

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: P309265

Luminaire Tested: **24FCZ2-35HE-UNV-L82765-HRP-CP187-W2A-U-6500K**

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: P309265
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-35HE-UNV-L82765-HRP-CP187-W2A-U-6500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.187" POLYCARB SHEET
Light Source: (336) 6500K 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: 2387.0 lumens
Efficiency: N/A
Efficacy: 87.8 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

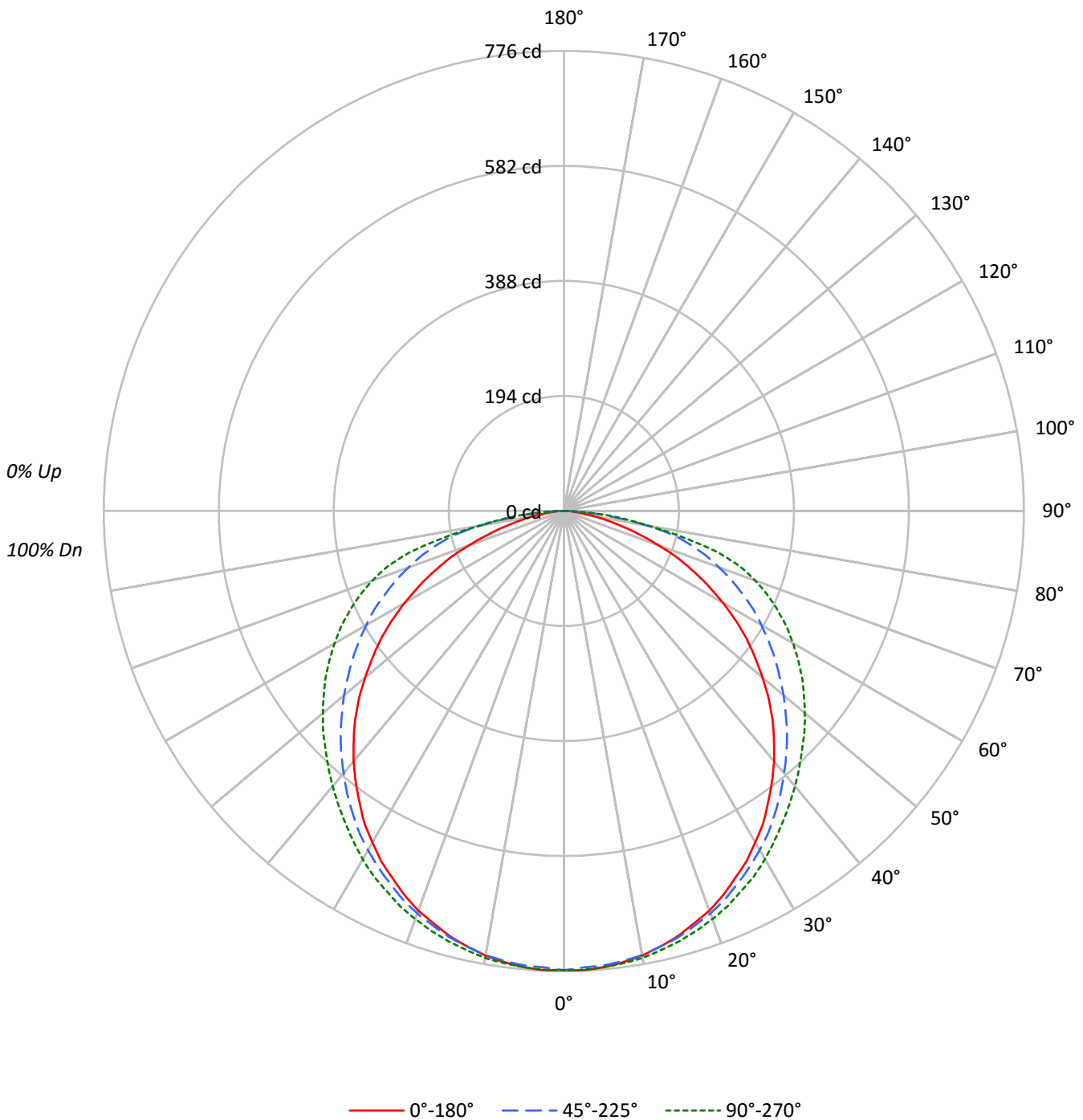
Input Watts (W): 27.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	101	96	93	96	93	90	92	90	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	24	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1042	1042	1042
5°	1043	1039	1043
10°	1040	1039	1046
15°	1034	1037	1047
20°	1027	1035	1049
25°	1015	1030	1050
30°	1003	1026	1054
35°	987	1021	1055
40°	969	1015	1065
45°	947	1013	1082
50°	916	1012	1111
55°	884	1020	1151
60°	834	1035	1202
65°	770	1060	1269
70°	672	1097	1352
75°	545	1153	1397
80°	403	1130	1130
85°	309	834	942



