

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: P309282

Luminaire Tested: **24FCZ2-35-UNV-L82765-HRP-CA08-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: P309282
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-5700K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" ACRYLIC SHEET
Light Source: (168) 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: 2572.0 lumens
Efficiency: N/A
Efficacy: 89.3 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

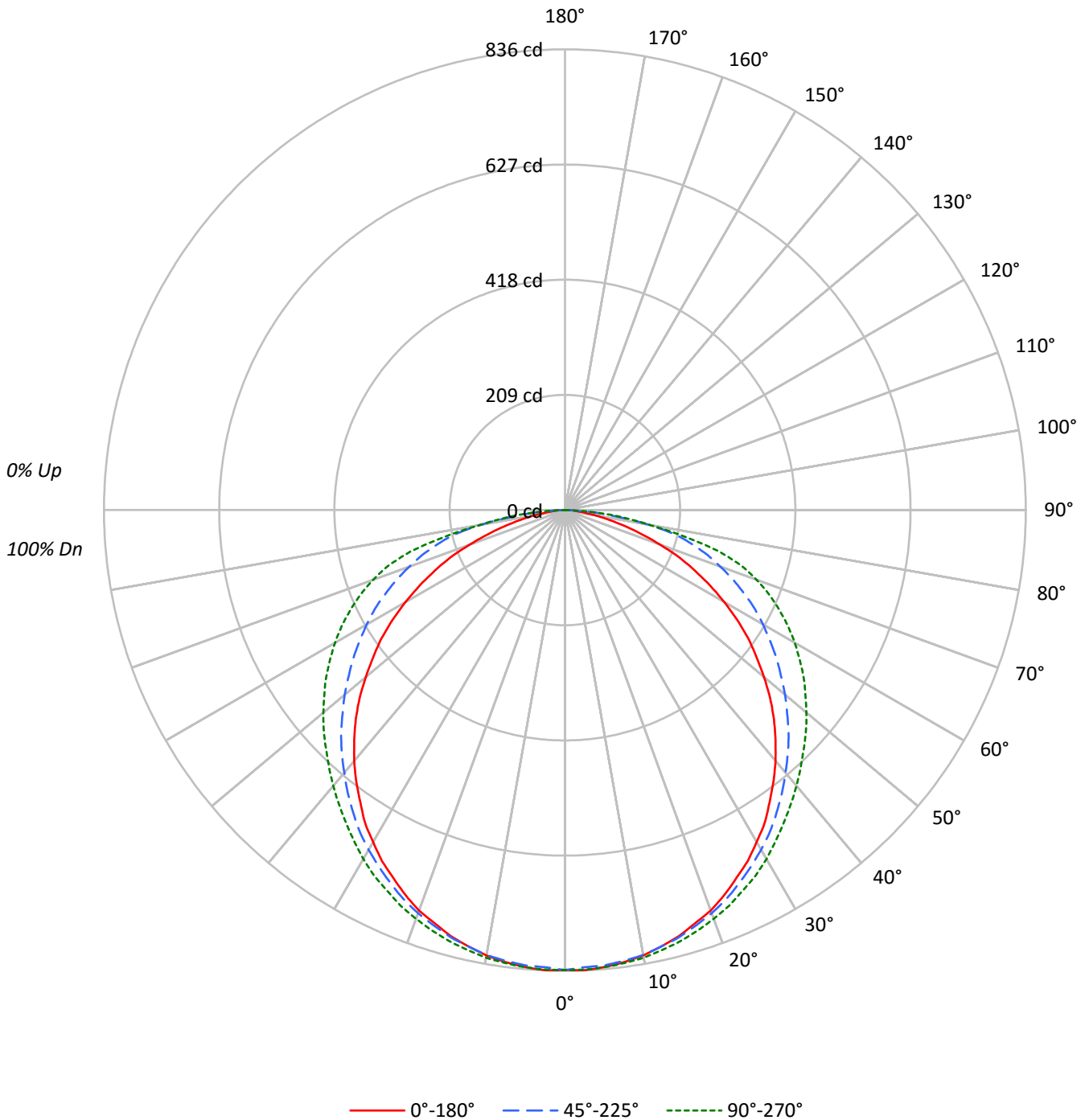
Input Watts (W): 28.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1123	1123	1123
5°	1124	1120	1124
10°	1121	1120	1127
15°	1114	1117	1128
20°	1107	1115	1130
25°	1093	1109	1132
30°	1081	1106	1136
35°	1063	1100	1137
40°	1044	1093	1148
45°	1020	1092	1166
50°	987	1091	1197
55°	952	1099	1240
60°	898	1116	1295
65°	830	1142	1368
70°	724	1182	1457
75°	588	1242	1506
80°	434	1218	1218
85°	332	897	1014



