

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: P310296

Luminaire Tested: **24FCZ2-55HE-UNV-L82765-RDP-CP187-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: P310296
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-L82765-RDP-CP187-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" 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: 3244.0 lumens
Efficiency: N/A
Efficacy: 73.9 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

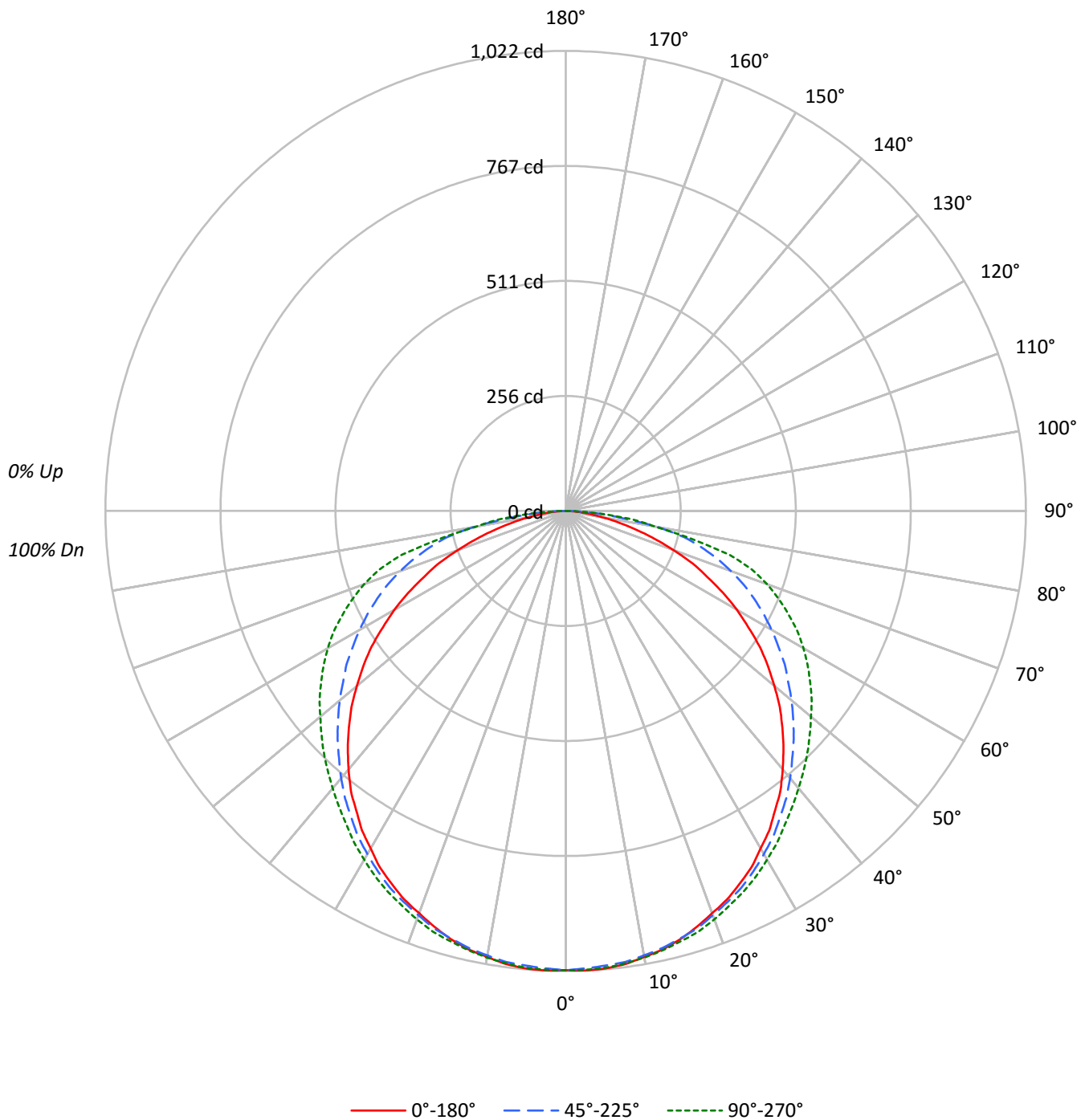
Input Watts (W): 43.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				0
RW	70	50	30	10	70	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		100
1	108	103	98	94	105	100	96	92	96	93	89		92	89	87		82
2	97	89	81	75	95	87	80	74	83	77	72		80	75	71		67
3	88	77	68	62	86	76	67	61	72	66	60		70	64	59		56
4	81	68	59	52	78	67	58	51	64	57	51		62	55	50		47
5	74	60	51	44	72	59	51	44	57	49	43		55	48	43		40
6	68	54	45	38	66	53	45	38	51	44	38		50	43	37		35
7	63	49	40	34	61	48	40	34	47	39	33		45	38	33		31
8	59	45	36	30	57	44	36	30	43	35	30		41	34	29		27
9	55	41	33	27	53	40	32	27	39	32	27		38	31	26		24
10	51	38	30	24	50	37	29	24	36	29	24		35	29	24		22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1373	1373	1373
5°	1378	1369	1376
10°	1374	1370	1376
15°	1372	1369	1378
20°	1362	1369	1382
25°	1357	1371	1386
30°	1345	1368	1390
35°	1332	1364	1396
40°	1317	1362	1413
45°	1295	1362	1445
50°	1266	1371	1489
55°	1234	1393	1555
60°	1182	1420	1641
65°	1107	1470	1742
70°	1006	1538	1874
75°	853	1623	1957
80°	673	1633	1584
85°	497	1243	1391



