

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: P313628

Luminaire Tested: **24FCZ2-50HE-UNV-L83050-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: P313628
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-L83050-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: 3201.0 lumens
Efficiency: N/A
Efficacy: 79.4 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

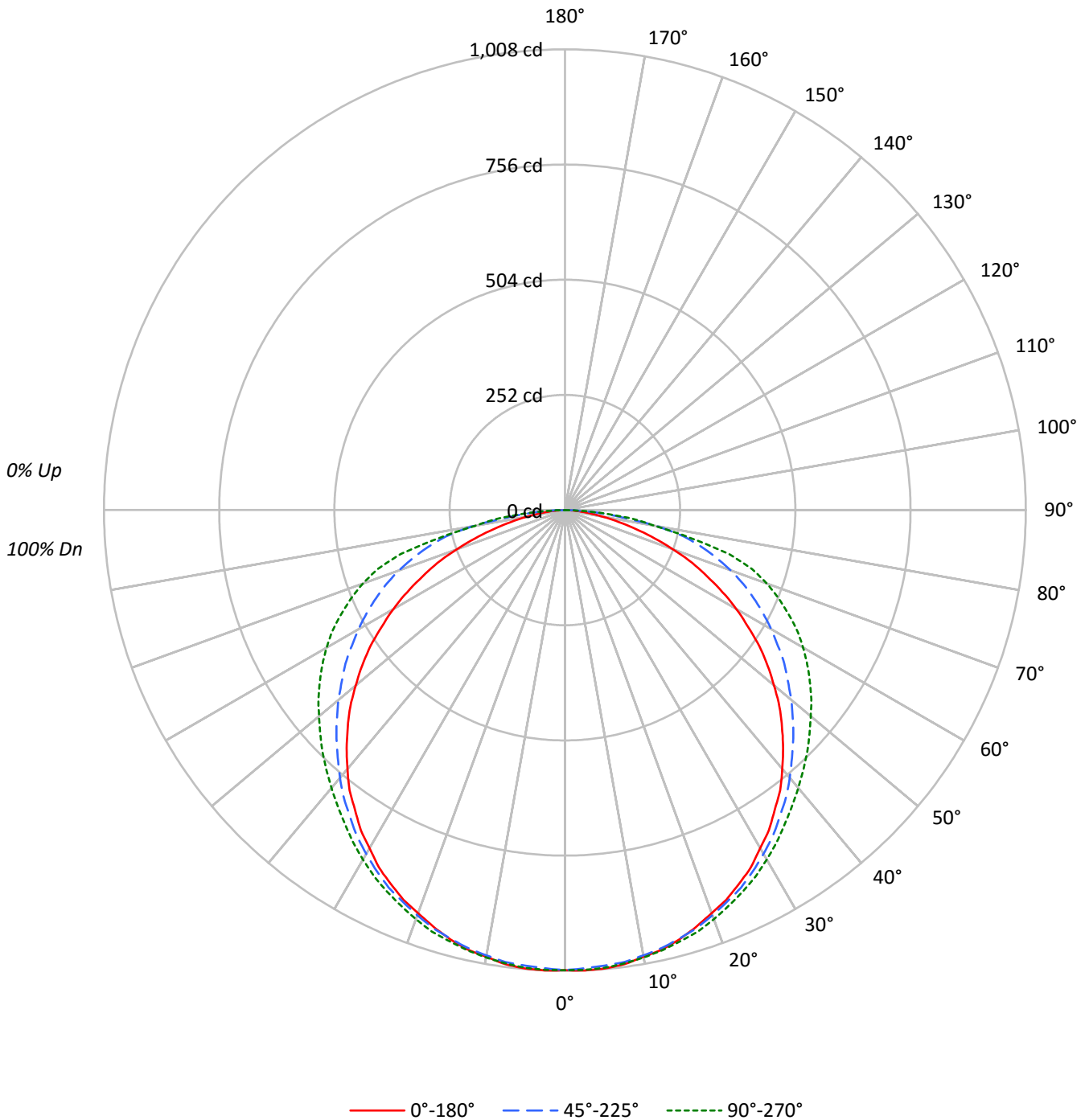
Input Watts (W): 40.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1354	1354	1354
5°	1360	1351	1357
10°	1356	1351	1358
15°	1354	1351	1360
20°	1344	1350	1364
25°	1339	1353	1367
30°	1327	1349	1372
35°	1314	1346	1377
40°	1300	1344	1394
45°	1278	1344	1426
50°	1250	1353	1469
55°	1218	1374	1534
60°	1167	1401	1619
65°	1092	1451	1719
70°	993	1518	1849
75°	842	1601	1931
80°	664	1612	1562
85°	491	1226	1372