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	79.1	3.1
10°-20°	227.0	8.8
20°-30°	345.6	13.4
30°-40°	419.6	16.3
40°-50°	443.3	17.2
50°-60°	418.3	16.3
60°-70°	347.8	13.5
70°-80°	228.8	8.9
80°-90°	62.4	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°	651.6	25.3
0°-40°	1071.3	41.7
0°-60°	1932.9	75.2
0°-90°	2572.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2572.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	834	834	834	834	834	
5°	832	832	829	832	832	79
15°	800	801	802	810	810	226
25°	736	741	747	760	762	340
35°	647	655	670	687	692	405
45°	536	547	574	602	613	413
55°	406	423	468	512	529	362
65°	261	291	359	411	430	258
75°	113	165	239	283	290	122
85°	22	47	58	65	66	26
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	834.5	834.5	834.5	834.5	834.5
2.5°	835.6	834.5	830.2	834.5	834.5
5°	832.3	832.3	829.1	832.3	832.3
7.5°	827.0	827.0	824.8	829.1	829.1
10°	820.5	820.5	819.4	824.8	824.8
12.5°	810.8	811.9	810.8	817.3	817.3
15°	800.0	801.1	802.2	809.7	809.7
17.5°	786.0	788.2	790.3	799.0	800.0
20°	773.1	774.2	778.5	788.2	789.3
22.5°	755.9	759.1	764.5	774.2	777.4
25°	736.5	740.8	747.3	760.2	762.3
27.5°	718.2	721.4	730.0	744.0	748.3
30°	695.6	701.0	711.7	725.7	731.1
32.5°	674.1	679.4	692.4	707.4	711.7
35°	647.1	654.7	669.7	687.0	692.4
37.5°	621.3	628.8	647.1	666.5	673.0
40°	594.4	603.0	622.4	645.0	653.6
42.5°	565.3	577.1	598.7	623.4	633.1
45°	536.2	547.0	573.9	601.9	612.7
47.5°	505.0	517.9	547.0	580.4	593.3
50°	471.6	487.8	521.2	557.8	571.8
52.5°	438.2	456.5	494.2	535.1	550.2
55°	405.9	423.2	468.4	512.5	528.7
57.5°	370.4	391.9	441.5	488.8	505.0
60°	333.8	357.5	414.6	464.1	481.3
62.5°	297.2	324.1	388.7	438.2	456.5
65°	260.6	290.7	358.6	411.3	429.6
67.5°	225.0	258.4	330.6	383.3	401.6
70°	184.1	226.1	300.4	352.1	370.4
72.5°	146.4	194.9	271.3	319.8	335.9
75°	113.1	164.7	239.0	283.2	289.6
77.5°	82.9	134.6	205.7	220.7	221.8
80°	56.0	107.7	157.2	155.1	157.2
82.5°	36.6	80.8	99.1	110.9	112.0
85°	21.5	47.4	58.1	64.6	65.7
87.5°	10.8	16.2	20.5	21.5	23.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)