

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: P310197

Luminaire Tested: **24FCZ2-50HE-UNV-L82765-RDP-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: P310197
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: 24FCZ2-50HE-UNV-L82765-RDP-CP125-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" POLYCARB SHEET
Light Source: (336) 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: 3068.0 lumens
Efficiency: N/A
Efficacy: 78.5 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

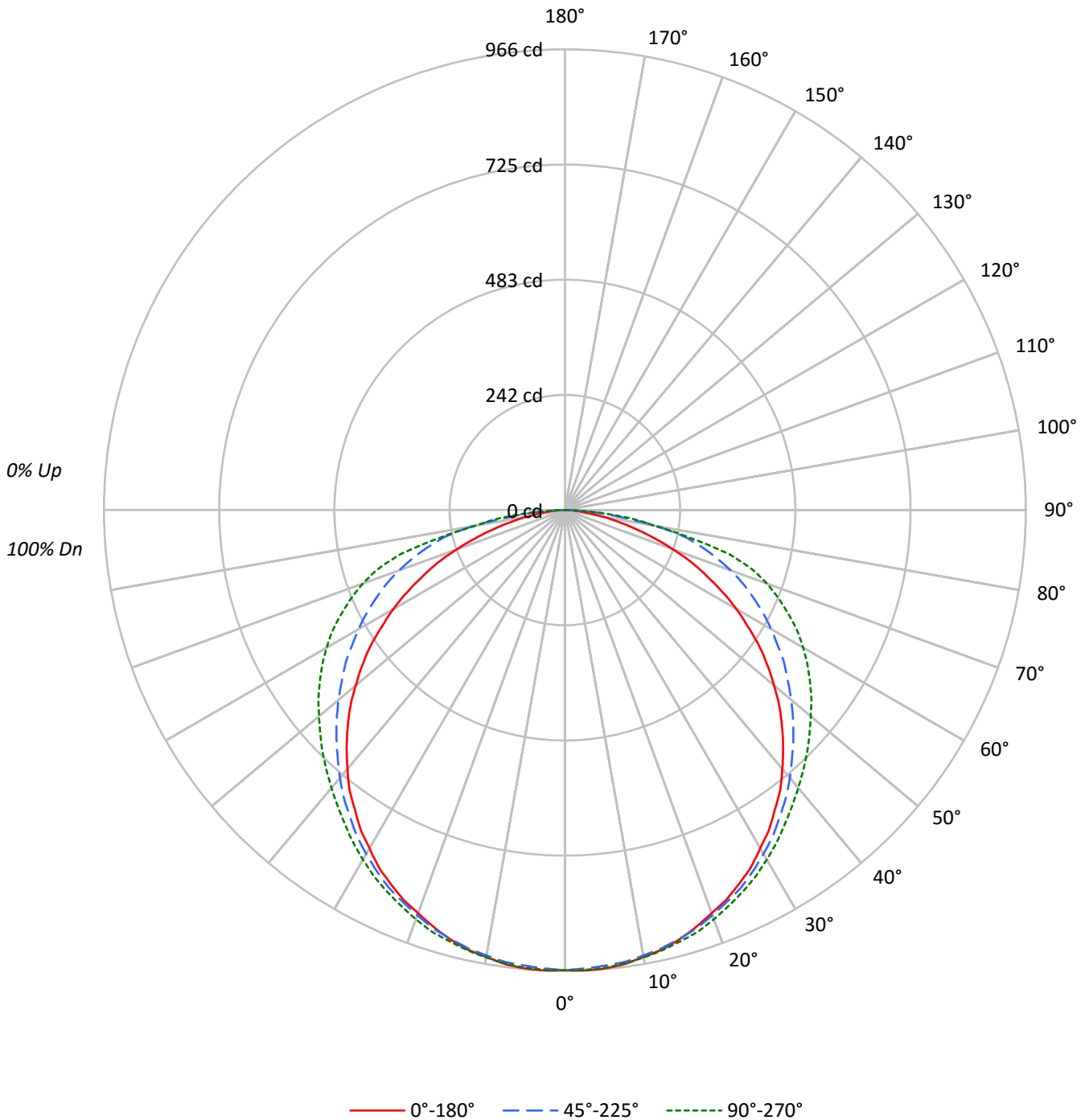
Input Watts (W): 39.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1298	1298	1298
5°	1303	1295	1301
10°	1299	1295	1301
15°	1297	1295	1304
20°	1288	1294	1307
25°	1283	1297	1310
30°	1272	1293	1315
35°	1260	1290	1320
40°	1245	1288	1336
45°	1225	1289	1367
50°	1198	1297	1408
55°	1167	1317	1471
60°	1118	1343	1552
65°	1046	1390	1647
70°	952	1455	1772
75°	807	1535	1851
80°	637	1545	1498
85°	469	1175	1315



