

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: P310177

Luminaire Tested: **24FCZ2-50HE-UNV-L82765-RDP-CA08-W2A-U-3500K**

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: P310177
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-CA08-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC SHEET
Light Source: (336) 3500K 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: 3019.0 lumens
Efficiency: N/A
Efficacy: 78.2 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

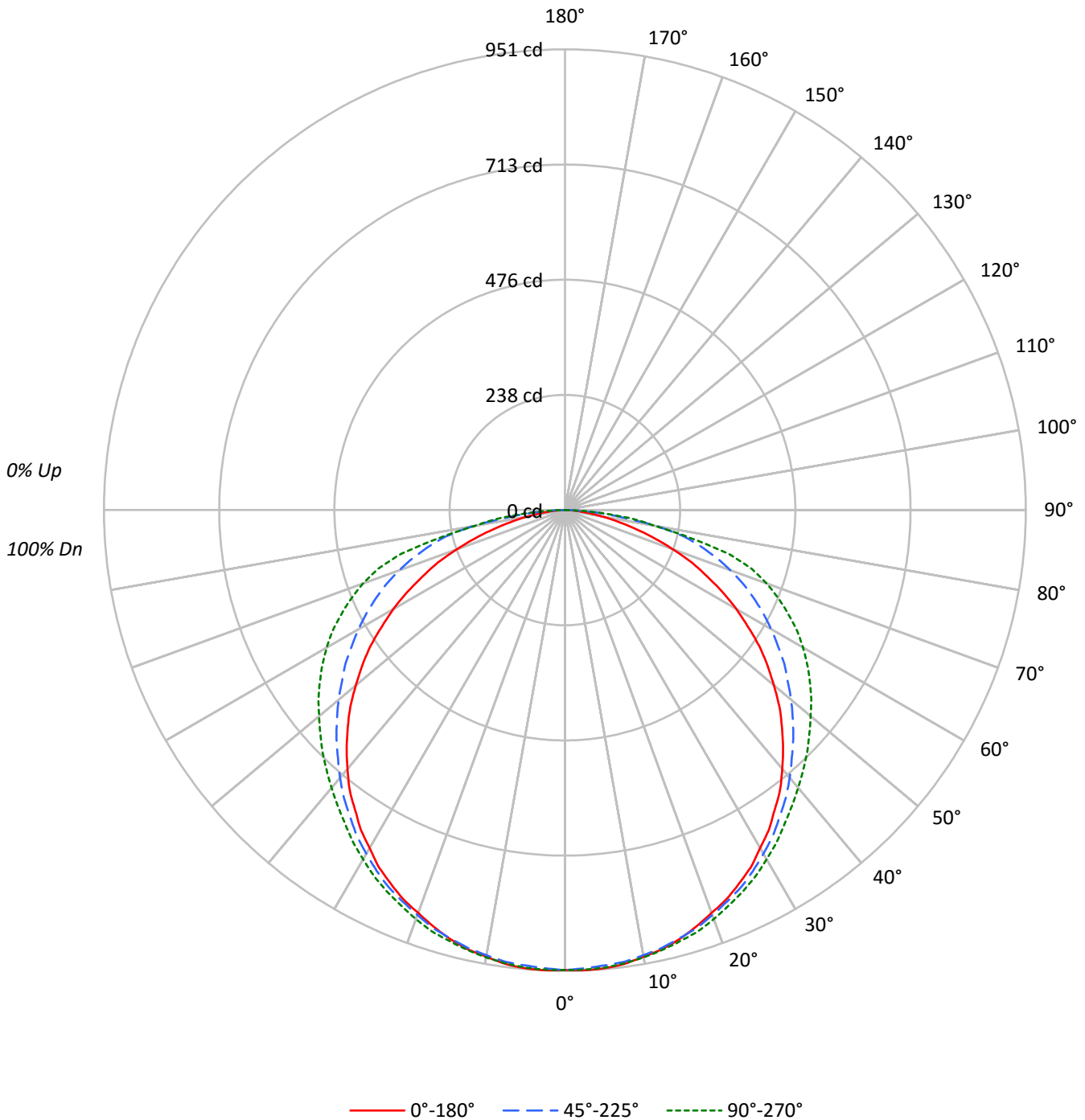
Input Watts (W): 38.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1277	1277	1277
5°	1282	1274	1280
10°	1279	1275	1281
15°	1277	1274	1283
20°	1267	1274	1287
25°	1263	1276	1289
30°	1252	1273	1294
35°	1240	1269	1299
40°	1226	1268	1315
45°	1205	1268	1345
50°	1178	1276	1385
55°	1149	1296	1447
60°	1100	1322	1527
65°	1030	1368	1621
70°	937	1432	1744
75°	794	1510	1822
80°	627	1520	1474
85°	462	1156	1295



