

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: P313489

Luminaire Tested: **24FCZ2-35HE-UNV-L83050-RDP-CP250-W2A-U-5000K**

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: P313489
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: 24FCZ2-35HE-UNV-L83050-RDP-CP250-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" POLYCARB SHEET
Light Source: (336) 5000K 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: 2129.0 lumens
Efficiency: N/A
Efficacy: 78.0 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

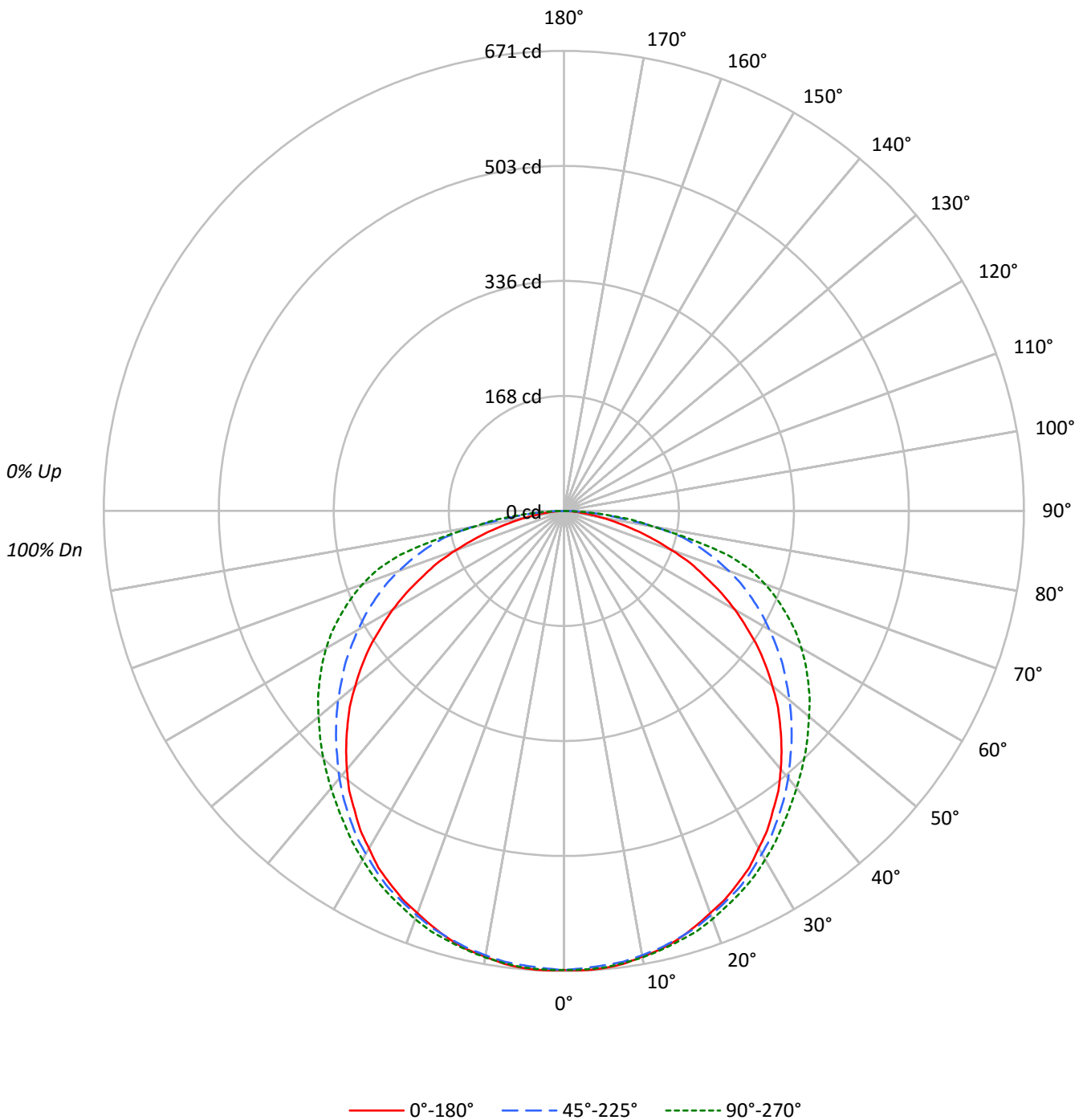
Input Watts (W): 27.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	68	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°	901	901	901
5°	904	899	903
10°	902	899	903
15°	900	899	905
20°	894	898	907
25°	890	900	909
30°	883	897	912
35°	874	895	916
40°	864	894	927
45°	850	894	948
50°	831	900	977
55°	810	914	1021
60°	776	932	1077
65°	726	965	1143
70°	661	1009	1230
75°	560	1065	1285
80°	442	1072	1039
85°	326	815	912



