

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: P313551

Luminaire Tested: **24FCZ2-40-UNV-L83050-RDP-CP125-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: P313551
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-CP125-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" POLYCARB 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: 2432.0 lumens
Efficiency: N/A
Efficacy: 74.4 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

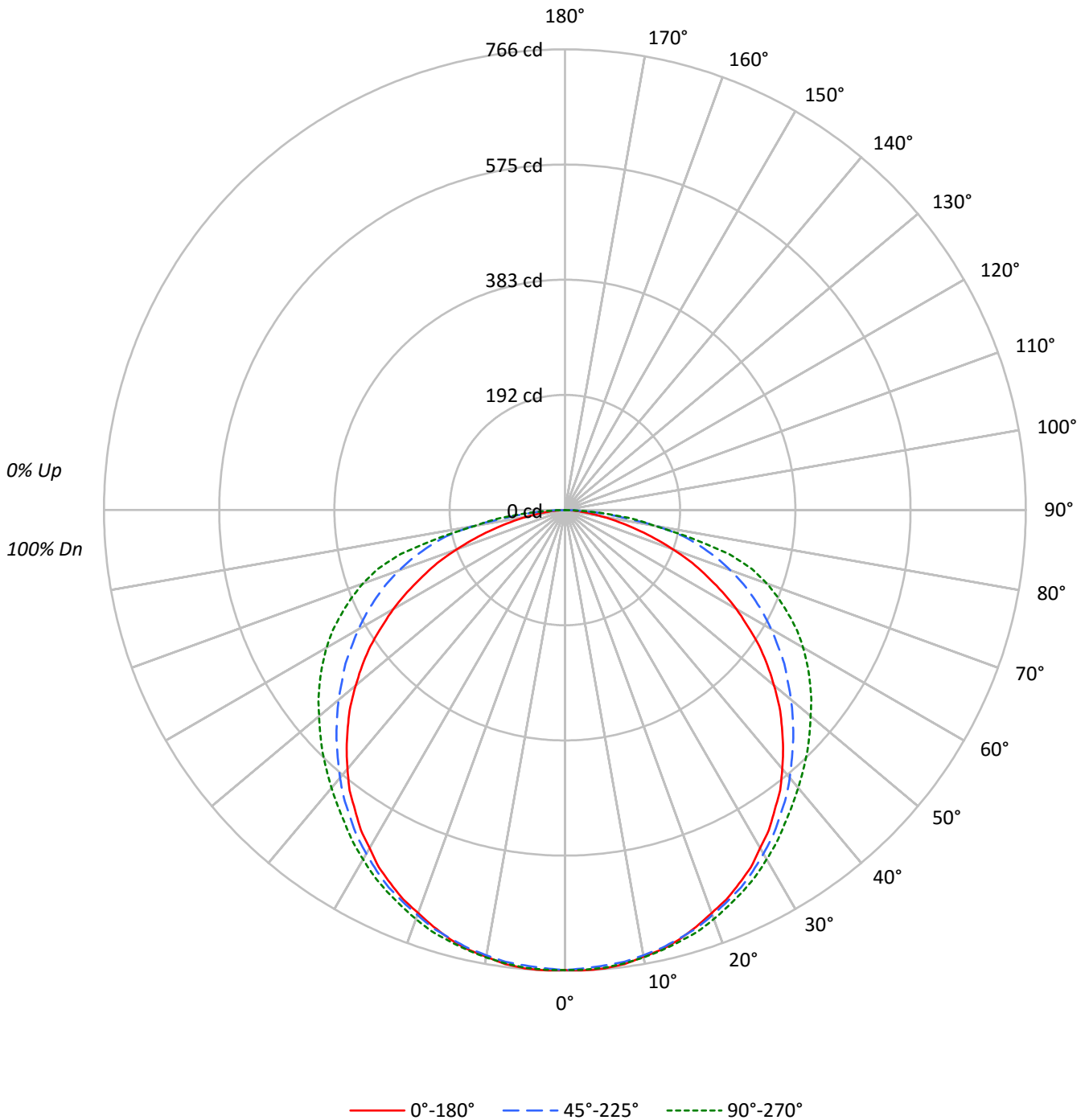
Input Watts (W): 32.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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					100			
1	108	103	98	94	105	100	96	92	96	93	89	92	89	87	88	86	84	82					82			
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67					67			
3	88	77	68	62	86	76	68	61	72	66	60	70	64	59	67	62	58	56					56			
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47					47			
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40					40			
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35					35			
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31					31			
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27					27			
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24					24			
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22					22			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1029	1029	1029
5°	1033	1026	1031
10°	1030	1027	1032
15°	1028	1027	1033
20°	1021	1026	1036
25°	1017	1028	1039
30°	1008	1025	1042
35°	999	1022	1046
40°	987	1021	1059
45°	971	1021	1083
50°	949	1028	1116
55°	925	1044	1166
60°	886	1065	1230
65°	830	1102	1306
70°	755	1153	1405
75°	639	1216	1468
80°	504	1224	1187
85°	372	931	1044



