

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: P311588

Luminaire Tested: **24FCZ2-50-UNV-L82765-S-CP125-W2A-U-2700K**

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: P311588
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)
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-S-CP125-W2A-U-2700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB SHEET
Light Source: (168) 2700K 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: 4308.0 lumens
Efficiency: N/A
Efficacy: 100.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

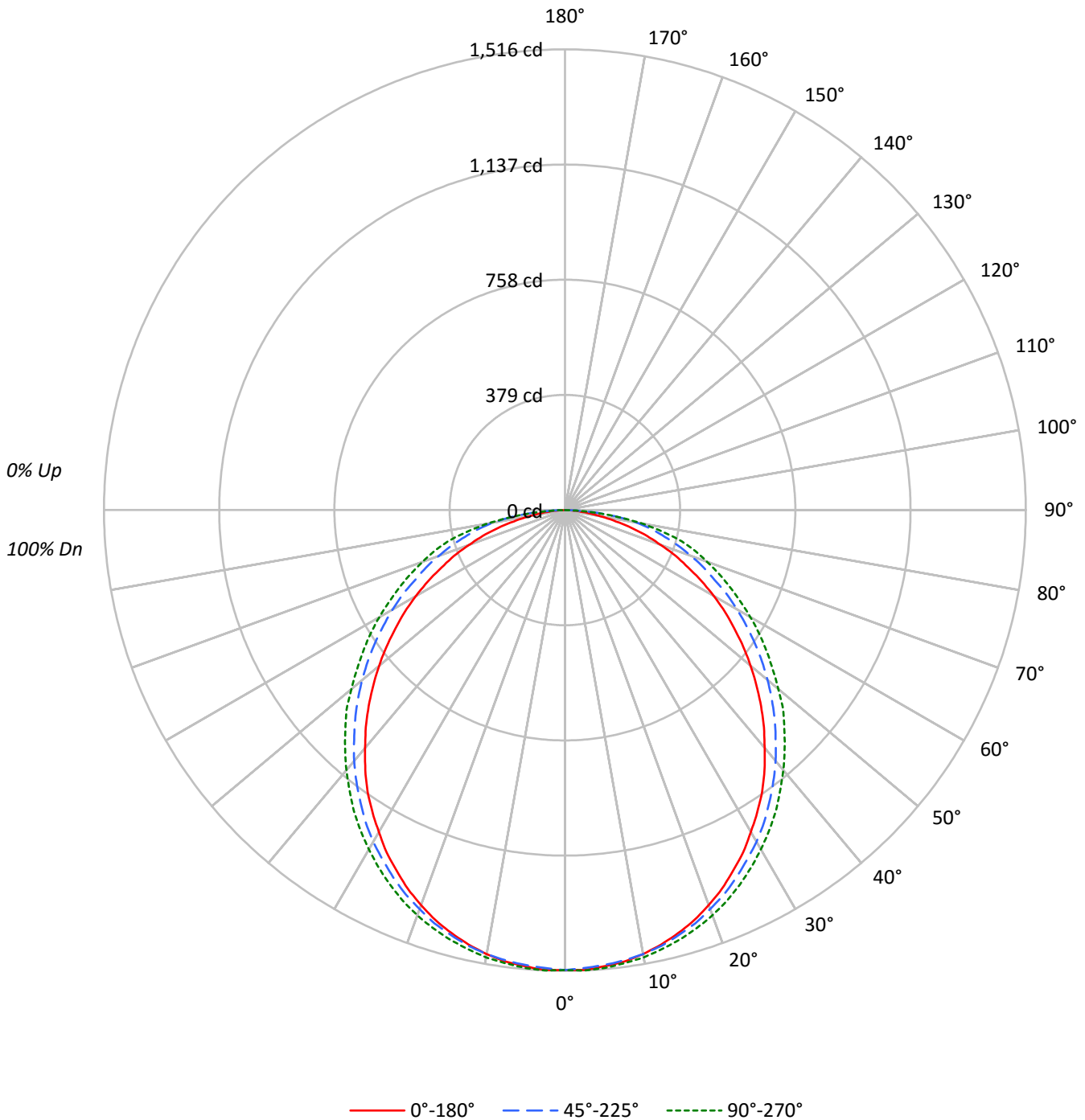
Input Watts (W): 42.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2036	2036	2036
5°	2035	2029	2042
10°	2027	2027	2042
15°	2007	2017	2038
20°	1981	2000	2032
25°	1944	1981	2019
30°	1901	1958	2003
35°	1859	1926	1987
40°	1795	1894	1964
45°	1737	1857	1942
50°	1670	1822	1919
55°	1595	1788	1900
60°	1521	1760	1896
65°	1425	1729	1908
70°	1319	1739	1959
75°	1181	1771	2070
80°	955	1877	2025
85°	718	1647	1606