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	96.8	3.0
10°-20°	278.5	8.6
20°-30°	425.9	13.1
30°-40°	520.6	16.0
40°-50°	554.9	17.1
50°-60°	530.6	16.4
60°-70°	449.4	13.9
70°-80°	302.1	9.3
80°-90°	85.2	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°	801.2	24.7
0°-40°	1321.8	40.7
0°-60°	2407.3	74.2
0°-90°	3244.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3244.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1020	1020	1020	1020	1020	
5°	1020	1018	1014	1018	1018	97
15°	985	985	983	991	990	278
25°	914	917	924	932	933	421
35°	811	817	830	846	850	508
45°	681	692	716	747	760	525
55°	526	546	594	640	663	469
65°	348	383	462	523	547	345
75°	164	224	312	365	376	176
85°	32	66	80	87	90	40
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1020.1	1020.1	1020.1	1020.1	1020.1
2.5°	1021.8	1021.8	1016.9	1020.1	1020.1
5°	1020.1	1018.5	1013.7	1018.5	1018.5
7.5°	1015.3	1013.7	1010.5	1015.3	1013.7
10°	1005.7	1005.7	1002.4	1007.3	1007.3
12.5°	997.6	996.0	994.4	1000.8	999.2
15°	984.7	984.7	983.1	991.2	989.6
17.5°	968.7	970.3	971.9	978.3	979.9
20°	951.0	954.2	955.8	965.4	965.4
22.5°	934.9	936.5	939.7	949.3	949.3
25°	913.9	917.2	923.6	931.6	933.3
27.5°	893.0	894.6	902.7	913.9	915.6
30°	865.7	870.5	880.2	893.0	894.6
32.5°	841.5	846.4	857.6	870.5	873.7
35°	811.0	817.4	830.3	846.4	849.6
37.5°	783.6	788.4	804.5	822.2	827.1
40°	749.8	759.5	775.6	796.5	804.5
42.5°	716.0	725.7	745.0	772.3	782.0
45°	680.6	691.9	716.0	746.6	759.5
47.5°	645.2	658.1	685.5	720.9	735.3
50°	605.0	621.1	654.9	695.1	711.2
52.5°	566.4	585.7	622.7	667.8	688.7
55°	526.2	545.5	593.7	640.4	662.9
57.5°	481.1	506.9	560.0	613.1	637.2
60°	439.3	463.4	527.8	585.7	609.8
62.5°	394.2	426.4	495.6	556.7	580.9
65°	347.6	383.0	461.8	522.9	547.1
67.5°	305.7	344.3	428.0	489.2	513.3
70°	255.8	304.1	391.0	452.1	476.3
72.5°	209.2	262.3	352.4	411.9	434.4
75°	164.1	223.7	312.2	365.3	376.5
77.5°	122.3	185.0	270.3	292.8	284.8
80°	86.9	148.0	210.8	199.5	204.4
82.5°	56.3	112.6	130.3	148.0	152.9
85°	32.2	66.0	80.5	86.9	90.1
87.5°	14.5	24.1	32.2	32.2	30.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)