

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: P309276

Luminaire Tested: **24FCZ2-35-UNV-L82765-HRP-CA08-W2A-U-3000K**

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: P309276
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: 24FCZ2-35-UNV-L82765-HRP-CA08-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" ACRYLIC 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: 2329.0 lumens
Efficiency: N/A
Efficacy: 83.8 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

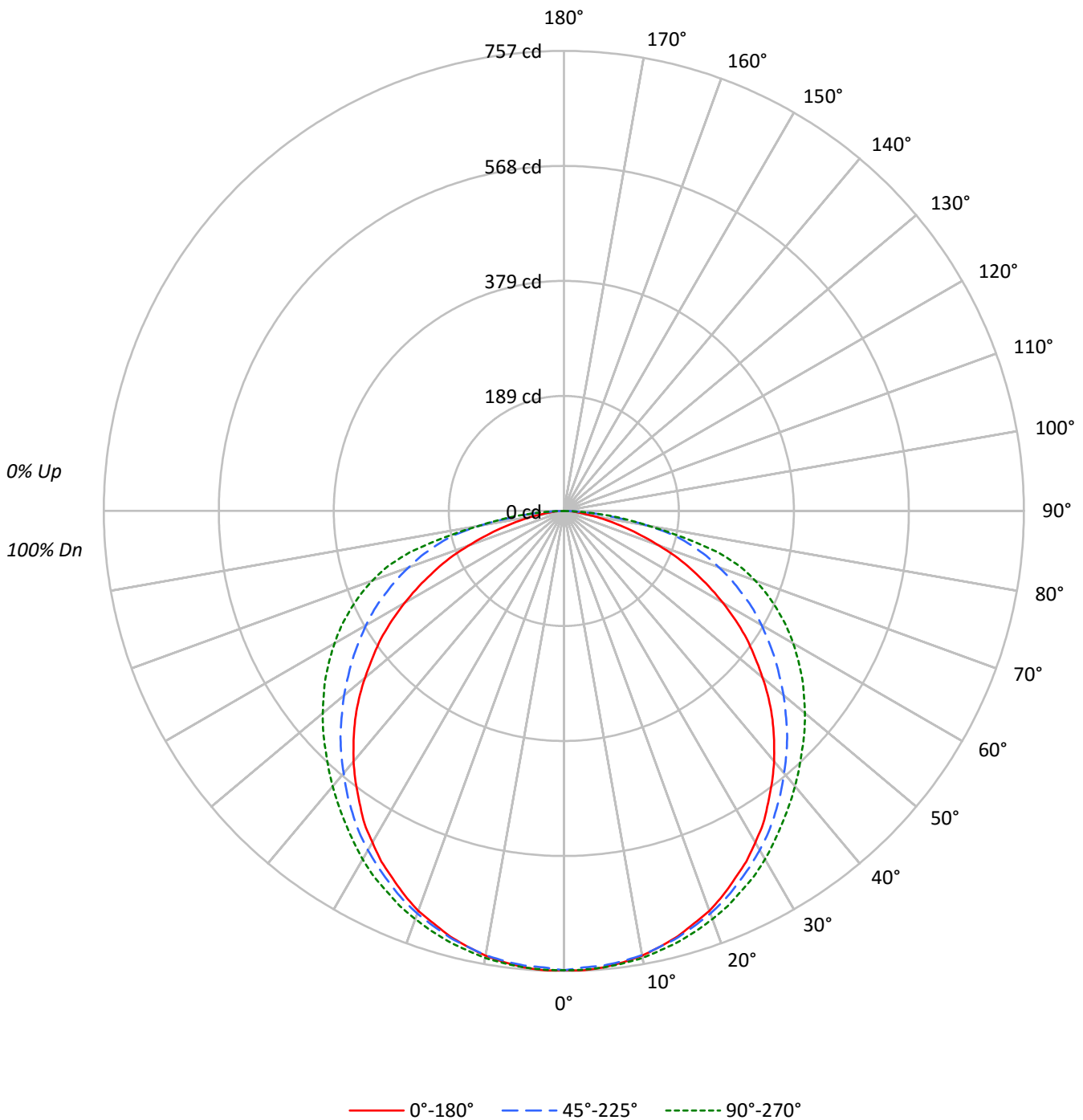
Input Watts (W): 27.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1017	1017	1017
5°	1018	1014	1018
10°	1015	1014	1020
15°	1009	1012	1021
20°	1002	1009	1023
25°	990	1005	1025
30°	979	1001	1029
35°	963	996	1030
40°	945	990	1039
45°	924	989	1056
50°	894	988	1084
55°	862	995	1123
60°	813	1010	1173
65°	751	1034	1238
70°	656	1070	1319
75°	532	1125	1364
80°	393	1103	1103
85°	301	814	919