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	73.4	3.1
10°-20°	210.7	8.8
20°-30°	320.7	13.4
30°-40°	389.5	16.3
40°-50°	411.4	17.2
50°-60°	388.2	16.3
60°-70°	322.8	13.5
70°-80°	212.4	8.9
80°-90°	57.9	2.4
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°	604.8	25.3
0°-40°	994.2	41.7
0°-60°	1793.9	75.2
0°-90°	2387.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2387.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	774	774	774	774	774	
5°	772	772	770	772	772	73
15°	742	744	744	752	752	209
25°	684	688	694	706	708	315
35°	601	608	622	638	643	376
45°	498	508	533	559	569	383
55°	377	393	435	476	491	336
65°	242	270	333	382	399	239
75°	105	153	222	263	269	113
85°	20	44	54	60	61	24
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	774.5	774.5	774.5	774.5	774.5
2.5°	775.5	774.5	770.5	774.5	774.5
5°	772.5	772.5	769.5	772.5	772.5
7.5°	767.5	767.5	765.5	769.5	769.5
10°	761.5	761.5	760.5	765.5	765.5
12.5°	752.5	753.5	752.5	758.5	758.5
15°	742.5	743.5	744.5	751.5	751.5
17.5°	729.5	731.5	733.5	741.5	742.5
20°	717.5	718.5	722.5	731.5	732.5
22.5°	701.5	704.5	709.5	718.5	721.5
25°	683.5	687.5	693.5	705.5	707.5
27.5°	666.5	669.5	677.5	690.5	694.5
30°	645.6	650.5	660.5	673.5	678.5
32.5°	625.6	630.6	642.6	656.5	660.5
35°	600.6	607.6	621.6	637.6	642.6
37.5°	576.6	583.6	600.6	618.6	624.6
40°	551.6	559.6	577.6	598.6	606.6
42.5°	524.6	535.6	555.6	578.6	587.6
45°	497.7	507.6	532.6	558.6	568.6
47.5°	468.7	480.7	507.6	538.6	550.6
50°	437.7	452.7	483.7	517.6	530.6
52.5°	406.7	423.7	458.7	496.7	510.6
55°	376.7	392.7	434.7	475.7	490.7
57.5°	343.8	363.7	409.7	453.7	468.7
60°	309.8	331.8	384.7	430.7	446.7
62.5°	275.8	300.8	360.8	406.7	423.7
65°	241.8	269.8	332.8	381.7	398.7
67.5°	208.9	239.8	306.8	355.8	372.7
70°	170.9	209.9	278.8	326.8	343.8
72.5°	135.9	180.9	251.8	296.8	311.8
75°	104.9	152.9	221.8	262.8	268.8
77.5°	76.9	124.9	190.9	204.9	205.9
80°	52.0	99.9	145.9	143.9	145.9
82.5°	34.0	74.9	91.9	102.9	103.9
85°	20.0	44.0	54.0	60.0	61.0
87.5°	10.0	15.0	19.0	20.0	22.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)