

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: P309367

Luminaire Tested: **24FCZ2-40-UNV-L82765-HRP-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: P309367
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: 24FCZ2-40-UNV-L82765-HRP-CA08-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" ACRYLIC SHEET
Light Source: (168) 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: 2742.0 lumens
Efficiency: N/A
Efficacy: 83.3 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

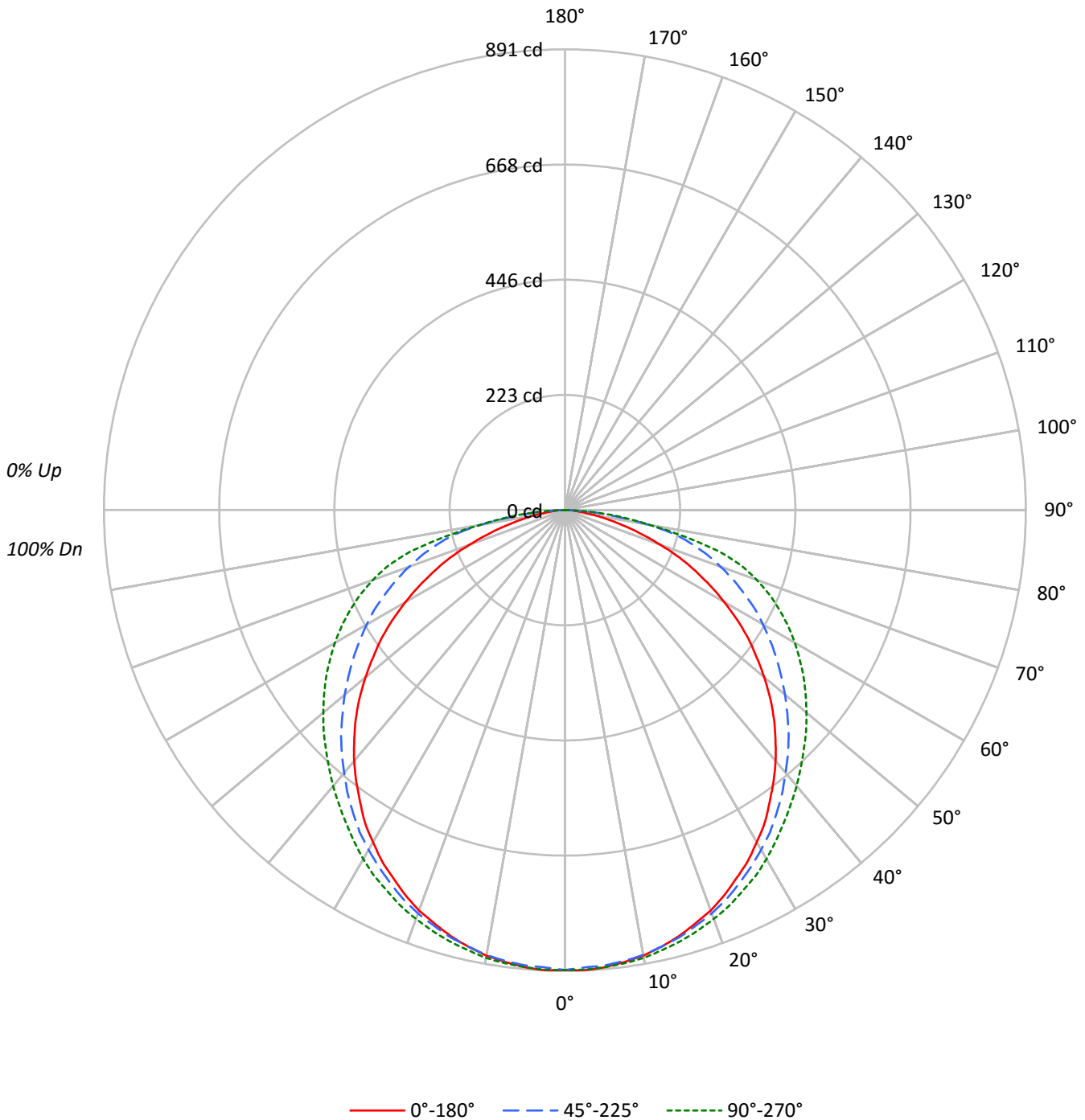
Input Watts (W): 32.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1197	1197	1197
5°	1198	1194	1198
10°	1195	1194	1201
15°	1188	1191	1202
20°	1180	1188	1205
25°	1166	1183	1207
30°	1152	1179	1211
35°	1133	1173	1212
40°	1113	1165	1224
45°	1088	1164	1243
50°	1052	1163	1276
55°	1015	1171	1322
60°	958	1189	1381
65°	884	1217	1458
70°	772	1260	1554
75°	626	1325	1605
80°	463	1299	1299
85°	355	957	1081



