

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: P310145

Luminaire Tested: **24FCZ2-45-UNV-L82765-RDP-CA125-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: P310145
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-CA125-W2A-U-5500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" ACRYLIC 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: 2888.0 lumens
Efficiency: N/A
Efficacy: 74.6 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

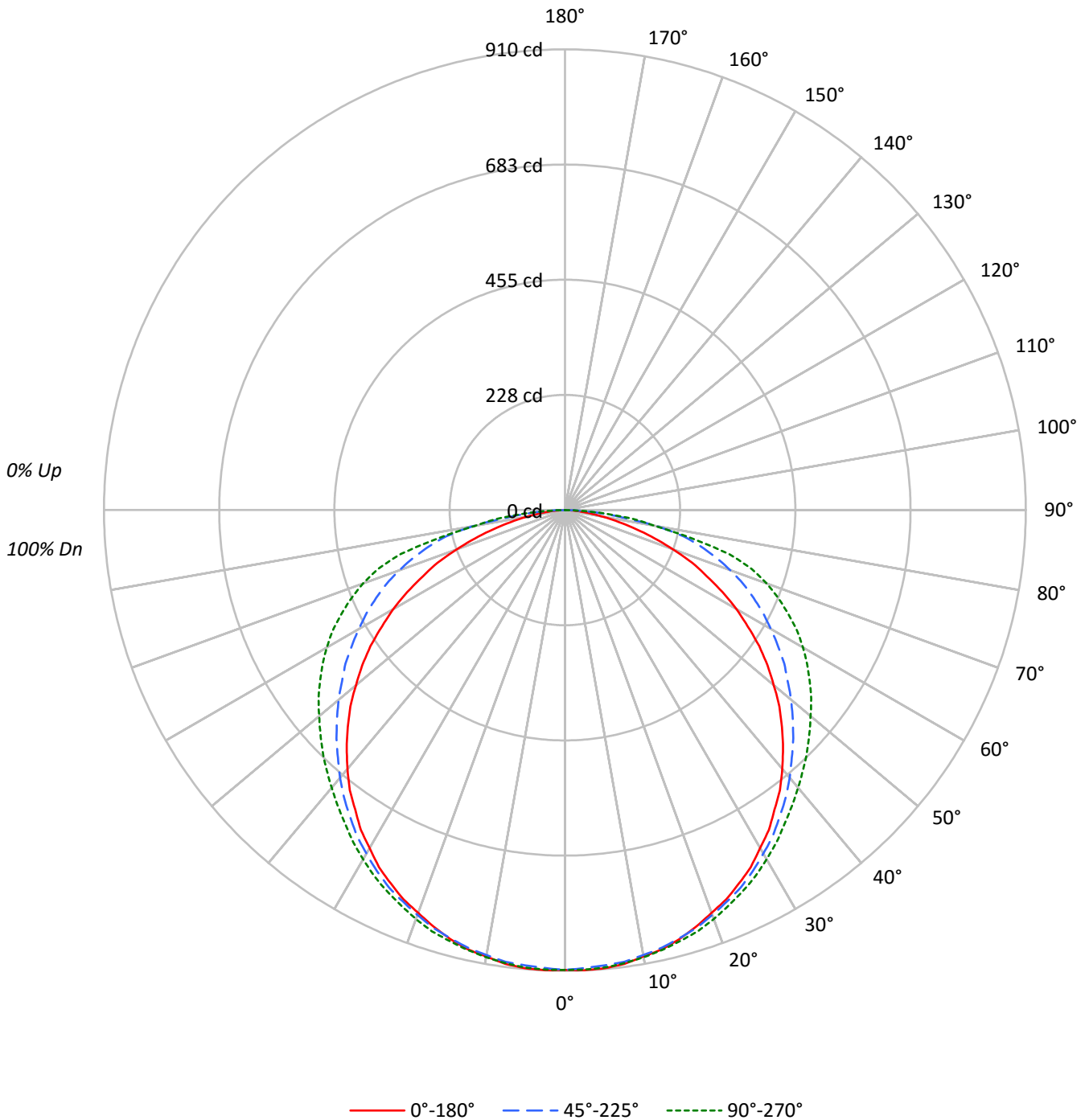
Input Watts (W): 38.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	68	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°	1222	1222	1222
5°	1227	1219	1225
10°	1223	1219	1225
15°	1221	1219	1227
20°	1212	1218	1231
25°	1208	1221	1233
30°	1197	1217	1237
35°	1186	1214	1242
40°	1172	1213	1258
45°	1153	1213	1286
50°	1127	1220	1325
55°	1099	1240	1384
60°	1052	1264	1461
65°	985	1309	1550
70°	896	1369	1668
75°	760	1445	1743
80°	600	1454	1409
85°	442	1105	1238



