

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: P313171

Luminaire Tested: **24FCZ2-40-UNV-L83050-HRP-CA125-W2A-U-3500K**

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: P313171
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: 24FCZ2-40-UNV-L83050-HRP-CA125-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" ACRYLIC SHEET
Light Source: (168) 3500K 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: 2865.0 lumens
Efficiency: N/A
Efficacy: 87.6 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

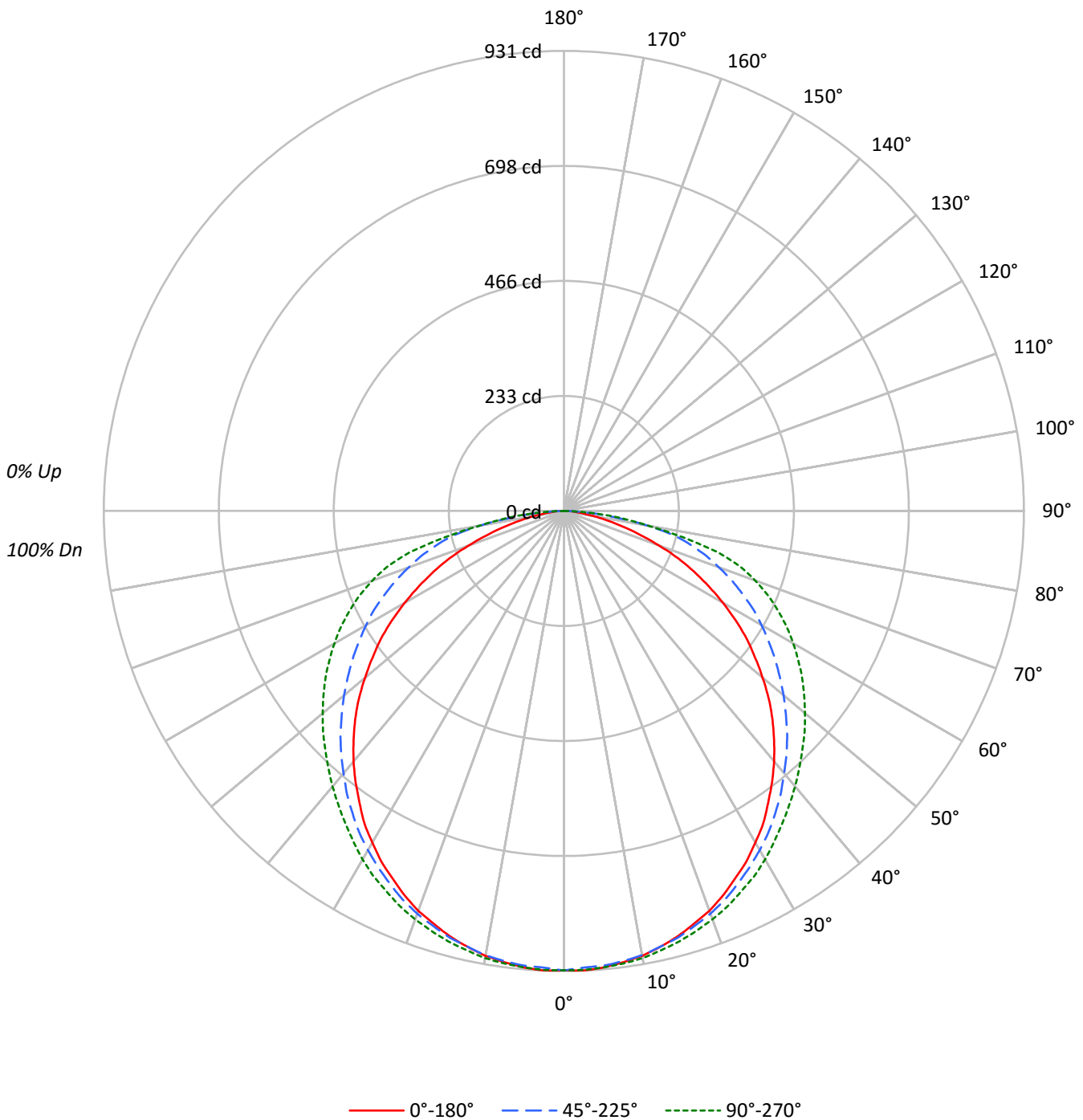
Input Watts (W): 32.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1251	1251	1251
5°	1252	1247	1252
10°	1249	1247	1255
15°	1241	1245	1256
20°	1233	1242	1259
25°	1218	1236	1261
30°	1204	1232	1265
35°	1184	1225	1267
40°	1163	1218	1279
45°	1137	1216	1299
50°	1100	1215	1333
55°	1061	1224	1381
60°	1001	1243	1443
65°	924	1272	1524
70°	807	1316	1623
75°	655	1384	1677
80°	483	1357	1357
85°	371	1000	1130



