

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: P313466

Luminaire Tested: **24FCZ2-35HE-UNV-L83050-RDP-CA08-W2A-U-3500K**

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: P313466
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-CA08-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC SHEET
Light Source: (336) 3500K 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: 2164.0 lumens
Efficiency: N/A
Efficacy: 83.2 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

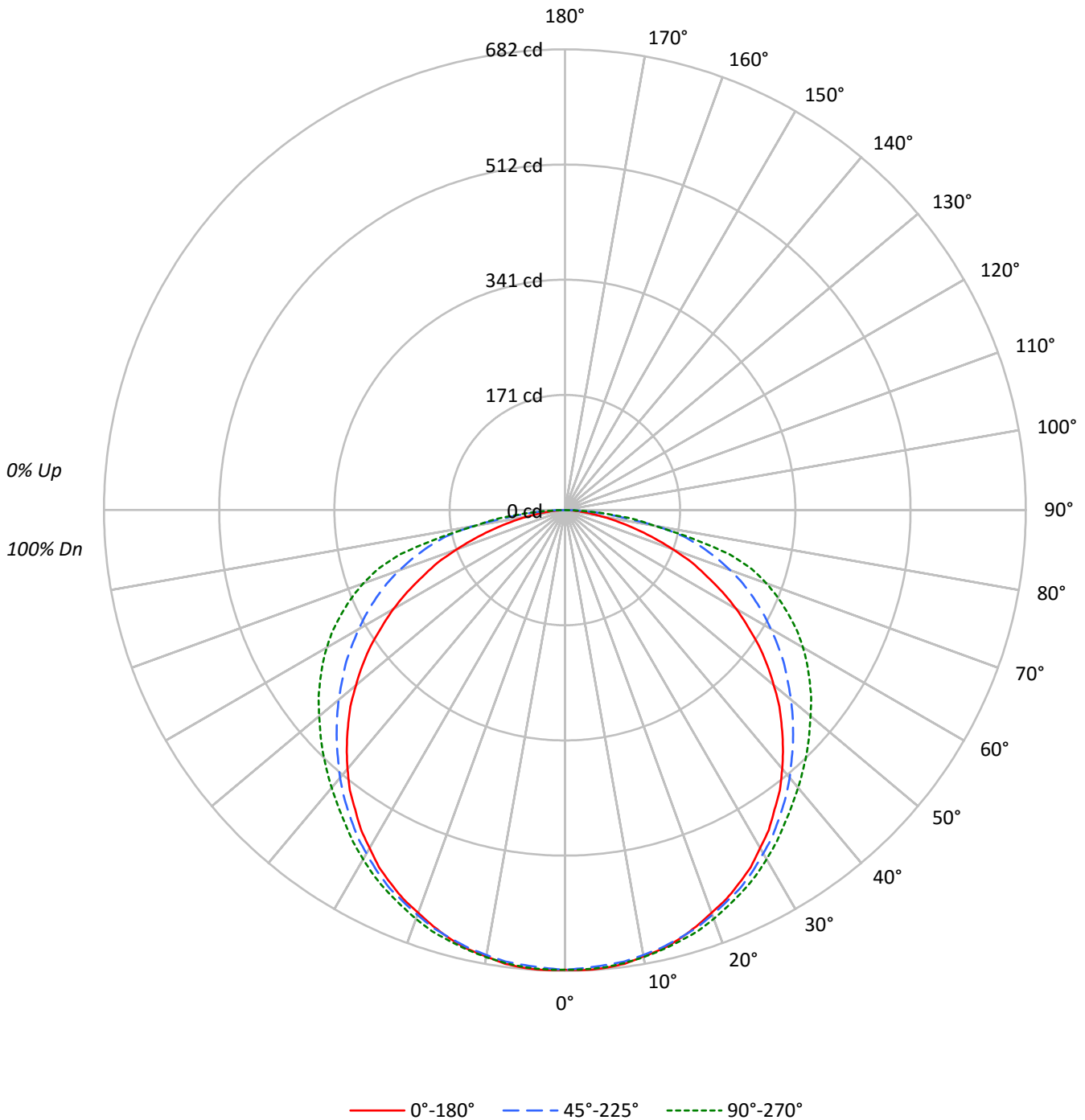
Input Watts (W): 26
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	67	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°	916	916	916
5°	919	913	918
10°	917	914	918
15°	915	913	919
20°	908	913	922
25°	905	915	924
30°	897	912	927
35°	889	910	931
40°	879	909	943
45°	864	909	964
50°	845	915	993
55°	823	929	1037
60°	788	947	1095
65°	738	981	1162
70°	672	1026	1250
75°	569	1082	1306
80°	449	1089	1056
85°	332	829	928



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	64.6	3.0
10°-20°	185.8	8.6
20°-30°	284.1	13.1
30°-40°	347.3	16.0
40°-50°	370.2	17.1
50°-60°	353.9	16.4
60°-70°	299.8	13.9
70°-80°	201.5	9.3
80°-90°	56.8	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°	534.4	24.7
0°-40°	881.8	40.7
0°-60°	1605.8	74.2
0°-90°	2164.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2164.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	680	680	680	680	680	
5°	680	679	676	679	679	65
15°	657	657	656	661	660	185
25°	610	612	616	622	623	281
35°	541	545	554	565	567	339
45°	454	462	478	498	507	350
55°	351	364	396	427	442	313
65°	232	256	308	349	365	230
75°	110	149	208	244	251	117
85°	22	44	54	58	60	27
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	680.5	680.5	680.5	680.5	680.5
2.5°	681.6	681.6	678.4	680.5	680.5
5°	680.5	679.4	676.2	679.4	679.4
7.5°	677.3	676.2	674.1	677.3	676.2
10°	670.9	670.9	668.7	671.9	671.9
12.5°	665.5	664.4	663.3	667.6	666.6
15°	656.9	656.9	655.8	661.2	660.1
17.5°	646.2	647.2	648.3	652.6	653.7
20°	634.4	636.5	637.6	644.0	644.0
22.5°	623.6	624.7	626.8	633.3	633.3
25°	609.7	611.8	616.1	621.5	622.6
27.5°	595.7	596.8	602.2	609.7	610.7
30°	577.5	580.7	587.1	595.7	596.8
32.5°	561.4	564.6	572.1	580.7	582.8
35°	541.0	545.3	553.9	564.6	566.7
37.5°	522.7	526.0	536.7	548.5	551.7
40°	500.2	506.6	517.4	531.3	536.7
42.5°	477.6	484.1	497.0	515.2	521.7
45°	454.0	461.5	477.6	498.0	506.6
47.5°	430.4	439.0	457.3	480.9	490.5
50°	403.6	414.3	436.9	463.7	474.4
52.5°	377.8	390.7	415.4	445.4	459.4
55°	351.0	363.9	396.1	427.2	442.2
57.5°	320.9	338.1	373.5	409.0	425.1
60°	293.0	309.1	352.1	390.7	406.8
62.5°	263.0	284.4	330.6	371.4	387.5
65°	231.8	255.5	308.1	348.8	364.9
67.5°	203.9	229.7	285.5	326.3	342.4
70°	170.7	202.9	260.8	301.6	317.7
72.5°	139.5	175.0	235.1	274.8	289.8
75°	109.5	149.2	208.2	243.7	251.2
77.5°	81.6	123.4	180.3	195.4	190.0
80°	58.0	98.7	140.6	133.1	136.3
82.5°	37.6	75.1	86.9	98.7	102.0
85°	21.5	44.0	53.7	58.0	60.1
87.5°	9.7	16.1	21.5	21.5	20.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)