

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: P313681

Luminaire Tested: **24FCZ2-55HE-UNV-L83050-RDP-CP187-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: P313681
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-3500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" POLYCARB 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: 3193.0 lumens
Efficiency: N/A
Efficacy: 74.1 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

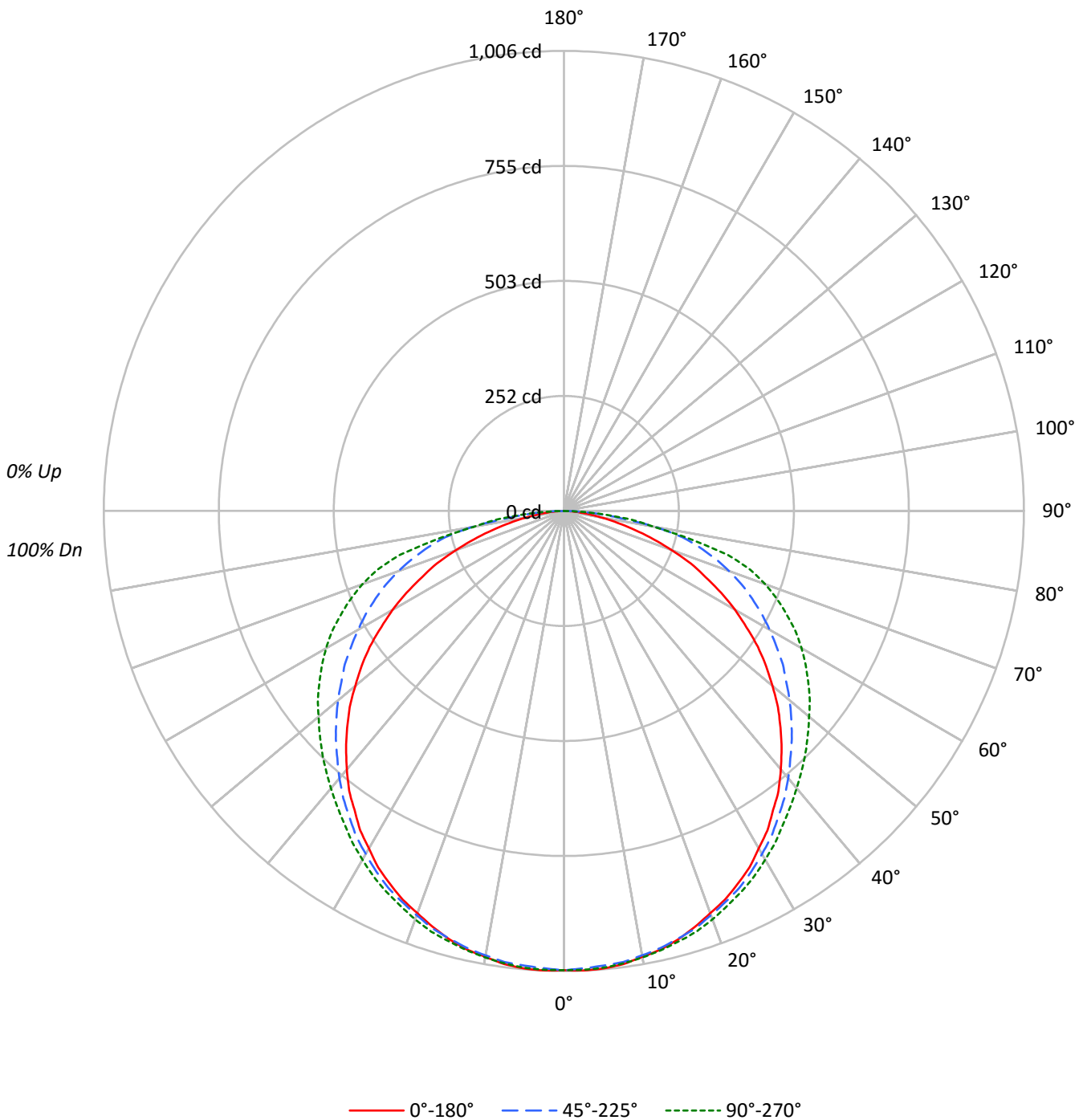
Input Watts (W): 43.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1351	1351	1351
5°	1356	1348	1354
10°	1352	1348	1354
15°	1350	1348	1357
20°	1340	1347	1361
25°	1336	1350	1364
30°	1324	1346	1368
35°	1311	1342	1373
40°	1296	1341	1391
45°	1275	1341	1422
50°	1247	1349	1465
55°	1215	1371	1531
60°	1164	1398	1615
65°	1089	1447	1714
70°	991	1514	1844
75°	840	1598	1927
80°	662	1608	1558
85°	489	1223	1369



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	95.2	3.0
10°-20°	274.1	8.6
20°-30°	419.2	13.1
30°-40°	512.5	16.0
40°-50°	546.2	17.1
50°-60°	522.2	16.4
60°-70°	442.4	13.9
70°-80°	297.3	9.3
80°-90°	83.9	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°	788.6	24.7
0°-40°	1301.0	40.7
0°-60°	2369.4	74.2
0°-90°	3193.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3193.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1004	1004	1004	1004	1004	
5°	1004	1002	998	1002	1002	95
15°	969	969	968	976	974	273
25°	900	903	909	917	919	415
35°	798	805	817	833	836	500
45°	670	681	705	735	748	517
55°	518	537	584	630	652	461
65°	342	377	454	515	538	340
75°	162	220	307	360	371	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°	1004.1	1004.1	1004.1	1004.1	1004.1
2.5°	1005.7	1005.7	1000.9	1004.1	1004.1
5°	1004.1	1002.5	997.8	1002.5	1002.5
7.5°	999.4	997.8	994.6	999.4	997.8
10°	989.9	989.9	986.7	991.4	991.4
12.5°	981.9	980.4	978.8	985.1	983.5
15°	969.3	969.3	967.7	975.6	974.0
17.5°	953.4	955.0	956.6	962.9	964.5
20°	936.0	939.2	940.8	950.3	950.3
22.5°	920.2	921.8	924.9	934.4	934.4
25°	899.6	902.7	909.1	917.0	918.6
27.5°	879.0	880.6	888.5	899.6	901.2
30°	852.1	856.8	866.3	879.0	880.6
32.5°	828.3	833.1	844.1	856.8	860.0
35°	798.2	804.6	817.2	833.1	836.2
37.5°	771.3	776.0	791.9	809.3	814.1
40°	738.0	747.5	763.4	784.0	791.9
42.5°	704.8	714.3	733.3	760.2	769.7
45°	669.9	681.0	704.8	734.9	747.5
47.5°	635.1	647.8	674.7	709.5	723.8
50°	595.5	611.3	644.6	684.2	700.0
52.5°	557.5	576.5	612.9	657.3	677.9
55°	517.9	536.9	584.4	630.3	652.5
57.5°	473.5	498.9	551.2	603.4	627.2
60°	432.4	456.1	519.5	576.5	600.2
62.5°	388.0	419.7	487.8	548.0	571.7
65°	342.1	376.9	454.5	514.7	538.5
67.5°	300.9	338.9	421.3	481.5	505.2
70°	251.8	299.3	384.9	445.0	468.8
72.5°	205.9	258.2	346.8	405.4	427.6
75°	161.5	220.1	307.3	359.5	370.6
77.5°	120.4	182.1	266.1	288.2	280.3
80°	85.5	145.7	207.5	196.4	201.1
82.5°	55.4	110.9	128.3	145.7	150.5
85°	31.7	64.9	79.2	85.5	88.7
87.5°	14.3	23.8	31.7	31.7	30.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)