

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: P310156

Luminaire Tested: **24FCZ2-45-UNV-L82765-RDP-CP125-W2A-U-6500K**

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: P310156
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: 24FCZ2-45-UNV-L82765-RDP-CP125-W2A-U-6500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" POLYCARB SHEET
Light Source: (168) 6500K 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: 2846.0 lumens
Efficiency: N/A
Efficacy: 72.4 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

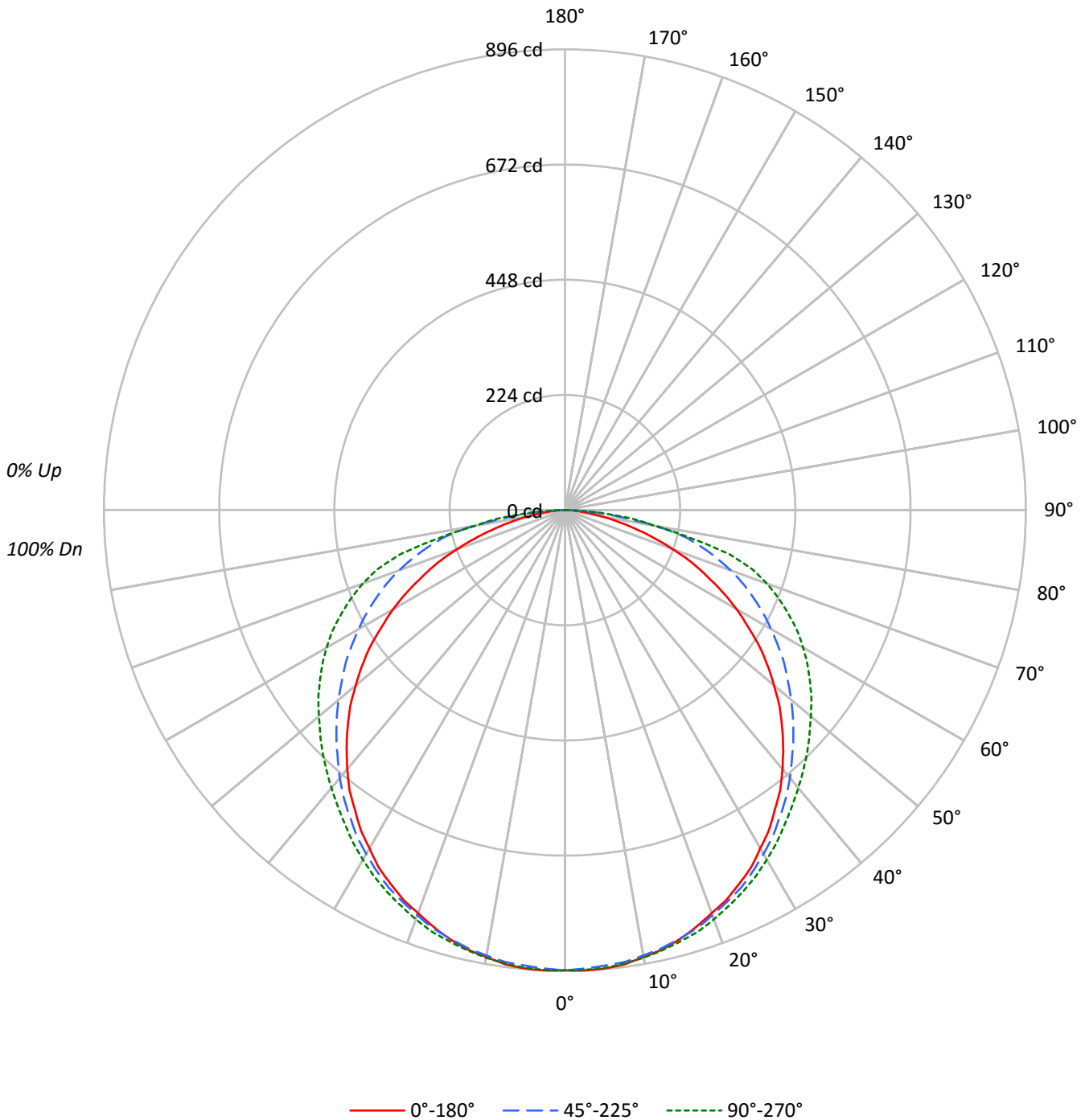
Input Watts (W): 39.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1204	1204	1204
5°	1209	1201	1207
10°	1205	1202	1207
15°	1203	1201	1209
20°	1195	1201	1213
25°	1190	1203	1216
30°	1180	1200	1219
35°	1169	1196	1224
40°	1155	1195	1240
45°	1136	1195	1268
50°	1111	1203	1306
55°	1083	1222	1364
60°	1037	1246	1440
65°	971	1290	1528
70°	883	1349	1644
75°	749	1424	1717
80°	590	1433	1389
85°	435	1090	1221



