

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: P313521

Luminaire Tested: **24FCZ2-40HE-UNV-L83050-RDP-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: P313521
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-CA125-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" ACRYLIC SHEET
Light Source: (336) 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: 2496.0 lumens
Efficiency: N/A
Efficacy: 82.1 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

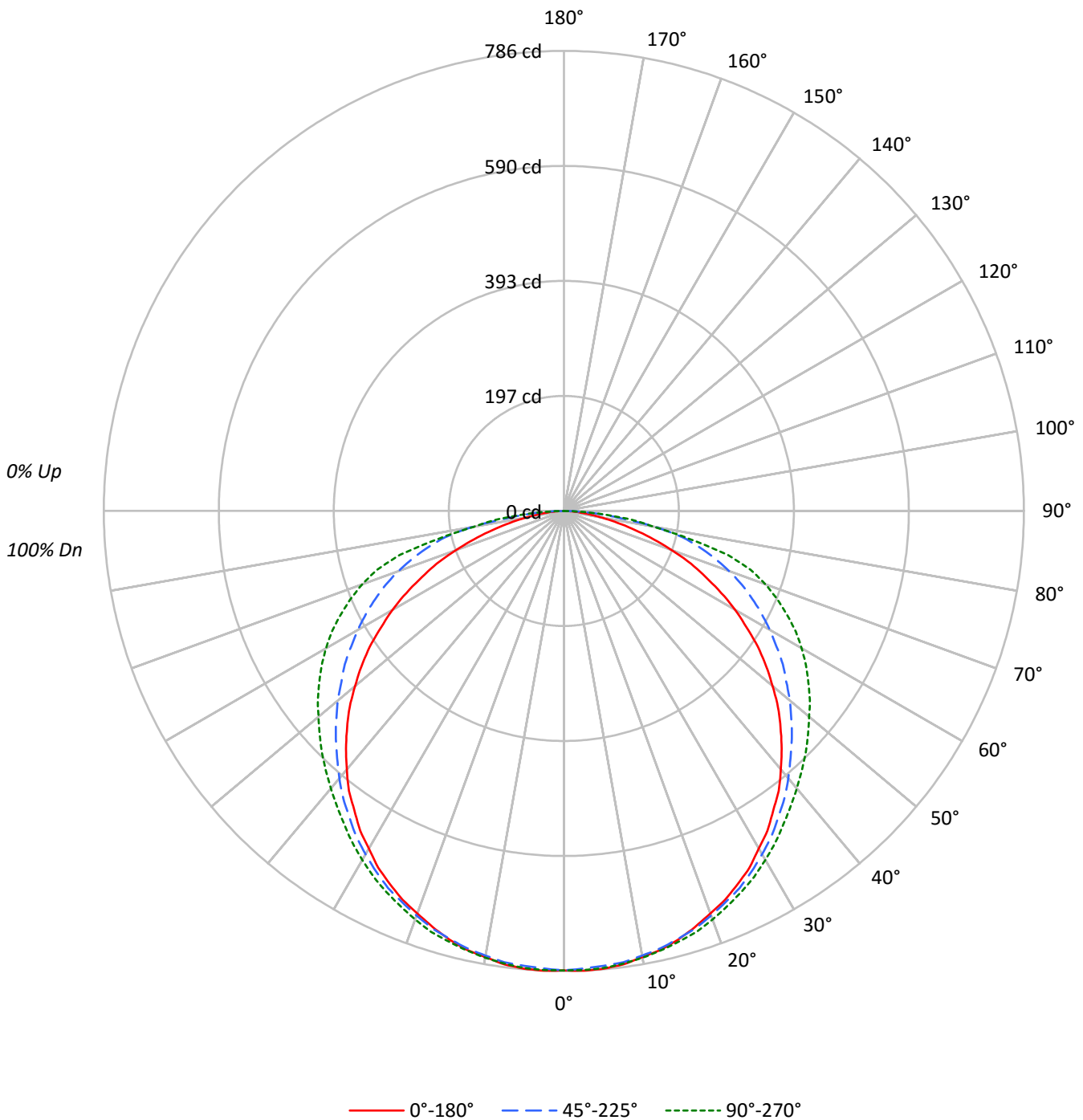
Input Watts (W): 30.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1056	1056	1056
5°	1060	1053	1058
10°	1057	1054	1059
15°	1055	1054	1061
20°	1048	1053	1064
25°	1044	1055	1066
30°	1035	1052	1070
35°	1025	1049	1074
40°	1013	1048	1087
45°	997	1048	1112
50°	974	1055	1145
55°	950	1072	1197
60°	910	1093	1263
65°	851	1131	1340
70°	774	1183	1442
75°	657	1249	1506
80°	518	1257	1218
85°	383	956	1070



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	74.5	3.0
10°-20°	214.3	8.6
20°-30°	327.7	13.1
30°-40°	400.6	16.0
40°-50°	427.0	17.1
50°-60°	408.2	16.4
60°-70°	345.8	13.9
70°-80°	232.4	9.3
80°-90°	65.6	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°	616.4	24.7
0°-40°	1017.0	40.7
0°-60°	1852.2	74.2
0°-90°	2496.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2496.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	785	785	785	785	785	
5°	785	784	780	784	784	75
15°	758	758	756	763	761	214
25°	703	706	711	717	718	324
35°	624	629	639	651	654	391
45°	524	532	551	574	584	404
55°	405	420	457	493	510	361
65°	267	295	355	402	421	265
75°	126	172	240	281	290	135
85°	25	51	62	67	69	31
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	784.9	784.9	784.9	784.9	784.9
2.5°	786.2	786.2	782.4	784.9	784.9
5°	784.9	783.7	780.0	783.7	783.7
7.5°	781.2	780.0	777.5	781.2	780.0
10°	773.8	773.8	771.3	775.0	775.0
12.5°	767.6	766.4	765.1	770.1	768.8
15°	757.7	757.7	756.4	762.6	761.4
17.5°	745.3	746.5	747.8	752.7	754.0
20°	731.7	734.2	735.4	742.8	742.8
22.5°	719.3	720.5	723.0	730.4	730.4
25°	703.2	705.7	710.6	716.8	718.1
27.5°	687.1	688.4	694.5	703.2	704.4
30°	666.1	669.8	677.2	687.1	688.4
32.5°	647.5	651.2	659.9	669.8	672.3
35°	624.0	628.9	638.8	651.2	653.7
37.5°	602.9	606.6	619.0	632.6	636.4
40°	576.9	584.4	596.7	612.8	619.0
42.5°	550.9	558.4	573.2	594.3	601.7
45°	523.7	532.4	550.9	574.5	584.4
47.5°	496.5	506.4	527.4	554.6	565.8
50°	465.5	477.9	503.9	534.8	547.2
52.5°	435.8	450.6	479.1	513.8	529.9
55°	404.8	419.7	456.8	492.7	510.1
57.5°	370.2	390.0	430.8	471.7	490.3
60°	338.0	356.6	406.1	450.6	469.2
62.5°	303.3	328.1	381.3	428.4	446.9
65°	267.4	294.7	355.3	402.4	420.9
67.5°	235.2	264.9	329.3	376.4	394.9
70°	196.8	234.0	300.8	347.9	366.5
72.5°	160.9	201.8	271.1	316.9	334.3
75°	126.3	172.1	240.2	281.0	289.7
77.5°	94.1	142.4	208.0	225.3	219.1
80°	66.9	113.9	162.2	153.5	157.2
82.5°	43.3	86.7	100.3	113.9	117.6
85°	24.8	50.8	61.9	66.9	69.3
87.5°	11.1	18.6	24.8	24.8	23.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)