

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: P308537

Luminaire Tested: **22FCZ2-39HE-UNV-L82765-RDP-CP187-W2A-U-2700K**

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: P308537
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-24)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 22FCZ2-39HE-UNV-L82765-RDP-CP187-W2A-U-2700K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" POLYCARB SHEET
Light Source: (168) 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: 2039.0 lumens
Efficiency: N/A
Efficacy: 62.9 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

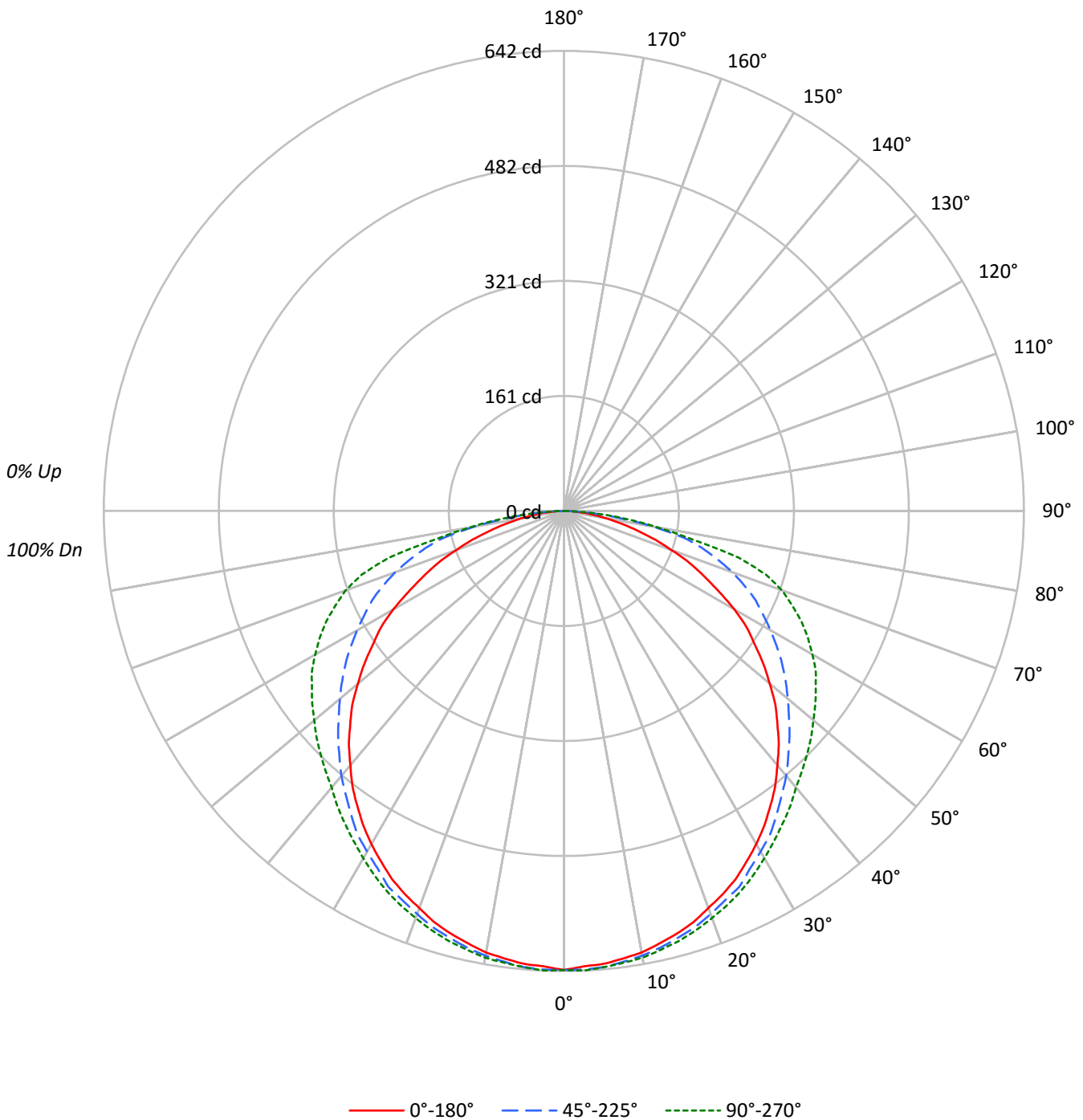
Input Watts (W): 32.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	92	89	92	89	86	88	86	84	82
2	97	88	81	75	95	86	80	74	83	77	72	80	75	71	76	72	69	67
3	88	77	68	61	86	75	67	61	72	65	60	70	64	59	67	62	58	55
4	80	68	59	51	78	66	58	51	64	56	50	61	55	50	59	54	49	47
5	74	60	51	44	72	59	50	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	44	38	51	43	38	50	43	37	48	42	37	35
7	63	49	40	33	61	48	39	33	47	39	33	45	38	33	44	37	33	31
8	59	45	36	30	57	44	35	30	43	35	29	41	34	29	40	34	29	27
9	55	41	32	27	53	40	32	27	39	32	26	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°	1724	1724	1724
5°	1714	1726	1726
10°	1709	1721	1730
15°	1701	1718	1730
20°	1688	1714	1731
25°	1684	1719	1737
30°	1669	1706	1739
35°	1651	1700	1749
40°	1628	1697	1770
45°	1604	1695	1827
50°	1570	1708	1903
55°	1527	1745	2013
60°	1477	1792	2155
65°	1375	1882	2330
70°	1263	1971	2549
75°	1107	2074	2636
80°	953	1976	2069
85°	834	1436	1575



