

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: P310154

Luminaire Tested: **24FCZ2-45-UNV-L82765-RDP-CP125-W2A-U-5500K**

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: P310154
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-5500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" POLYCARB SHEET
Light Source: (168) 5500K 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: 2832.0 lumens
Efficiency: N/A
Efficacy: 73.2 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

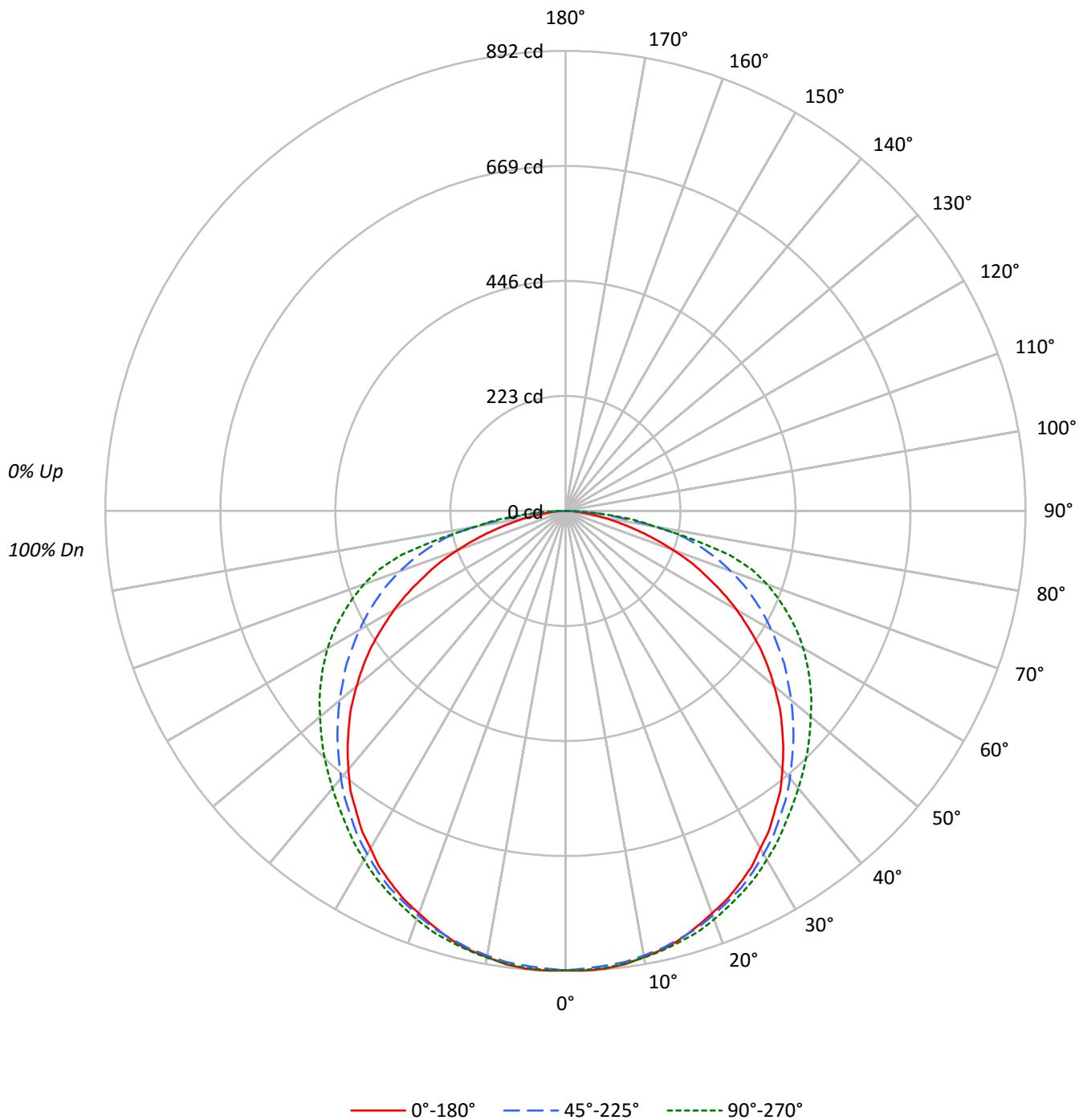
Input Watts (W): 38.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
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°	1198	1198	1198
5°	1203	1195	1201
10°	1199	1196	1201
15°	1198	1196	1203
20°	1189	1195	1207
25°	1185	1197	1209
30°	1174	1194	1213
35°	1163	1191	1218
40°	1150	1189	1234
45°	1131	1189	1262
50°	1106	1197	1300
55°	1077	1216	1358
60°	1032	1240	1433
65°	966	1284	1521
70°	878	1343	1636
75°	745	1417	1709
80°	588	1426	1382
85°	434	1084	1215



