

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: P313548

Luminaire Tested: **24FCZ2-40-UNV-L83050-RDP-CA125-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: P313548
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: 24FCZ2-40-UNV-L83050-RDP-CA125-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" ACRYLIC 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: 2629.0 lumens
Efficiency: N/A
Efficacy: 76.6 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

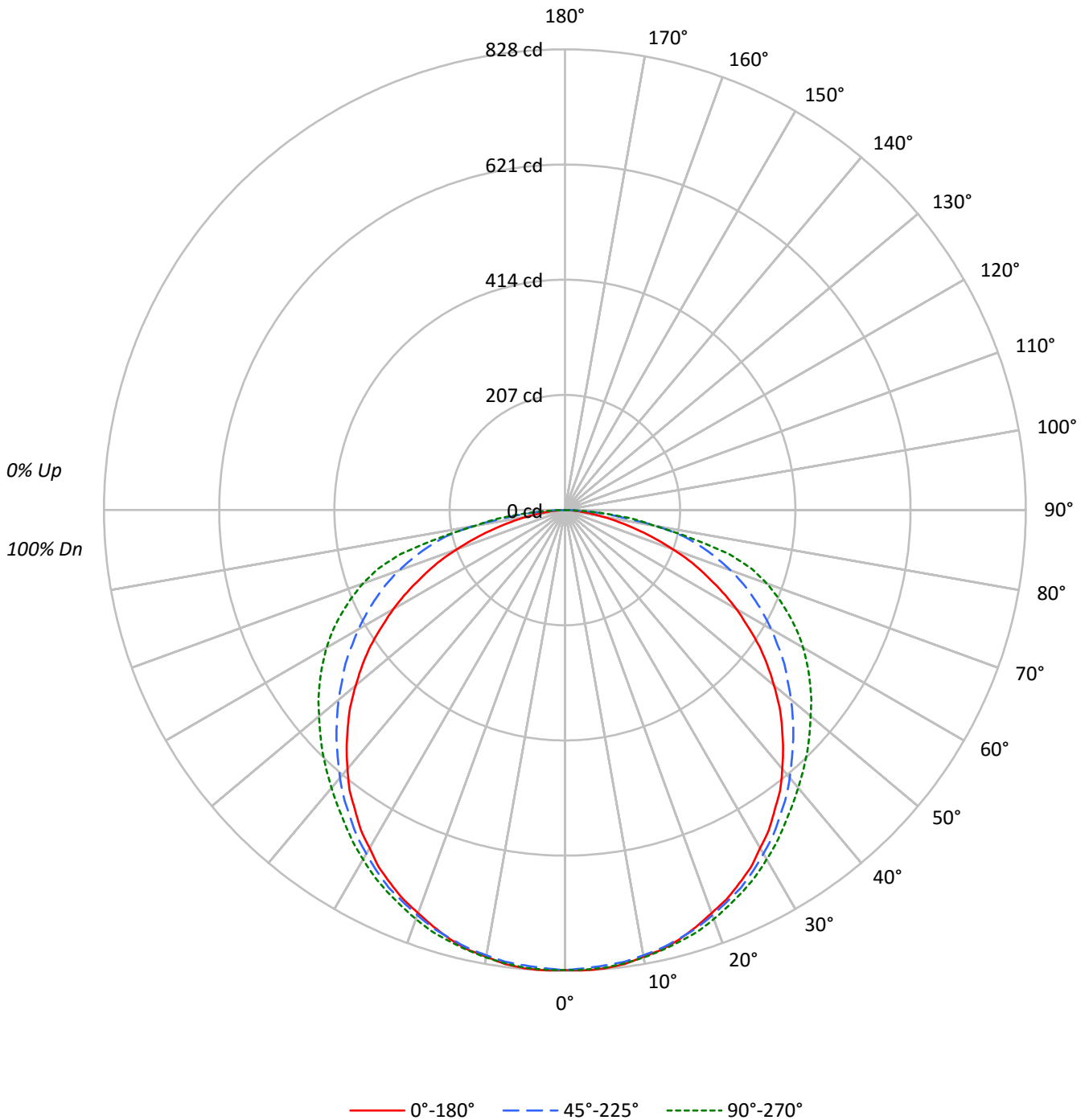
Input Watts (W): 34.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1112	1112	1112
5°	1117	1110	1115
10°	1113	1110	1115
15°	1112	1110	1117
20°	1104	1109	1120
25°	1100	1111	1123
30°	1090	1108	1126
35°	1079	1105	1131
40°	1067	1104	1145
45°	1050	1104	1171
50°	1026	1111	1207
55°	1000	1129	1260
60°	958	1151	1330
65°	897	1192	1412
70°	816	1247	1519
75°	691	1315	1586
80°	545	1323	1283
85°	403	1007	1127