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.5	3.0
10°-20°	208.8	8.6
20°-30°	319.3	13.1
30°-40°	390.3	16.0
40°-50°	416.0	17.1
50°-60°	397.8	16.4
60°-70°	336.9	13.9
70°-80°	226.5	9.3
80°-90°	63.9	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°	600.6	24.7
0°-40°	991.0	40.7
0°-60°	1804.7	74.2
0°-90°	2432.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2432.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	765	765	765	765	765	
5°	765	764	760	764	764	73
15°	738	738	737	743	742	208
25°	685	688	692	698	700	316
35°	608	613	622	634	637	381
45°	510	519	537	560	569	394
55°	394	409	445	480	497	351
65°	261	287	346	392	410	259
75°	123	168	234	274	282	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°	764.8	764.8	764.8	764.8	764.8
2.5°	766.0	766.0	762.4	764.8	764.8
5°	764.8	763.6	760.0	763.6	763.6
7.5°	761.2	760.0	757.6	761.2	760.0
10°	753.9	753.9	751.5	755.1	755.1
12.5°	747.9	746.7	745.5	750.3	749.1
15°	738.3	738.3	737.0	743.1	741.9
17.5°	726.2	727.4	728.6	733.4	734.6
20°	712.9	715.3	716.5	723.8	723.8
22.5°	700.9	702.1	704.5	711.7	711.7
25°	685.2	687.6	692.4	698.4	699.7
27.5°	669.5	670.7	676.7	685.2	686.4
30°	649.0	652.6	659.8	669.5	670.7
32.5°	630.9	634.5	643.0	652.6	655.0
35°	608.0	612.8	622.5	634.5	636.9
37.5°	587.5	591.1	603.2	616.4	620.0
40°	562.1	569.4	581.4	597.1	603.2
42.5°	536.8	544.0	558.5	579.0	586.3
45°	510.3	518.7	536.8	559.7	569.4
47.5°	483.7	493.4	513.9	540.4	551.3
50°	453.6	465.6	491.0	521.1	533.2
52.5°	424.6	439.1	466.8	500.6	516.3
55°	394.5	408.9	445.1	480.1	497.0
57.5°	360.7	380.0	419.8	459.6	477.7
60°	329.3	347.4	395.7	439.1	457.2
62.5°	295.5	319.7	371.5	417.4	435.5
65°	260.6	287.1	346.2	392.0	410.1
67.5°	229.2	258.1	320.9	366.7	384.8
70°	191.8	228.0	293.1	339.0	357.1
72.5°	156.8	196.6	264.2	308.8	325.7
75°	123.0	167.7	234.0	273.8	282.3
77.5°	91.7	138.7	202.7	219.5	213.5
80°	65.1	111.0	158.0	149.6	153.2
82.5°	42.2	84.4	97.7	111.0	114.6
85°	24.1	49.5	60.3	65.1	67.6
87.5°	10.9	18.1	24.1	24.1	22.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)