

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: P310231

Luminaire Tested: **24FCZ2-50-UNV-L82765-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: P310231
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: 24FCZ2-50-UNV-L82765-RDP-CA125-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" ACRYLIC 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: 2993.0 lumens
Efficiency: N/A
Efficacy: 69.8 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

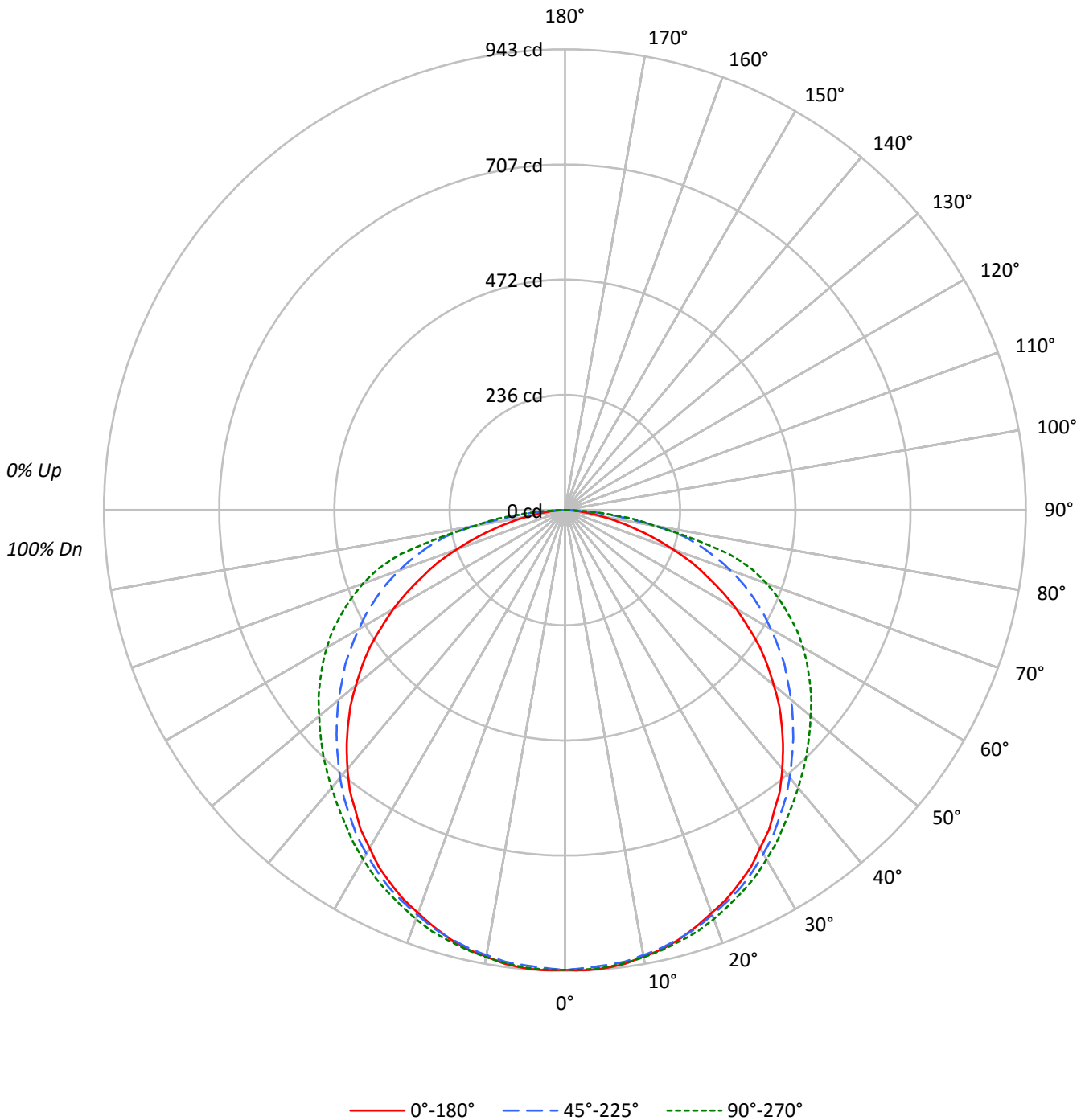
Input Watts (W): 42.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1266	1266	1266
5°	1271	1263	1269
10°	1268	1264	1270
15°	1266	1264	1272
20°	1256	1263	1275
25°	1252	1265	1278
30°	1241	1262	1282
35°	1229	1258	1287
40°	1215	1257	1304
45°	1195	1257	1333
50°	1168	1265	1374
55°	1139	1285	1435
60°	1091	1310	1514
65°	1021	1357	1607
70°	928	1419	1729
75°	787	1497	1806
80°	621	1507	1461
85°	459	1145	1283