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	84.9	3.0
10°-20°	244.3	8.6
20°-30°	373.6	13.1
30°-40°	456.8	16.0
40°-50°	486.8	17.1
50°-60°	465.5	16.4
60°-70°	394.3	13.9
70°-80°	265.0	9.3
80°-90°	74.7	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°	702.9	24.7
0°-40°	1159.6	40.7
0°-60°	2111.9	74.2
0°-90°	2846.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2846.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	895	895	895	895	895	
5°	895	894	889	894	894	85
15°	864	864	862	870	868	244
25°	802	805	810	817	819	370
35°	712	717	728	742	745	446
45°	597	607	628	655	666	461
55°	462	478	521	562	582	411
65°	305	336	405	459	480	303
75°	144	196	274	320	330	154
85°	28	58	71	76	79	35
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	895.0	895.0	895.0	895.0	895.0
2.5°	896.4	896.4	892.2	895.0	895.0
5°	895.0	893.6	889.3	893.6	893.6
7.5°	890.8	889.3	886.5	890.8	889.3
10°	882.3	882.3	879.5	883.7	883.7
12.5°	875.2	873.8	872.4	878.0	876.6
15°	863.9	863.9	862.5	869.6	868.2
17.5°	849.8	851.2	852.6	858.3	859.7
20°	834.3	837.1	838.5	847.0	847.0
22.5°	820.2	821.6	824.4	832.9	832.9
25°	801.8	804.6	810.3	817.3	818.8
27.5°	783.5	784.9	791.9	801.8	803.2
30°	759.5	763.7	772.2	783.5	784.9
32.5°	738.3	742.5	752.4	763.7	766.5
35°	711.5	717.1	728.4	742.5	745.4
37.5°	687.5	691.7	705.8	721.4	725.6
40°	657.8	666.3	680.4	698.8	705.8
42.5°	628.2	636.7	653.6	677.6	686.1
45°	597.1	607.0	628.2	655.0	666.3
47.5°	566.1	577.4	601.4	632.4	645.1
50°	530.8	544.9	574.5	609.8	623.9
52.5°	496.9	513.8	546.3	585.8	604.2
55°	461.6	478.5	520.9	561.8	581.6
57.5°	422.1	444.7	491.3	537.8	559.0
60°	385.4	406.6	463.0	513.8	535.0
62.5°	345.9	374.1	434.8	488.4	509.6
65°	304.9	336.0	405.1	458.8	480.0
67.5°	268.2	302.1	375.5	429.1	450.3
70°	224.5	266.8	343.0	396.7	417.8
72.5°	183.5	230.1	309.2	361.4	381.1
75°	144.0	196.2	273.9	320.4	330.3
77.5°	107.3	162.3	237.2	256.9	249.9
80°	76.2	129.9	184.9	175.0	179.3
82.5°	49.4	98.8	114.3	129.9	134.1
85°	28.2	57.9	70.6	76.2	79.1
87.5°	12.7	21.2	28.2	28.2	26.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)