

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: P309264

Luminaire Tested: **24FCZ2-35HE-UNV-L82765-HRP-CP187-W2A-U-5700K**

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: P309264
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-5700K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.187"
POLYCARB SHEET
Light Source: (336) 5700K 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: 2381.0 lumens
Efficiency: N/A
Efficacy: 89.2 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

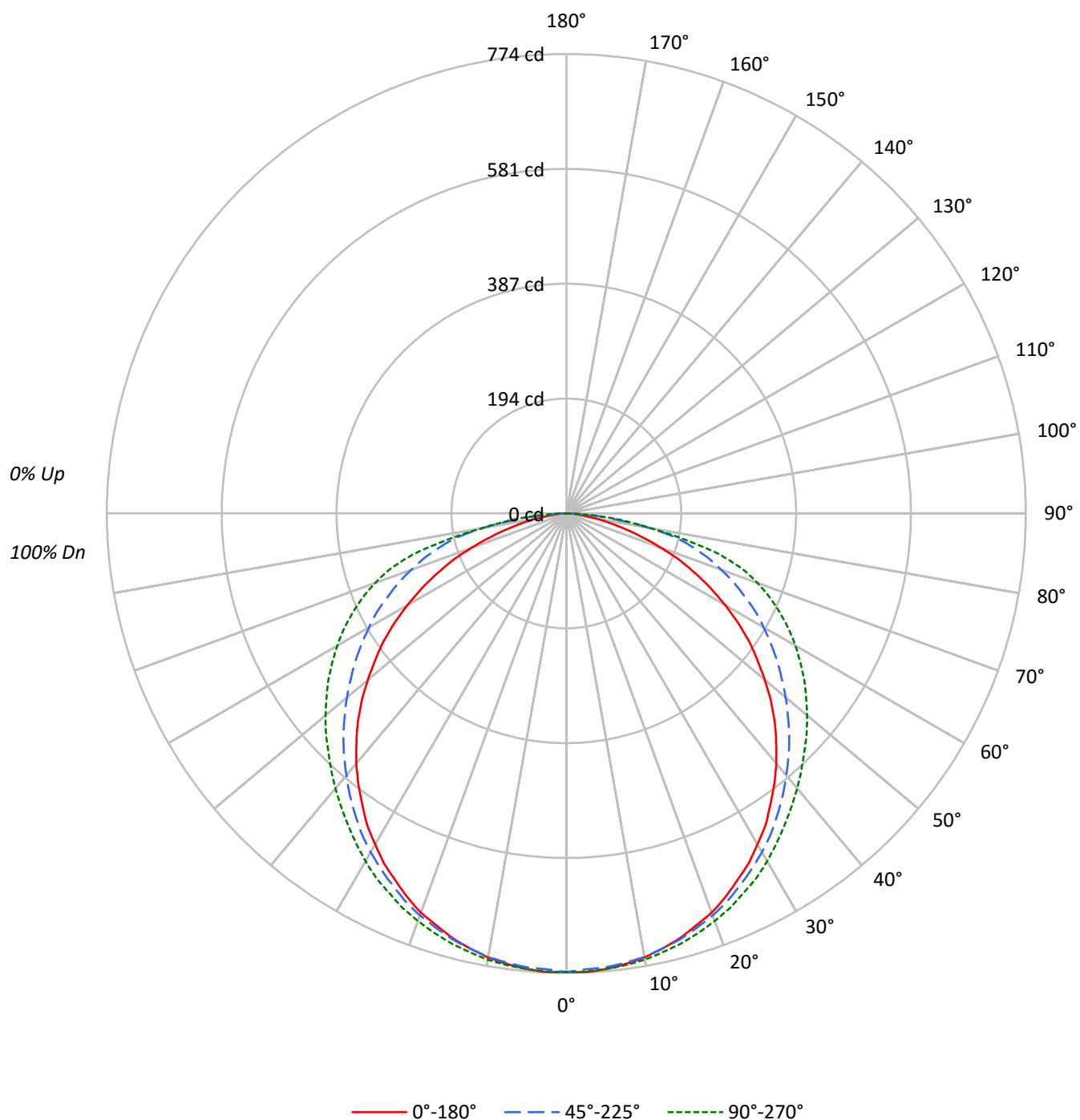
Input Watts (W): 26.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1039	1039	1039
5°	1041	1037	1041
10°	1038	1036	1043
15°	1032	1034	1044
20°	1025	1032	1046
25°	1012	1027	1048
30°	1000	1024	1052
35°	984	1018	1053
40°	966	1012	1063
45°	945	1011	1079
50°	914	1010	1108
55°	882	1017	1148
60°	832	1033	1199
65°	768	1057	1266
70°	671	1094	1349
75°	544	1150	1394
80°	401	1127	1127
85°	307	831	939



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	73.2	3.1
10°-20°	210.2	8.8
20°-30°	319.9	13.4
30°-40°	388.5	16.3
40°-50°	410.4	17.2
50°-60°	387.3	16.3
60°-70°	322.0	13.5
70°-80°	211.8	8.9
80°-90°	57.7	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°	603.3	25.3
0°-40°	991.7	41.7
0°-60°	1789.4	75.2
0°-90°	2381.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2381.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	772	772	772	772	772	
5°	770	770	768	770	770	73
15°	741	742	743	750	750	209
25°	682	686	692	704	706	315
35°	599	606	620	636	641	375
45°	496	506	531	557	567	382
55°	376	392	434	474	489	335
65°	241	269	332	381	398	238
75°	105	152	221	262	268	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°	772.5	772.5	772.5	772.5	772.5
2.5°	773.5	772.5	768.5	772.5	772.5
5°	770.5	770.5	767.5	770.5	770.5
7.5°	765.5	765.5	763.5	767.5	767.5
10°	759.6	759.6	758.6	763.5	763.5
12.5°	750.6	751.6	750.6	756.6	756.6
15°	740.6	741.6	742.6	749.6	749.6
17.5°	727.7	729.7	731.6	739.6	740.6
20°	715.7	716.7	720.7	729.7	730.7
22.5°	699.8	702.7	707.7	716.7	719.7
25°	681.8	685.8	691.8	703.7	705.7
27.5°	664.9	667.9	675.8	688.8	692.8
30°	643.9	648.9	658.9	671.8	676.8
32.5°	624.0	629.0	640.9	654.9	658.9
35°	599.1	606.1	620.0	636.0	640.9
37.5°	575.2	582.1	599.1	617.0	623.0
40°	550.2	558.2	576.1	597.1	605.1
42.5°	523.3	534.3	554.2	577.1	586.1
45°	496.4	506.4	531.3	557.2	567.2
47.5°	467.5	479.5	506.4	537.3	549.2
50°	436.6	451.5	482.4	516.3	529.3
52.5°	405.7	422.6	457.5	495.4	509.4
55°	375.8	391.7	433.6	474.5	489.4
57.5°	342.9	362.8	408.7	452.5	467.5
60°	309.0	330.9	383.8	429.6	445.6
62.5°	275.1	300.0	359.8	405.7	422.6
65°	241.2	269.1	331.9	380.8	397.7
67.5°	208.3	239.2	306.0	354.9	371.8
70°	170.5	209.3	278.1	326.0	342.9
72.5°	135.6	180.4	251.2	296.0	311.0
75°	104.7	152.5	221.3	262.2	268.1
77.5°	76.8	124.6	190.4	204.3	205.3
80°	51.8	99.7	145.5	143.5	145.5
82.5°	33.9	74.8	91.7	102.7	103.7
85°	19.9	43.9	53.8	59.8	60.8
87.5°	10.0	15.0	18.9	19.9	21.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)