

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: P313680

Luminaire Tested: **24FCZ2-55HE-UNV-L83050-RDP-CP187-W2A-U-3000K**

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: P313680
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: 24FCZ2-55HE-UNV-L83050-RDP-CP187-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" POLYCARB SHEET
Light Source: (336) 3000K 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: 3018.0 lumens
Efficiency: N/A
Efficacy: 70.2 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

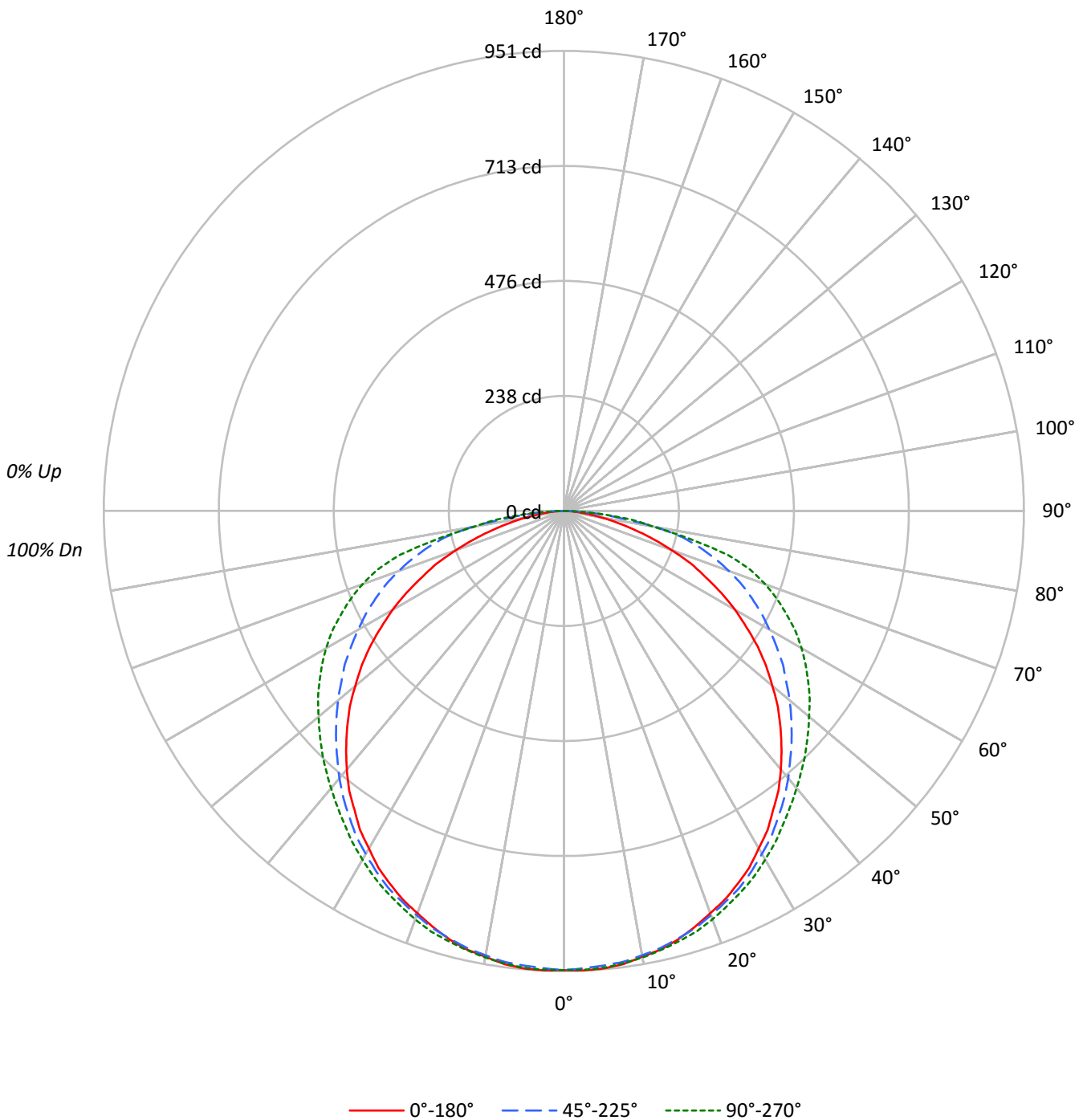
Input Watts (W): 43
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	68	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°	1278	1274	1280
15°	1276	1274	1282
20°	1267	1273	1286
25°	1262	1276	1289
30°	1251	1272	1293
35°	1239	1269	1298
40°	1225	1267	1315
45°	1205	1267	1345
50°	1178	1275	1385
55°	1148	1296	1447
60°	1100	1321	1527
65°	1029	1368	1621
70°	936	1431	1743
75°	794	1510	1821
80°	626	1519	1473
85°	462	1155	1294



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	90.0	3.0
10°-20°	259.1	8.6
20°-30°	396.2	13.1
30°-40°	484.4	16.0
40°-50°	516.2	17.1
50°-60°	493.6	16.4
60°-70°	418.1	13.9
70°-80°	281.0	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°	745.4	24.7
0°-40°	1229.7	40.7
0°-60°	2239.6	74.2
0°-90°	3018.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3018.0	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°	850	853	859	867	868	392
35°	754	760	772	787	790	473
45°	633	644	666	695	707	488
55°	490	508	552	596	617	436
65°	323	356	430	486	509	321
75°	153	208	290	340	350	163
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°	949.1	949.1	949.1	949.1	949.1
2.5°	950.6	950.6	946.1	949.1	949.1
5°	949.1	947.6	943.1	947.6	947.6
7.5°	944.6	943.1	940.1	944.6	943.1
10°	935.6	935.6	932.6	937.1	937.1
12.5°	928.1	926.6	925.1	931.1	929.6
15°	916.1	916.1	914.6	922.1	920.6
17.5°	901.2	902.7	904.2	910.2	911.7
20°	884.7	887.7	889.2	898.2	898.2
22.5°	869.7	871.2	874.2	883.2	883.2
25°	850.3	853.3	859.3	866.7	868.2
27.5°	830.8	832.3	839.8	850.3	851.8
30°	805.4	809.9	818.8	830.8	832.3
32.5°	782.9	787.4	797.9	809.9	812.9
35°	754.5	760.5	772.4	787.4	790.4
37.5°	729.0	733.5	748.5	764.9	769.4
40°	697.6	706.6	721.5	741.0	748.5
42.5°	666.1	675.1	693.1	718.5	727.5
45°	633.2	643.7	666.1	694.6	706.6
47.5°	600.3	612.3	637.7	670.6	684.1
50°	562.9	577.8	609.3	646.7	661.7
52.5°	526.9	544.9	579.3	621.2	640.7
55°	489.5	507.5	552.4	595.8	616.7
57.5°	447.6	471.5	520.9	570.3	592.8
60°	408.7	431.1	491.0	544.9	567.3
62.5°	366.8	396.7	461.1	517.9	540.4
65°	323.3	356.3	429.6	486.5	509.0
67.5°	284.4	320.4	398.2	455.1	477.5
70°	238.0	282.9	363.8	420.6	443.1
72.5°	194.6	244.0	327.8	383.2	404.2
75°	152.7	208.1	290.4	339.8	350.3
77.5°	113.8	172.2	251.5	272.4	265.0
80°	80.8	137.7	196.1	185.6	190.1
82.5°	52.4	104.8	121.3	137.7	142.2
85°	29.9	61.4	74.8	80.8	83.8
87.5°	13.5	22.5	29.9	29.9	28.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)