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	95.5	3.0
10°-20°	274.8	8.6
20°-30°	420.2	13.1
30°-40°	513.7	16.0
40°-50°	547.5	17.1
50°-60°	523.5	16.4
60°-70°	443.5	13.9
70°-80°	298.1	9.3
80°-90°	84.1	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°	790.5	24.7
0°-40°	1304.3	40.7
0°-60°	2375.4	74.2
0°-90°	3201.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3201.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1007	1007	1007	1007	1007	
5°	1007	1005	1000	1005	1005	96
15°	972	972	970	978	976	274
25°	902	905	911	919	921	416
35°	800	807	819	835	838	501
45°	672	683	706	737	749	518
55°	519	538	586	632	654	462
65°	343	378	456	516	540	340
75°	162	221	308	360	372	173
85°	32	65	79	86	89	39
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1006.6	1006.6	1006.6	1006.6	1006.6
2.5°	1008.2	1008.2	1003.4	1006.6	1006.6
5°	1006.6	1005.0	1000.3	1005.0	1005.0
7.5°	1001.9	1000.3	997.1	1001.9	1000.3
10°	992.3	992.3	989.2	993.9	993.9
12.5°	984.4	982.8	981.2	987.6	986.0
15°	971.7	971.7	970.1	978.0	976.5
17.5°	955.8	957.4	959.0	965.3	966.9
20°	938.4	941.5	943.1	952.6	952.6
22.5°	922.5	924.1	927.2	936.8	936.8
25°	901.8	905.0	911.4	919.3	920.9
27.5°	881.2	882.8	890.7	901.8	903.4
30°	854.2	859.0	868.5	881.2	882.8
32.5°	830.4	835.1	846.3	859.0	862.1
35°	800.2	806.6	819.3	835.1	838.3
37.5°	773.2	778.0	793.9	811.3	816.1
40°	739.9	749.4	765.3	785.9	793.9
42.5°	706.5	716.1	735.1	762.1	771.6
45°	671.6	682.7	706.5	736.7	749.4
47.5°	636.7	649.4	676.4	711.3	725.6
50°	597.0	612.9	646.2	685.9	701.8
52.5°	558.9	577.9	614.5	658.9	679.5
55°	519.2	538.2	585.9	631.9	654.1
57.5°	474.7	500.1	552.5	604.9	628.7
60°	433.5	457.3	520.8	577.9	601.8
62.5°	389.0	420.7	489.0	549.4	573.2
65°	343.0	377.9	455.7	516.0	539.8
67.5°	301.7	339.8	422.3	482.7	506.5
70°	252.4	300.1	385.8	446.2	470.0
72.5°	206.4	258.8	347.7	406.5	428.7
75°	161.9	220.7	308.0	360.4	371.5
77.5°	120.7	182.6	266.7	289.0	281.0
80°	85.7	146.1	208.0	196.9	201.6
82.5°	55.6	111.1	128.6	146.1	150.8
85°	31.8	65.1	79.4	85.7	88.9
87.5°	14.3	23.8	31.8	31.8	30.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)