

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: P313537

Luminaire Tested: **24FCZ2-40HE-UNV-L83050-RDP-CP250-W2A-U-4000K**

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: P313537
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-CP250-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" POLYCARB SHEET
Light Source: (336) 4000K 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: 2441.0 lumens
Efficiency: N/A
Efficacy: 78.5 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

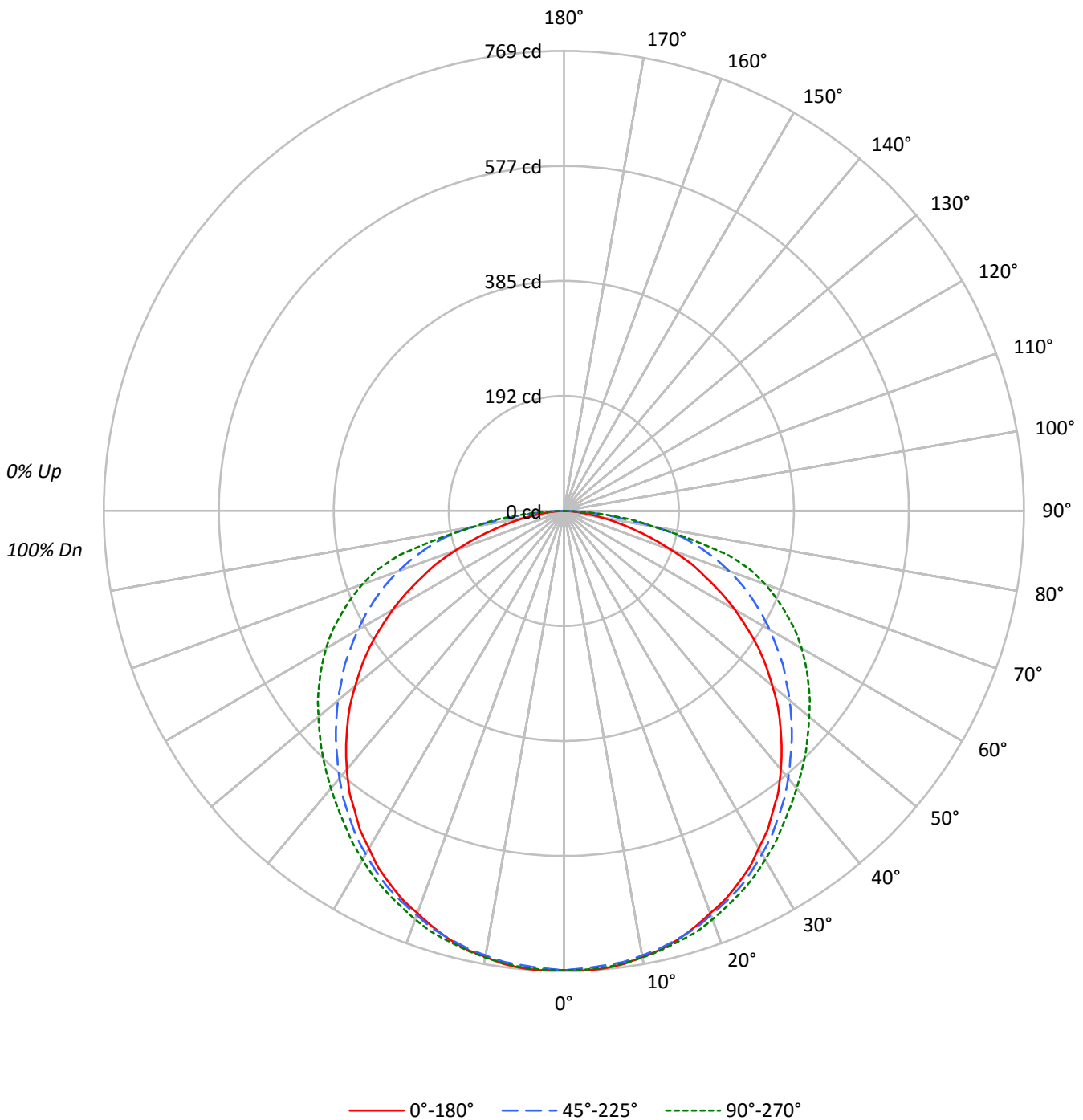
Input Watts (W): 31.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1033	1033	1033
5°	1037	1030	1035
10°	1034	1031	1035
15°	1032	1031	1037
20°	1025	1030	1040
25°	1021	1032	1042
30°	1012	1029	1046
35°	1002	1026	1050
40°	991	1025	1063
45°	975	1025	1087
50°	953	1032	1120
55°	929	1048	1170
60°	889	1069	1235
65°	833	1106	1311
70°	757	1157	1410
75°	642	1221	1473
80°	507	1229	1192
85°	374	934	1047