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	143.3	3.3
10°-20°	409.4	9.5
20°-30°	615.4	14.3
30°-40°	733.1	17.0
40°-50°	750.3	17.4
50°-60°	675.4	15.7
60°-70°	530.4	12.3
70°-80°	344.3	8.0
80°-90°	106.5	2.5
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°	1168.1	27.1
0°-40°	1901.1	44.1
0°-60°	3326.8	77.2
0°-90°	4308.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4308.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1513	1513	1513	1513	1513	
5°	1507	1509	1502	1511	1512	143
15°	1441	1445	1448	1460	1463	406
25°	1310	1320	1334	1356	1360	603
35°	1132	1145	1173	1201	1210	706
45°	913	935	976	1013	1021	704
55°	680	710	762	802	810	610
65°	448	482	543	588	599	445
75°	227	271	341	387	398	240
85°	46	86	107	104	104	56
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1513.4	1513.4	1513.4	1513.4	1513.4
2.5°	1514.8	1514.8	1508.0	1514.8	1516.2
5°	1506.6	1509.3	1502.5	1510.7	1512.1
7.5°	1498.4	1498.4	1494.3	1502.5	1503.8
10°	1483.3	1484.7	1483.3	1492.9	1494.3
12.5°	1464.2	1466.9	1468.3	1477.9	1479.2
15°	1440.9	1445.0	1447.7	1460.1	1462.8
17.5°	1414.9	1419.0	1425.9	1439.5	1442.3
20°	1383.4	1388.9	1397.1	1414.9	1419.0
22.5°	1349.2	1354.7	1368.4	1384.8	1391.6
25°	1309.5	1320.5	1334.2	1356.1	1360.2
27.5°	1269.9	1279.4	1297.2	1320.5	1326.0
30°	1223.3	1238.4	1260.3	1283.5	1289.0
32.5°	1178.2	1193.2	1219.2	1243.9	1250.7
35°	1131.7	1145.3	1172.7	1201.4	1209.6
37.5°	1078.3	1096.1	1126.2	1154.9	1163.1
40°	1022.2	1044.1	1078.3	1108.4	1118.0
42.5°	968.8	992.1	1026.3	1059.1	1070.1
45°	912.7	934.6	975.7	1012.6	1020.8
47.5°	855.2	879.9	923.7	960.6	974.3
50°	797.8	823.8	870.3	908.6	916.8
52.5°	740.3	767.7	816.9	858.0	862.1
55°	680.1	710.2	762.2	801.9	810.1
57.5°	625.3	651.3	707.5	748.5	758.1
60°	565.1	593.9	654.1	692.4	704.7
62.5°	507.7	537.8	600.7	639.0	650.0
65°	447.5	481.7	543.2	588.4	599.4
67.5°	395.5	428.3	494.0	537.8	548.7
70°	335.3	372.2	442.0	487.1	498.1
72.5°	283.3	321.6	391.4	435.1	451.6
75°	227.2	270.9	340.7	387.3	398.2
77.5°	172.4	223.0	294.2	329.8	329.8
80°	123.2	176.5	242.2	258.6	261.4
82.5°	80.7	132.7	179.3	177.9	177.9
85°	46.5	86.2	106.7	104.0	104.0
87.5°	17.8	35.6	38.3	38.3	36.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)