

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: P310917

Luminaire Tested: **24FCZ2-50-UNV-L82765-CP125-W2A-U-4500K**

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: P310917
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-15)
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-CP125-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" POLYCARB SHEET
Light Source: (168) 4500K 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: 4539.0 lumens
Efficiency: N/A
Efficacy: 104.3 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

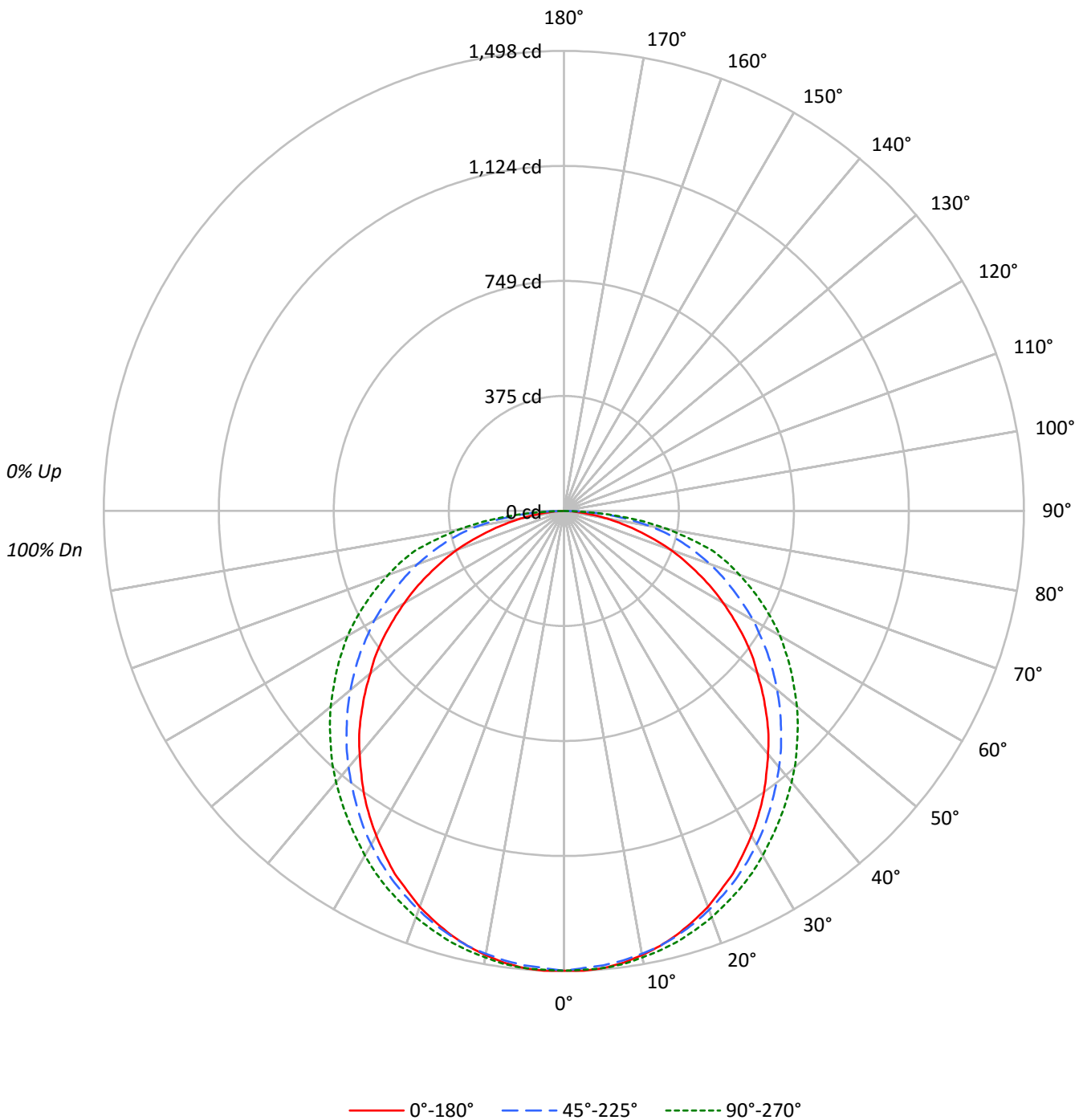
Input Watts (W): 43.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	92	89	92	89	87	88	86	84	82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	64	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	37	31	57	45	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2014	2014	2014
5°	2018	2006	2018
10°	2006	2000	2016
15°	1989	1993	2018
20°	1964	1980	2016
25°	1934	1965	2014
30°	1897	1949	2012
35°	1860	1929	2014
40°	1817	1915	2026
45°	1774	1903	2043
50°	1721	1898	2074
55°	1678	1901	2116
60°	1613	1917	2188
65°	1539	1937	2268
70°	1458	1996	2393
75°	1300	2083	2615
80°	1109	2205	2672
85°	790	2186	2558