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	90.1	3.0
10°-20°	259.2	8.6
20°-30°	396.4	13.1
30°-40°	484.5	16.0
40°-50°	516.4	17.1
50°-60°	493.8	16.4
60°-70°	418.3	13.9
70°-80°	281.1	9.3
80°-90°	79.3	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°	745.6	24.7
0°-40°	1230.1	40.7
0°-60°	2240.3	74.2
0°-90°	3019.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3019.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	949	949	949	949	949	
5°	949	948	943	948	948	90
15°	916	916	915	922	921	258
25°	851	854	860	867	868	392
35°	755	761	773	788	791	473
45°	633	644	666	695	707	489
55°	490	508	553	596	617	436
65°	324	356	430	487	509	321
75°	153	208	290	340	350	164
85°	30	61	75	81	84	37
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	949.4	949.4	949.4	949.4	949.4
2.5°	950.9	950.9	946.4	949.4	949.4
5°	949.4	947.9	943.4	947.9	947.9
7.5°	944.9	943.4	940.4	944.9	943.4
10°	935.9	935.9	932.9	937.4	937.4
12.5°	928.4	926.9	925.4	931.4	929.9
15°	916.4	916.4	914.9	922.4	920.9
17.5°	901.5	903.0	904.5	910.5	912.0
20°	885.0	888.0	889.5	898.5	898.5
22.5°	870.0	871.5	874.5	883.5	883.5
25°	850.6	853.6	859.5	867.0	868.5
27.5°	831.1	832.6	840.1	850.6	852.1
30°	805.6	810.1	819.1	831.1	832.6
32.5°	783.2	787.7	798.1	810.1	813.1
35°	754.7	760.7	772.7	787.7	790.7
37.5°	729.3	733.8	748.7	765.2	769.7
40°	697.8	706.8	721.8	741.2	748.7
42.5°	666.4	675.4	693.3	718.8	727.8
45°	633.4	643.9	666.4	694.8	706.8
47.5°	600.5	612.5	637.9	670.9	684.3
50°	563.0	578.0	609.5	646.9	661.9
52.5°	527.1	545.1	579.5	621.4	640.9
55°	489.7	507.6	552.6	596.0	617.0
57.5°	447.7	471.7	521.1	570.5	593.0
60°	408.8	431.3	491.2	545.1	567.5
62.5°	366.9	396.8	461.2	518.1	540.6
65°	323.5	356.4	429.8	486.7	509.1
67.5°	284.5	320.5	398.3	455.2	477.7
70°	238.1	283.0	363.9	420.8	443.2
72.5°	194.7	244.1	327.9	383.3	404.3
75°	152.7	208.1	290.5	339.9	350.4
77.5°	113.8	172.2	251.6	272.5	265.1
80°	80.9	137.8	196.2	185.7	190.2
82.5°	52.4	104.8	121.3	137.8	142.3
85°	29.9	61.4	74.9	80.9	83.9
87.5°	13.5	22.5	29.9	29.9	28.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)