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.3	3.0
10°-20°	257.0	8.6
20°-30°	392.9	13.1
30°-40°	480.4	16.0
40°-50°	512.0	17.1
50°-60°	489.5	16.4
60°-70°	414.7	13.9
70°-80°	278.7	9.3
80°-90°	78.6	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°	739.2	24.7
0°-40°	1219.5	40.7
0°-60°	2221.0	74.2
0°-90°	2993.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2993.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	941	941	941	941	941	
5°	941	940	935	940	940	89
15°	909	909	907	914	913	256
25°	843	846	852	860	861	389
35°	748	754	766	781	784	469
45°	628	638	661	689	701	484
55°	486	503	548	591	612	432
65°	321	353	426	482	505	318
75°	151	206	288	337	347	162
85°	30	61	74	80	83	37
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	941.2	941.2	941.2	941.2	941.2
2.5°	942.7	942.7	938.2	941.2	941.2
5°	941.2	939.7	935.3	939.7	939.7
7.5°	936.8	935.3	932.3	936.8	935.3
10°	927.9	927.9	924.9	929.3	929.3
12.5°	920.4	918.9	917.5	923.4	921.9
15°	908.6	908.6	907.1	914.5	913.0
17.5°	893.7	895.2	896.7	902.6	904.1
20°	877.4	880.3	881.8	890.7	890.7
22.5°	862.5	864.0	867.0	875.9	875.9
25°	843.2	846.2	852.1	859.6	861.0
27.5°	823.9	825.4	832.8	843.2	844.7
30°	798.7	803.1	812.1	823.9	825.4
32.5°	776.4	780.9	791.3	803.1	806.1
35°	748.2	754.2	766.0	780.9	783.8
37.5°	723.0	727.4	742.3	758.6	763.1
40°	691.8	700.7	715.6	734.9	742.3
42.5°	660.6	669.5	687.4	712.6	721.5
45°	628.0	638.4	660.6	688.8	700.7
47.5°	595.3	607.2	632.4	665.1	678.4
50°	558.2	573.0	604.2	641.3	656.2
52.5°	522.6	540.4	574.5	616.1	635.4
55°	485.5	503.3	547.8	590.9	611.6
57.5°	443.9	467.6	516.6	565.6	587.9
60°	405.3	427.6	486.9	540.4	562.6
62.5°	363.7	393.4	457.2	513.7	535.9
65°	320.7	353.3	426.1	482.5	504.8
67.5°	282.1	317.7	394.9	451.3	473.6
70°	236.0	280.6	360.7	417.2	439.4
72.5°	193.0	242.0	325.1	380.0	400.8
75°	151.4	206.4	288.0	337.0	347.4
77.5°	112.8	170.7	249.4	270.2	262.8
80°	80.2	136.6	194.5	184.1	188.5
82.5°	52.0	103.9	120.2	136.6	141.0
85°	29.7	60.9	74.2	80.2	83.1
87.5°	13.4	22.3	29.7	29.7	28.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)