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	78.4	3.0
10°-20°	225.7	8.6
20°-30°	345.2	13.1
30°-40°	421.9	16.0
40°-50°	449.7	17.1
50°-60°	430.0	16.4
60°-70°	364.3	13.9
70°-80°	244.8	9.3
80°-90°	69.1	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°	649.3	24.7
0°-40°	1071.2	40.7
0°-60°	1950.9	74.2
0°-90°	2629.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2629.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	827	827	827	827	827	
5°	827	825	822	825	825	79
15°	798	798	797	803	802	225
25°	741	743	748	755	756	341
35°	657	662	673	686	688	412
45°	552	561	580	605	616	425
55°	426	442	481	519	537	380
65°	282	310	374	424	443	280
75°	133	181	253	296	305	142
85°	26	54	65	70	73	32
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	826.7	826.7	826.7	826.7	826.7
2.5°	828.0	828.0	824.1	826.7	826.7
5°	826.7	825.4	821.5	825.4	825.4
7.5°	822.8	821.5	818.9	822.8	821.5
10°	815.0	815.0	812.4	816.3	816.3
12.5°	808.5	807.2	805.9	811.1	809.8
15°	798.1	798.1	796.8	803.3	802.0
17.5°	785.0	786.3	787.6	792.8	794.1
20°	770.7	773.3	774.6	782.4	782.4
22.5°	757.6	758.9	761.5	769.4	769.4
25°	740.7	743.3	748.5	755.0	756.3
27.5°	723.7	725.0	731.6	740.7	742.0
30°	701.6	705.5	713.3	723.7	725.0
32.5°	682.0	685.9	695.0	705.5	708.1
35°	657.2	662.4	672.9	685.9	688.5
37.5°	635.1	639.0	652.0	666.4	670.3
40°	607.7	615.5	628.5	645.5	652.0
42.5°	580.3	588.1	603.8	625.9	633.8
45°	551.6	560.7	580.3	605.1	615.5
47.5°	522.9	533.3	555.5	584.2	595.9
50°	490.3	503.3	530.7	563.3	576.4
52.5°	459.0	474.7	504.7	541.2	558.1
55°	426.4	442.1	481.2	519.0	537.3
57.5°	389.9	410.8	453.8	496.8	516.4
60°	356.0	375.6	427.7	474.7	494.2
62.5°	319.5	345.6	401.6	451.2	470.7
65°	281.7	310.4	374.3	423.8	443.4
67.5°	247.8	279.1	346.9	396.4	416.0
70°	207.3	246.5	316.9	366.4	386.0
72.5°	169.5	212.6	285.6	333.8	352.1
75°	133.0	181.3	253.0	296.0	305.1
77.5°	99.1	150.0	219.1	237.3	230.8
80°	70.4	120.0	170.8	161.7	165.6
82.5°	45.6	91.3	105.6	120.0	123.9
85°	26.1	53.5	65.2	70.4	73.0
87.5°	11.7	19.6	26.1	26.1	24.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)