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	141.7	3.1
10°-20°	405.1	8.9
20°-30°	611.8	13.5
30°-40°	737.4	16.2
40°-50°	774.1	17.1
50°-60°	724.3	16.0
60°-70°	598.1	13.2
70°-80°	407.6	9.0
80°-90°	139.0	3.1
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°	1158.6	25.5
0°-40°	1896.0	41.8
0°-60°	3394.4	74.8
0°-90°	4539.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4539.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1497	1497	1497	1497	1497	
5°	1494	1492	1485	1494	1494	142
15°	1428	1429	1431	1446	1449	402
25°	1303	1309	1324	1349	1357	599
35°	1132	1144	1175	1214	1226	708
45°	932	952	1000	1054	1074	719
55°	715	744	810	876	902	638
65°	483	524	608	685	712	480
75°	250	307	401	476	503	267
85°	51	101	142	160	166	64
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1496.9	1496.9	1496.9	1496.9	1496.9
2.5°	1498.4	1496.9	1489.4	1496.9	1495.4
5°	1493.9	1492.4	1484.9	1493.9	1493.9
7.5°	1483.4	1483.4	1475.8	1486.4	1487.9
10°	1468.3	1468.3	1463.8	1475.8	1475.8
12.5°	1450.2	1450.2	1450.2	1462.3	1463.8
15°	1427.6	1429.2	1430.7	1445.7	1448.7
17.5°	1400.5	1403.6	1408.1	1426.1	1429.2
20°	1371.9	1374.9	1382.5	1403.6	1408.1
22.5°	1335.8	1343.3	1353.9	1378.0	1382.5
25°	1302.7	1308.7	1323.7	1349.3	1356.9
27.5°	1262.0	1271.0	1290.6	1317.7	1328.3
30°	1221.3	1230.4	1254.5	1286.1	1295.1
32.5°	1177.7	1191.2	1216.8	1249.9	1260.5
35°	1132.5	1144.5	1174.6	1213.8	1225.9
37.5°	1082.8	1099.3	1132.5	1174.6	1189.7
40°	1034.6	1052.7	1090.3	1135.5	1153.6
42.5°	986.4	1004.5	1046.6	1097.8	1115.9
45°	932.2	951.8	1000.0	1054.2	1073.7
47.5°	878.0	902.1	954.8	1012.0	1033.1
50°	822.3	849.4	906.6	966.8	990.9
52.5°	772.6	798.2	858.4	923.2	945.7
55°	715.3	743.9	810.2	876.5	902.1
57.5°	656.6	688.2	759.0	831.3	856.9
60°	599.4	634.0	712.3	784.6	813.2
62.5°	543.7	578.3	659.6	734.9	763.5
65°	483.4	524.1	608.4	685.2	712.3
67.5°	426.2	469.9	558.7	634.0	661.1
70°	370.5	412.6	507.5	581.3	608.4
72.5°	310.2	358.4	453.3	530.1	558.7
75°	250.0	307.2	400.6	475.9	503.0
77.5°	194.3	253.0	346.4	408.1	421.7
80°	143.1	203.3	284.6	328.3	344.9
82.5°	91.9	152.1	216.9	248.5	262.0
85°	51.2	100.9	141.6	159.6	165.7
87.5°	21.1	43.7	57.2	64.8	64.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)