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	88.1	3.1
10°-20°	252.9	8.8
20°-30°	385.0	13.4
30°-40°	467.4	16.3
40°-50°	493.8	17.2
50°-60°	466.0	16.3
60°-70°	387.5	13.5
70°-80°	254.9	8.9
80°-90°	69.5	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°	725.9	25.3
0°-40°	1193.3	41.7
0°-60°	2153.2	75.2
0°-90°	2865.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2865.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	930	930	930	930	930	
5°	927	927	924	927	927	88
15°	891	892	894	902	902	251
25°	820	825	832	847	849	378
35°	721	729	746	765	771	451
45°	597	609	639	670	682	460
55°	452	471	522	571	589	403
65°	290	324	399	458	479	287
75°	126	184	266	315	323	136
85°	24	53	65	72	73	29
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	929.6	929.6	929.6	929.6	929.6
2.5°	930.8	929.6	924.8	929.6	929.6
5°	927.2	927.2	923.6	927.2	927.2
7.5°	921.2	921.2	918.8	923.6	923.6
10°	914.0	914.0	912.8	918.8	918.8
12.5°	903.2	904.4	903.2	910.4	910.4
15°	891.2	892.4	893.6	902.0	902.0
17.5°	875.6	878.0	880.4	890.0	891.2
20°	861.2	862.4	867.2	878.0	879.2
22.5°	842.0	845.6	851.6	862.4	866.0
25°	820.4	825.2	832.4	846.8	849.2
27.5°	800.0	803.6	813.2	828.8	833.6
30°	774.8	780.8	792.8	808.4	814.4
32.5°	750.8	756.8	771.2	788.0	792.8
35°	720.9	729.2	746.0	765.2	771.2
37.5°	692.1	700.5	720.9	742.4	749.6
40°	662.1	671.7	693.3	718.5	728.0
42.5°	629.7	642.9	666.9	694.5	705.3
45°	597.3	609.3	639.3	670.5	682.5
47.5°	562.5	576.9	609.3	646.5	660.9
50°	525.3	543.3	580.5	621.3	636.9
52.5°	488.2	508.6	550.5	596.1	612.9
55°	452.2	471.4	521.7	570.9	588.9
57.5°	412.6	436.6	491.8	544.5	562.5
60°	371.8	398.2	461.8	517.0	536.1
62.5°	331.0	361.0	433.0	488.2	508.6
65°	290.3	323.8	399.4	458.2	478.6
67.5°	250.7	287.9	368.2	427.0	447.4
70°	205.1	251.9	334.6	392.2	412.6
72.5°	163.1	217.1	302.3	356.2	374.2
75°	125.9	183.5	266.3	315.4	322.6
77.5°	92.4	149.9	229.1	245.9	247.1
80°	62.4	119.9	175.1	172.7	175.1
82.5°	40.8	90.0	110.3	123.5	124.7
85°	24.0	52.8	64.8	72.0	73.2
87.5°	12.0	18.0	22.8	24.0	26.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)