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	84.5	3.0
10°-20°	243.1	8.6
20°-30°	371.8	13.1
30°-40°	454.5	16.0
40°-50°	484.4	17.1
50°-60°	463.2	16.4
60°-70°	392.4	13.9
70°-80°	263.7	9.3
80°-90°	74.4	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°	699.4	24.7
0°-40°	1153.9	40.7
0°-60°	2101.5	74.2
0°-90°	2832.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2832.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	891	891	891	891	891	
5°	891	889	885	889	889	85
15°	860	860	858	865	864	242
25°	798	801	806	813	815	368
35°	708	714	725	739	742	444
45°	594	604	625	652	663	458
55°	459	476	518	559	579	409
65°	303	334	403	456	478	301
75°	143	195	272	319	329	153
85°	28	58	70	76	79	35
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	890.6	890.6	890.6	890.6	890.6
2.5°	892.0	892.0	887.8	890.6	890.6
5°	890.6	889.2	885.0	889.2	889.2
7.5°	886.4	885.0	882.2	886.4	885.0
10°	877.9	877.9	875.1	879.3	879.3
12.5°	870.9	869.5	868.1	873.7	872.3
15°	859.7	859.7	858.3	865.3	863.9
17.5°	845.6	847.0	848.4	854.1	855.5
20°	830.2	833.0	834.4	842.8	842.8
22.5°	816.1	817.5	820.3	828.8	828.8
25°	797.9	800.7	806.3	813.3	814.7
27.5°	779.6	781.0	788.0	797.9	799.3
30°	755.7	759.9	768.4	779.6	781.0
32.5°	734.7	738.9	748.7	759.9	762.8
35°	708.0	713.6	724.8	738.9	741.7
37.5°	684.1	688.3	702.4	717.8	722.0
40°	654.6	663.0	677.1	695.3	702.4
42.5°	625.1	633.5	650.4	674.3	682.7
45°	594.2	604.0	625.1	651.8	663.0
47.5°	563.3	574.5	598.4	629.3	642.0
50°	528.2	542.2	571.7	606.8	620.9
52.5°	494.5	511.3	543.6	583.0	601.2
55°	459.3	476.2	518.3	559.1	578.7
57.5°	420.0	442.5	488.8	535.2	556.3
60°	383.5	404.6	460.7	511.3	532.4
62.5°	344.2	372.2	432.6	486.0	507.1
65°	303.4	334.3	403.2	456.5	477.6
67.5°	266.9	300.6	373.7	427.0	448.1
70°	223.3	265.5	341.3	394.7	415.8
72.5°	182.6	229.0	307.6	359.6	379.3
75°	143.3	195.3	272.5	318.9	328.7
77.5°	106.8	161.5	236.0	255.7	248.6
80°	75.9	129.2	184.0	174.2	178.4
82.5°	49.2	98.3	113.8	129.2	133.4
85°	28.1	57.6	70.2	75.9	78.7
87.5°	12.6	21.1	28.1	28.1	26.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)