

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: P310258

Luminaire Tested: **24FCZ2-50-UNV-L82765-RDP-CP250-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: P310258
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-CP250-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" 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: 2788.0 lumens
Efficiency: N/A
Efficacy: 65.0 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

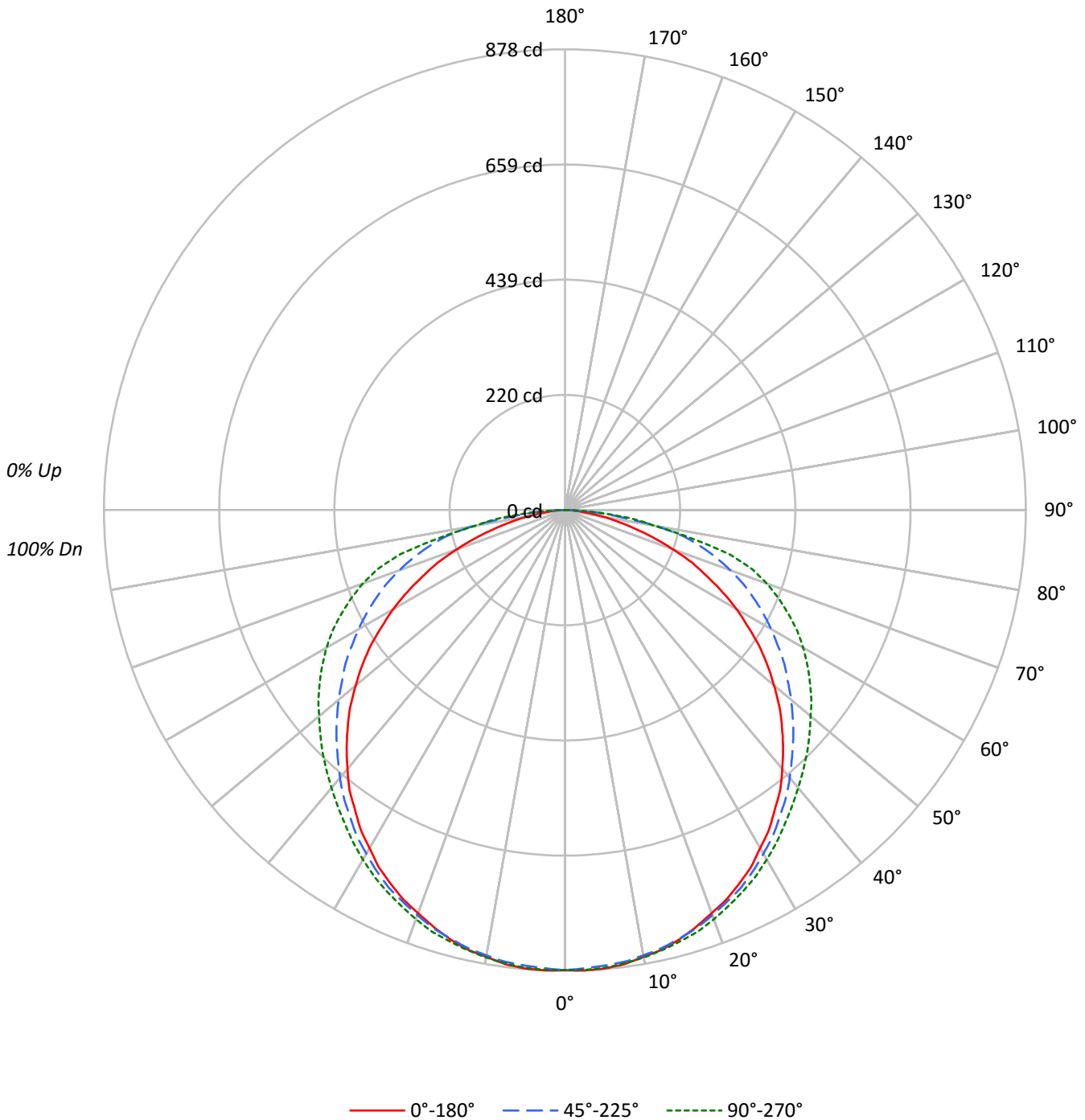
Input Watts (W): 42.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1180	1180	1180
5°	1184	1177	1182
10°	1181	1177	1183
15°	1179	1177	1185
20°	1170	1176	1188
25°	1166	1178	1191
30°	1156	1175	1195
35°	1145	1172	1199
40°	1132	1171	1214
45°	1113	1171	1242
50°	1088	1178	1279
55°	1061	1197	1336
60°	1016	1221	1410
65°	951	1264	1497
70°	865	1322	1610
75°	734	1395	1682
80°	579	1404	1361
85°	428	1067	1195



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	83.2	3.0
10°-20°	239.4	8.6
20°-30°	366.0	13.1
30°-40°	447.5	16.0
40°-50°	476.9	17.1
50°-60°	456.0	16.4
60°-70°	386.3	13.9
70°-80°	259.6	9.3
80°-90°	73.2	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°	688.5	24.7
0°-40°	1136.0	40.7
0°-60°	2068.9	74.2
0°-90°	2788.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2788.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	877	877	877	877	877	
5°	877	875	871	875	875	83
15°	846	846	845	852	850	239
25°	786	788	794	801	802	362
35°	697	702	714	727	730	437
45°	585	595	615	642	653	451
55°	452	469	510	550	570	403
65°	299	329	397	449	470	297
75°	141	192	268	314	324	151
85°	28	57	69	75	77	34
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	876.7	876.7	876.7	876.7	876.7
2.5°	878.1	878.1	874.0	876.7	876.7
5°	876.7	875.4	871.2	875.4	875.4
7.5°	872.6	871.2	868.4	872.6	871.2
10°	864.3	864.3	861.5	865.7	865.7
12.5°	857.4	856.0	854.6	860.2	858.8
15°	846.3	846.3	844.9	851.9	850.5
17.5°	832.5	833.9	835.3	840.8	842.2
20°	817.3	820.0	821.4	829.7	829.7
22.5°	803.5	804.8	807.6	815.9	815.9
25°	785.5	788.2	793.8	800.7	802.1
27.5°	767.5	768.9	775.8	785.5	786.9
30°	744.0	748.1	756.4	767.5	768.9
32.5°	723.2	727.4	737.1	748.1	750.9
35°	697.0	702.5	713.6	727.4	730.2
37.5°	673.5	677.6	691.4	706.7	710.8
40°	644.4	652.7	666.5	684.5	691.4
42.5°	615.4	623.7	640.3	663.8	672.1
45°	585.0	594.6	615.4	641.7	652.7
47.5°	554.5	565.6	589.1	619.5	632.0
50°	520.0	533.8	562.8	597.4	611.2
52.5°	486.8	503.4	535.2	573.9	591.9
55°	452.2	468.8	510.3	550.4	569.7
57.5°	413.5	435.6	481.2	526.9	547.6
60°	377.5	398.3	453.6	503.4	524.1
62.5°	338.8	366.5	425.9	478.5	499.2
65°	298.7	329.1	396.9	449.4	470.2
67.5°	262.7	295.9	367.8	420.4	441.1
70°	219.9	261.4	336.0	388.6	409.3
72.5°	179.8	225.4	302.9	354.0	373.4
75°	141.1	192.2	268.3	313.9	323.6
77.5°	105.1	159.0	232.3	251.7	244.8
80°	74.7	127.2	181.2	171.5	175.6
82.5°	48.4	96.8	112.0	127.2	131.4
85°	27.7	56.7	69.1	74.7	77.4
87.5°	12.4	20.7	27.7	27.7	26.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)