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	84.3	3.1
10°-20°	242.0	8.8
20°-30°	368.4	13.4
30°-40°	447.4	16.3
40°-50°	472.6	17.2
50°-60°	446.0	16.3
60°-70°	370.8	13.5
70°-80°	244.0	8.9
80°-90°	66.5	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°	694.7	25.3
0°-40°	1142.1	41.7
0°-60°	2060.7	75.2
0°-90°	2742.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2742.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	890	890	890	890	890	
5°	887	887	884	887	887	84
15°	853	854	855	863	863	241
25°	785	790	797	810	813	362
35°	690	698	714	732	738	432
45°	572	583	612	642	653	440
55°	433	451	499	546	564	385
65°	278	310	382	438	458	275
75°	120	176	255	302	309	130
85°	23	50	62	69	70	28
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	889.6	889.6	889.6	889.6	889.6
2.5°	890.8	889.6	885.1	889.6	889.6
5°	887.3	887.3	883.9	887.3	887.3
7.5°	881.6	881.6	879.3	883.9	883.9
10°	874.7	874.7	873.6	879.3	879.3
12.5°	864.4	865.5	864.4	871.3	871.3
15°	852.9	854.1	855.2	863.2	863.2
17.5°	838.0	840.3	842.6	851.8	852.9
20°	824.2	825.4	830.0	840.3	841.4
22.5°	805.8	809.3	815.0	825.4	828.8
25°	785.2	789.8	796.7	810.4	812.7
27.5°	765.7	769.1	778.3	793.2	797.8
30°	741.6	747.3	758.8	773.7	779.4
32.5°	718.6	724.3	738.1	754.2	758.8
35°	689.9	697.9	714.0	732.4	738.1
37.5°	662.4	670.4	689.9	710.6	717.5
40°	633.7	642.8	663.5	687.6	696.8
42.5°	602.7	615.3	638.2	664.7	675.0
45°	571.7	583.1	611.8	641.7	653.2
47.5°	538.4	552.2	583.1	618.7	632.5
50°	502.8	520.0	555.6	594.6	609.5
52.5°	467.2	486.7	526.9	570.5	586.6
55°	432.8	451.1	499.3	546.4	563.6
57.5°	394.9	417.8	470.7	521.2	538.4
60°	355.9	381.1	442.0	494.8	513.1
62.5°	316.8	345.5	414.4	467.2	486.7
65°	277.8	309.9	382.3	438.5	458.0
67.5°	239.9	275.5	352.4	408.7	428.2
70°	196.3	241.1	320.3	375.4	394.9
72.5°	156.1	207.8	289.3	340.9	358.2
75°	120.5	175.6	254.8	301.9	308.8
77.5°	88.4	143.5	219.3	235.3	236.5
80°	59.7	114.8	167.6	165.3	167.6
82.5°	39.0	86.1	105.6	118.2	119.4
85°	23.0	50.5	62.0	68.9	70.0
87.5°	11.5	17.2	21.8	23.0	25.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)