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.8	3.0
10°-20°	209.6	8.6
20°-30°	320.5	13.1
30°-40°	391.8	16.0
40°-50°	417.6	17.1
50°-60°	399.2	16.4
60°-70°	338.2	13.9
70°-80°	227.3	9.3
80°-90°	64.1	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°	602.9	24.7
0°-40°	994.6	40.7
0°-60°	1811.4	74.2
0°-90°	2441.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2441.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	768	768	768	768	768	
5°	768	766	763	766	766	73
15°	741	741	740	746	745	209
25°	688	690	695	701	702	317
35°	610	615	625	637	639	382
45°	512	521	539	562	572	395
55°	396	410	447	482	499	353
65°	262	288	348	394	412	260
75°	124	168	235	275	283	132
85°	24	50	60	65	68	30
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	767.6	767.6	767.6	767.6	767.6
2.5°	768.8	768.8	765.2	767.6	767.6
5°	767.6	766.4	762.8	766.4	766.4
7.5°	764.0	762.8	760.4	764.0	762.8
10°	756.7	756.7	754.3	757.9	757.9
12.5°	750.7	749.5	748.3	753.1	751.9
15°	741.0	741.0	739.8	745.8	744.6
17.5°	728.9	730.1	731.3	736.1	737.4
20°	715.6	718.0	719.2	726.5	726.5
22.5°	703.5	704.7	707.1	714.4	714.4
25°	687.7	690.1	695.0	701.0	702.2
27.5°	672.0	673.2	679.2	687.7	688.9
30°	651.4	655.0	662.3	672.0	673.2
32.5°	633.2	636.9	645.3	655.0	657.4
35°	610.2	615.1	624.8	636.9	639.3
37.5°	589.6	593.3	605.4	618.7	622.3
40°	564.2	571.5	583.6	599.3	605.4
42.5°	538.8	546.1	560.6	581.2	588.4
45°	512.2	520.6	538.8	561.8	571.5
47.5°	485.5	495.2	515.8	542.4	553.3
50°	455.2	467.4	492.8	523.1	535.2
52.5°	426.2	440.7	468.6	502.5	518.2
55°	395.9	410.4	446.8	481.9	498.8
57.5°	362.0	381.4	421.3	461.3	479.5
60°	330.5	348.7	397.1	440.7	458.9
62.5°	296.6	320.9	372.9	418.9	437.1
65°	261.5	288.2	347.5	393.5	411.7
67.5°	230.0	259.1	322.1	368.1	386.2
70°	192.5	228.8	294.2	340.2	358.4
72.5°	157.4	197.4	265.2	310.0	326.9
75°	123.5	168.3	234.9	274.8	283.3
77.5°	92.0	139.2	203.4	220.4	214.3
80°	65.4	111.4	158.6	150.1	153.8
82.5°	42.4	84.8	98.1	111.4	115.0
85°	24.2	49.6	60.5	65.4	67.8
87.5°	10.9	18.2	24.2	24.2	23.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)