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	71.6	3.1
10°-20°	205.6	8.8
20°-30°	312.9	13.4
30°-40°	380.0	16.3
40°-50°	401.4	17.2
50°-60°	378.8	16.3
60°-70°	315.0	13.5
70°-80°	207.2	8.9
80°-90°	56.5	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°	590.1	25.3
0°-40°	970.1	41.7
0°-60°	1750.3	75.2
0°-90°	2329.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2329.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	756	756	756	756	756	
5°	754	754	751	754	754	72
15°	724	725	726	733	733	204
25°	667	671	677	688	690	308
35°	586	593	606	622	627	367
45°	486	495	520	545	555	374
55°	368	383	424	464	479	327
65°	236	263	325	372	389	233
75°	102	149	216	256	262	110
85°	20	43	53	58	60	24
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	755.6	755.6	755.6	755.6	755.6
2.5°	756.6	755.6	751.7	755.6	755.6
5°	753.7	753.7	750.8	753.7	753.7
7.5°	748.8	748.8	746.9	750.8	750.8
10°	743.0	743.0	742.0	746.9	746.9
12.5°	734.2	735.2	734.2	740.0	740.0
15°	724.4	725.4	726.4	733.2	733.2
17.5°	711.8	713.7	715.7	723.5	724.4
20°	700.1	701.0	704.9	713.7	714.7
22.5°	684.5	687.4	692.3	701.0	704.0
25°	666.9	670.8	676.7	688.4	690.3
27.5°	650.3	653.3	661.1	673.7	677.6
30°	629.9	634.7	644.5	657.2	662.0
32.5°	610.4	615.2	626.9	640.6	644.5
35°	586.0	592.8	606.5	622.1	626.9
37.5°	562.6	569.4	586.0	603.5	609.4
40°	538.2	546.0	563.6	584.0	591.8
42.5°	511.9	522.6	542.1	564.5	573.3
45°	485.6	495.3	519.7	545.0	554.8
47.5°	457.3	469.0	495.3	525.5	537.2
50°	427.1	441.7	471.9	505.1	517.7
52.5°	396.8	413.4	447.5	484.6	498.2
55°	367.6	383.2	424.1	464.1	478.7
57.5°	335.4	354.9	399.8	442.7	457.3
60°	302.3	323.7	375.4	420.2	435.8
62.5°	269.1	293.5	352.0	396.8	413.4
65°	236.0	263.3	324.7	372.5	389.0
67.5°	203.8	234.0	299.3	347.1	363.7
70°	166.7	204.8	272.0	318.8	335.4
72.5°	132.6	176.5	245.7	289.6	304.2
75°	102.4	149.2	216.5	256.4	262.3
77.5°	75.1	121.9	186.2	199.9	200.9
80°	50.7	97.5	142.4	140.4	142.4
82.5°	33.2	73.1	89.7	100.4	101.4
85°	19.5	42.9	52.7	58.5	59.5
87.5°	9.8	14.6	18.5	19.5	21.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)