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	91.5	3.0
10°-20°	263.4	8.6
20°-30°	402.8	13.1
30°-40°	492.4	16.0
40°-50°	524.8	17.1
50°-60°	501.8	16.4
60°-70°	425.1	13.9
70°-80°	285.7	9.3
80°-90°	80.6	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°	757.7	24.7
0°-40°	1250.1	40.7
0°-60°	2276.7	74.2
0°-90°	3068.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3068.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	965	965	965	965	965	
5°	965	963	959	963	963	92
15°	931	931	930	937	936	263
25°	864	867	874	881	883	398
35°	767	773	785	800	804	480
45°	644	654	677	706	718	496
55°	498	516	562	606	627	443
65°	329	362	437	495	517	326
75°	155	212	295	345	356	166
85°	30	62	76	82	85	38
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	964.8	964.8	964.8	964.8	964.8
2.5°	966.3	966.3	961.8	964.8	964.8
5°	964.8	963.3	958.7	963.3	963.3
7.5°	960.2	958.7	955.7	960.2	958.7
10°	951.1	951.1	948.1	952.6	952.6
12.5°	943.5	942.0	940.5	946.5	945.0
15°	931.3	931.3	929.8	937.4	935.9
17.5°	916.1	917.6	919.1	925.2	926.8
20°	899.4	902.4	903.9	913.1	913.1
22.5°	884.1	885.7	888.7	897.8	897.8
25°	864.4	867.4	873.5	881.1	882.6
27.5°	844.6	846.1	853.7	864.4	865.9
30°	818.7	823.3	832.4	844.6	846.1
32.5°	795.9	800.4	811.1	823.3	826.3
35°	767.0	773.1	785.2	800.4	803.5
37.5°	741.1	745.7	760.9	777.6	782.2
40°	709.1	718.3	733.5	753.3	760.9
42.5°	677.2	686.3	704.6	730.4	739.6
45°	643.7	654.4	677.2	706.1	718.3
47.5°	610.2	622.4	648.3	681.8	695.4
50°	572.2	587.4	619.4	657.4	672.6
52.5°	535.7	553.9	588.9	631.5	651.3
55°	497.6	515.9	561.5	605.7	627.0
57.5°	455.0	479.4	529.6	579.8	602.6
60°	415.4	438.3	499.1	553.9	576.7
62.5°	372.8	403.3	468.7	526.5	549.4
65°	328.7	362.2	436.7	494.6	517.4
67.5°	289.1	325.7	404.8	462.6	485.4
70°	242.0	287.6	369.8	427.6	450.4
72.5°	197.8	248.0	333.3	389.6	410.9
75°	155.2	211.5	295.2	345.4	356.1
77.5°	115.7	175.0	255.7	277.0	269.4
80°	82.2	140.0	199.4	188.7	193.3
82.5°	53.3	106.5	123.3	140.0	144.6
85°	30.4	62.4	76.1	82.2	85.2
87.5°	13.7	22.8	30.4	30.4	28.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)