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	63.5	3.0
10°-20°	182.8	8.6
20°-30°	279.5	13.1
30°-40°	341.7	16.0
40°-50°	364.2	17.1
50°-60°	348.2	16.4
60°-70°	295.0	13.9
70°-80°	198.2	9.3
80°-90°	55.9	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°	525.8	24.7
0°-40°	867.5	40.7
0°-60°	1579.9	74.2
0°-90°	2129.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2129.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	670	670	670	670	670	
5°	670	668	665	668	668	64
15°	646	646	645	650	649	182
25°	600	602	606	611	612	276
35°	532	536	545	556	558	333
45°	447	454	470	490	498	345
55°	345	358	390	420	435	308
65°	228	251	303	343	359	226
75°	108	147	205	240	247	115
85°	21	43	53	57	59	26
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	669.5	669.5	669.5	669.5	669.5
2.5°	670.6	670.6	667.4	669.5	669.5
5°	669.5	668.5	665.3	668.5	668.5
7.5°	666.3	665.3	663.2	666.3	665.3
10°	660.0	660.0	657.9	661.1	661.1
12.5°	654.7	653.7	652.6	656.8	655.8
15°	646.3	646.3	645.2	650.5	649.4
17.5°	635.7	636.8	637.8	642.1	643.1
20°	624.1	626.2	627.3	633.6	633.6
22.5°	613.5	614.6	616.7	623.0	623.0
25°	599.8	601.9	606.1	611.4	612.5
27.5°	586.1	587.1	592.4	599.8	600.9
30°	568.1	571.3	577.6	586.1	587.1
32.5°	552.3	555.5	562.9	571.3	573.4
35°	532.2	536.5	544.9	555.5	557.6
37.5°	514.3	517.4	528.0	539.6	542.8
40°	492.1	498.4	509.0	522.7	528.0
42.5°	469.9	476.3	488.9	506.9	513.2
45°	446.7	454.1	469.9	490.0	498.4
47.5°	423.5	431.9	449.9	473.1	482.6
50°	397.1	407.6	429.8	456.2	466.8
52.5°	371.7	384.4	408.7	438.2	452.0
55°	345.3	358.0	389.7	420.3	435.1
57.5°	315.7	332.6	367.5	402.3	418.2
60°	288.3	304.1	346.4	384.4	400.2
62.5°	258.7	279.8	325.3	365.4	381.2
65°	228.1	251.3	303.1	343.2	359.0
67.5°	200.6	226.0	280.9	321.0	336.9
70°	167.9	199.6	256.6	296.7	312.6
72.5°	137.3	172.1	231.3	270.3	285.1
75°	107.7	146.8	204.9	239.7	247.1
77.5°	80.3	121.4	177.4	192.2	186.9
80°	57.0	97.2	138.3	130.9	134.1
82.5°	37.0	73.9	85.5	97.2	100.3
85°	21.1	43.3	52.8	57.0	59.1
87.5°	9.5	15.8	21.1	21.1	20.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)