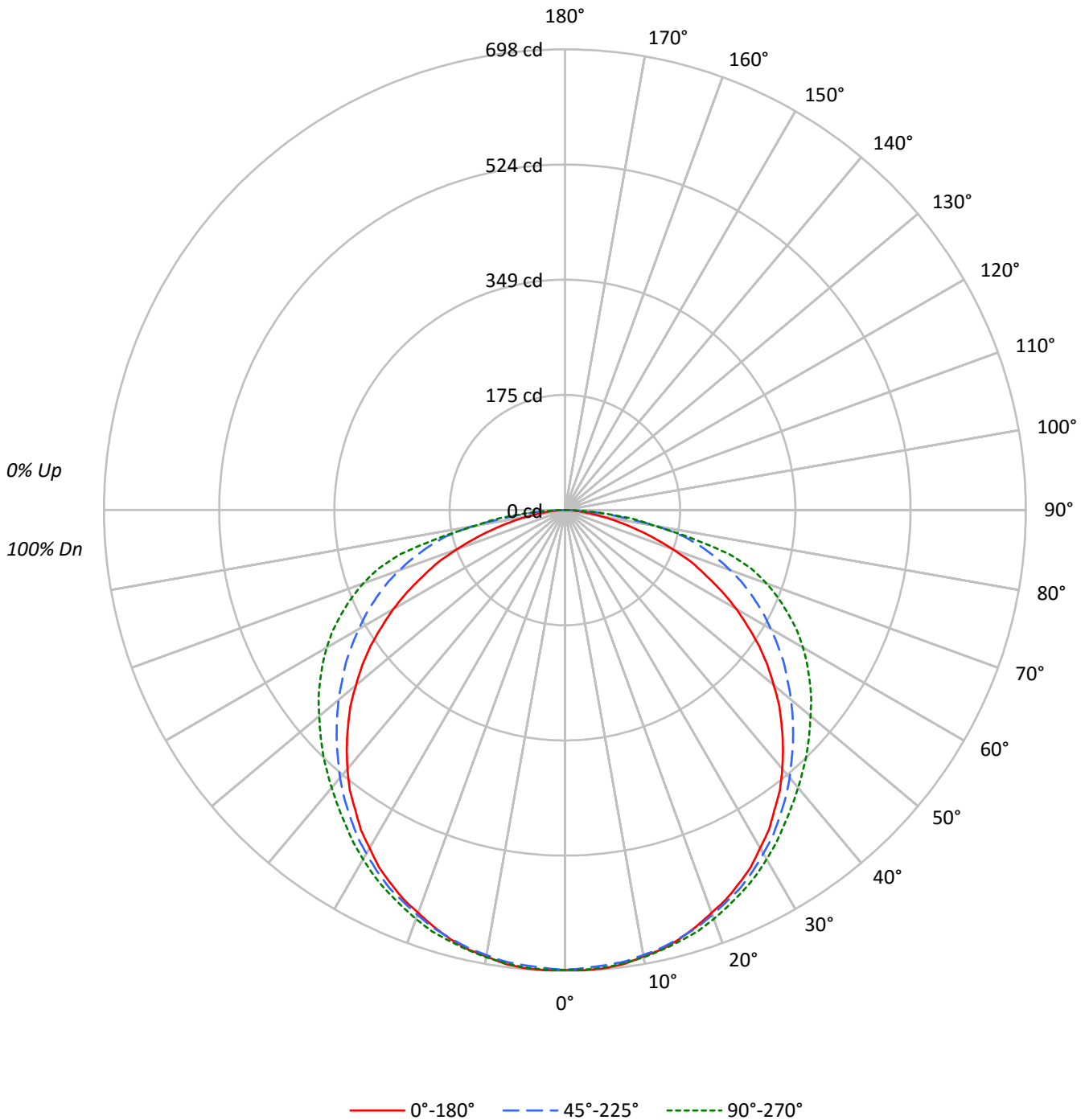
Input Watts (W): 30.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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	68	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°	937	937	937
5°	941	935	939
10°	938	935	940
15°	937	935	941
20°	930	934	944
25°	926	936	946
30°	918	934	949
35°	909	931	953
40°	899	930	965
45°	884	930	987
50°	865	936	1016
55°	843	951	1062
60°	807	970	1121
65°	755	1004	1189
70°	687	1050	1279
75°	583	1108	1337
80°	459	1115	1081
85°	340	848	949



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.1	3.0
10°-20°	190.2	8.6
20°-30°	290.8	13.1
30°-40°	355.5	16.0
40°-50°	378.9	17.1
50°-60°	362.3	16.4
60°-70°	306.9	13.9
70°-80°	206.2	9.3
80°-90°	58.2	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°	547.0	24.7
0°-40°	902.5	40.7
0°-60°	1643.7	74.2
0°-90°	2215.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2215.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	697	697	697	697	697	
5°	697	696	692	696	696	66
15°	672	672	671	677	676	190
25°	624	626	631	636	637	288
35°	554	558	567	578	580	347
45°	465	472	489	510	519	358
55°	359	372	405	437	453	320
65°	237	262	315	357	374	236
75°	112	153	213	249	257	120
85°	22	45	55	59	62	27
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	696.6	696.6	696.6	696.6	696.6
2.5°	697.7	697.7	694.4	696.6	696.6
5°	696.6	695.5	692.2	695.5	695.5
7.5°	693.3	692.2	690.0	693.3	692.2
10°	686.7	686.7	684.5	687.8	687.8
12.5°	681.2	680.1	679.0	683.4	682.3
15°	672.4	672.4	671.3	676.8	675.7
17.5°	661.4	662.5	663.6	668.0	669.1
20°	649.3	651.5	652.6	659.2	659.2
22.5°	638.3	639.4	641.6	648.2	648.2
25°	624.0	626.2	630.6	636.1	637.2
27.5°	609.8	610.9	616.4	624.0	625.1
30°	591.1	594.4	601.0	609.8	610.9
32.5°	574.6	577.9	585.6	594.4	596.6
35°	553.7	558.1	566.9	577.9	580.1
37.5°	535.1	538.3	549.3	561.4	564.7
40°	512.0	518.6	529.6	543.8	549.3
42.5°	488.9	495.5	508.7	527.4	534.0
45°	464.7	472.4	488.9	509.8	518.6
47.5°	440.6	449.4	468.0	492.2	502.1
50°	413.1	424.1	447.2	474.6	485.6
52.5°	386.7	399.9	425.2	455.9	470.2
55°	359.3	372.4	405.4	437.3	452.7
57.5°	328.5	346.1	382.3	418.6	435.1
60°	299.9	316.4	360.4	399.9	416.4
62.5°	269.2	291.1	338.4	380.1	396.6
65°	237.3	261.5	315.3	357.1	373.5
67.5°	208.7	235.1	292.2	334.0	350.5
70°	174.7	207.6	267.0	308.7	325.2
72.5°	142.8	179.1	240.6	281.3	296.6
75°	112.1	152.7	213.1	249.4	257.1
77.5°	83.5	126.3	184.6	200.0	194.5
80°	59.3	101.1	143.9	136.2	139.5
82.5°	38.5	76.9	89.0	101.1	104.4
85°	22.0	45.0	54.9	59.3	61.5
87.5°	9.9	16.5	22.0	22.0	20.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)