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	60.6	3.0
10°-20°	174.0	8.5
20°-30°	265.4	13.0
30°-40°	324.1	15.9
40°-50°	346.5	17.0
50°-60°	334.4	16.4
60°-70°	287.9	14.1
70°-80°	194.8	9.6
80°-90°	51.4	2.5
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°	499.9	24.5
0°-40°	824.0	40.4
0°-60°	1505.0	73.8
0°-90°	2039.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2039.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	640	640	640	640	640	
5°	634	636	639	639	639	60
15°	610	612	616	620	621	172
25°	567	570	579	582	585	261
35°	502	507	518	528	532	314
45°	422	429	446	468	480	325
55°	326	336	372	410	429	292
65°	216	237	296	342	366	215
75°	106	141	200	240	254	114
85°	27	38	46	48	51	30
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	640.5	640.5	640.5	640.5	640.5
2.5°	636.0	637.5	640.5	640.5	642.0
5°	634.5	636.0	639.0	639.0	639.0
7.5°	630.0	631.5	634.5	636.0	636.0
10°	625.5	627.0	630.0	631.5	633.0
12.5°	618.0	619.5	624.0	627.0	627.0
15°	610.5	612.0	616.5	619.5	621.0
17.5°	601.5	604.5	609.0	612.0	613.5
20°	589.5	592.5	598.5	603.0	604.5
22.5°	579.0	582.0	588.0	592.5	595.5
25°	567.0	570.0	579.0	582.0	585.0
27.5°	552.0	555.0	562.5	568.5	573.0
30°	537.0	540.0	549.0	556.5	559.5
32.5°	520.5	525.0	535.5	541.5	546.0
35°	502.5	507.0	517.5	528.0	532.5
37.5°	484.5	489.0	499.5	513.0	519.0
40°	463.5	469.5	483.0	501.0	504.0
42.5°	444.0	451.5	463.5	484.5	492.0
45°	421.5	429.0	445.5	468.0	480.0
47.5°	400.5	408.0	426.0	453.0	468.0
50°	375.0	385.5	408.0	439.5	454.5
52.5°	351.0	360.0	390.0	424.5	442.5
55°	325.5	336.0	372.0	409.5	429.0
57.5°	303.0	312.0	352.5	394.5	417.0
60°	274.5	286.5	333.0	378.0	400.5
62.5°	244.5	262.5	313.5	360.0	384.0
65°	216.0	237.0	295.5	342.0	366.0
67.5°	190.5	213.0	273.0	322.5	345.0
70°	160.5	189.0	250.5	298.5	324.0
72.5°	133.5	165.0	225.0	273.0	295.5
75°	106.5	141.0	199.5	240.0	253.5
77.5°	82.5	115.5	171.0	183.0	184.5
80°	61.5	91.5	127.5	129.0	133.5
82.5°	42.0	64.5	82.5	90.0	91.5
85°	27.0	37.5	46.5	48.0	51.0
87.5°	12.0	13.5	16.5	15.0	15.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)