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	86.2	3.0
10°-20°	247.9	8.6
20°-30°	379.2	13.1
30°-40°	463.5	16.0
40°-50°	494.0	17.1
50°-60°	472.3	16.4
60°-70°	400.1	13.9
70°-80°	268.9	9.3
80°-90°	75.8	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°	713.2	24.7
0°-40°	1176.8	40.7
0°-60°	2143.1	74.2
0°-90°	2888.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2888.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	908	908	908	908	908	
5°	908	907	902	907	907	86
15°	877	877	875	882	881	247
25°	814	816	822	829	831	375
35°	722	728	739	754	756	452
45°	606	616	638	665	676	467
55°	468	486	529	570	590	417
65°	309	341	411	466	487	307
75°	146	199	278	325	335	156
85°	29	59	72	77	80	35
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	908.2	908.2	908.2	908.2	908.2
2.5°	909.6	909.6	905.3	908.2	908.2
5°	908.2	906.8	902.5	906.8	906.8
7.5°	903.9	902.5	899.6	903.9	902.5
10°	895.3	895.3	892.4	896.7	896.7
12.5°	888.1	886.7	885.3	891.0	889.6
15°	876.7	876.7	875.2	882.4	881.0
17.5°	862.4	863.8	865.2	870.9	872.4
20°	846.6	849.5	850.9	859.5	859.5
22.5°	832.3	833.7	836.6	845.2	845.2
25°	813.6	816.5	822.2	829.4	830.8
27.5°	795.0	796.5	803.6	813.6	815.1
30°	770.7	775.0	783.6	795.0	796.5
32.5°	749.2	753.5	763.5	775.0	777.8
35°	722.0	727.7	739.2	753.5	756.4
37.5°	697.6	701.9	716.2	732.0	736.3
40°	667.5	676.1	690.5	709.1	716.2
42.5°	637.5	646.0	663.2	687.6	696.2
45°	605.9	616.0	637.5	664.7	676.1
47.5°	574.4	585.9	610.2	641.8	654.6
50°	538.6	552.9	583.0	618.8	633.2
52.5°	504.2	521.4	554.4	594.5	613.1
55°	468.4	485.6	528.6	570.1	590.2
57.5°	428.3	451.2	498.5	545.8	567.3
60°	391.1	412.6	469.9	521.4	542.9
62.5°	351.0	379.6	441.2	495.6	517.1
65°	309.4	340.9	411.1	465.6	487.0
67.5°	272.2	306.6	381.0	435.5	457.0
70°	227.8	270.7	348.1	402.5	424.0
72.5°	186.2	233.5	313.7	366.7	386.8
75°	146.1	199.1	277.9	325.2	335.2
77.5°	108.9	164.7	240.7	260.7	253.5
80°	77.4	131.8	187.7	177.6	181.9
82.5°	50.1	100.3	116.0	131.8	136.1
85°	28.6	58.7	71.6	77.4	80.2
87.5°	12.9	21.5	28.6	28.6	27.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)