

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: P309365

Luminaire Tested: **24FCZ2-40-UNV-L82765-HRP-CA08-W2A-U-2700K**

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: P309365
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-2700K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" ACRYLIC SHEET
Light Source: (168) 2700K 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: 2576.0 lumens
Efficiency: N/A
Efficacy: 78.8 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

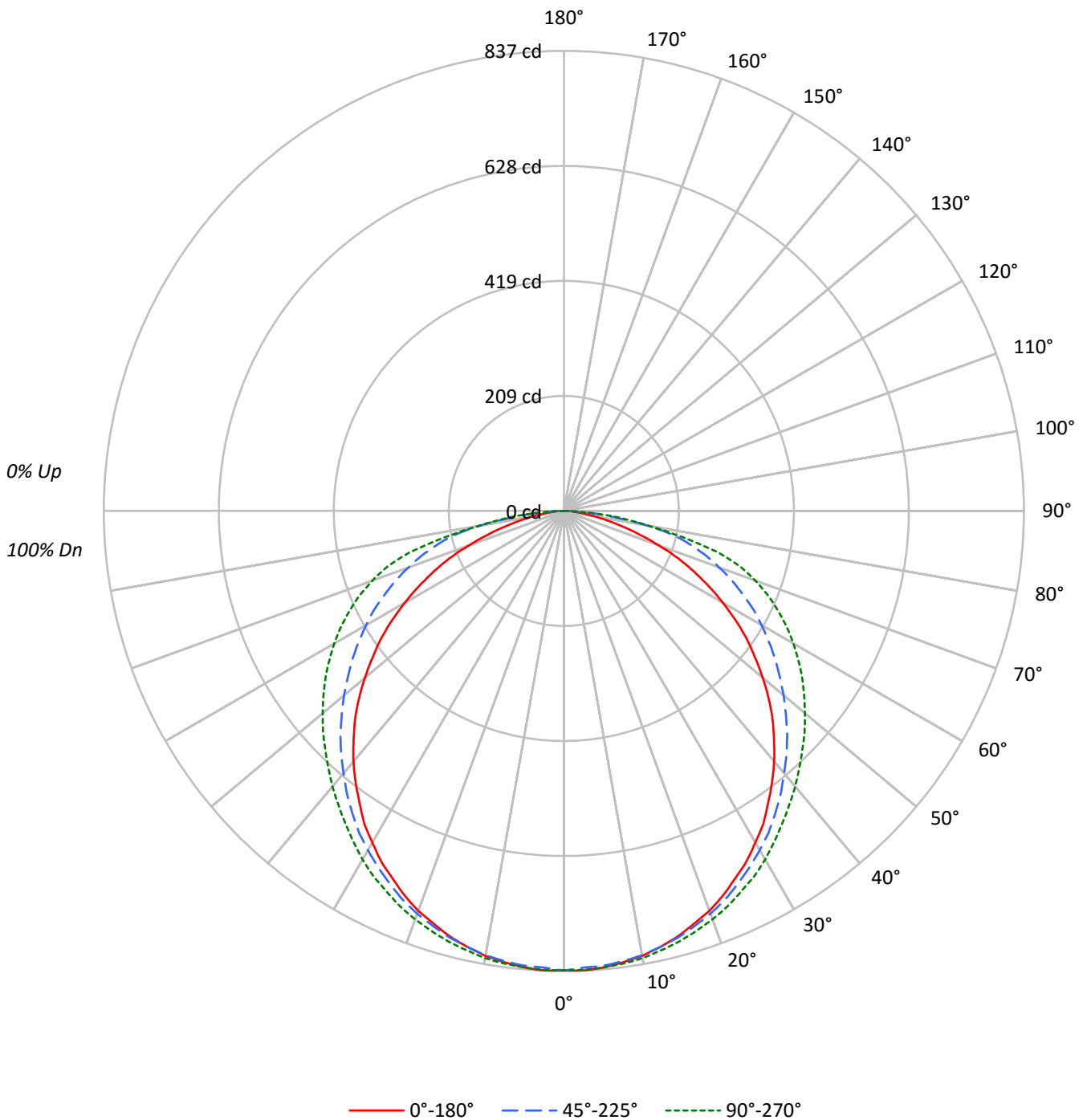
Input Watts (W): 32.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P309365

CATALOG NUMBER: 24FCZ2-40-UNV-L82765-HRP-CA08-W2A-U-2700K

Luminous Intensity Polar Plot





TEST NUMBER: P309365

CATALOG NUMBER: 24FCZ2-40-UNV-L82765-HRP-CA08-W2A-U-2700K

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°	1125	1125	1125
5°	1126	1122	1126
10°	1123	1121	1129
15°	1116	1119	1130
20°	1109	1116	1132
25°	1095	1111	1133
30°	1082	1107	1138
35°	1065	1102	1139
40°	1046	1095	1150
45°	1022	1094	1168
50°	989	1093	1199
55°	954	1100	1242
60°	900	1117	1297
65°	831	1143	1370
70°	725	1184	1459
75°	588	1245	1508
80°	435	1220	1220
85°	333	898	1016



TEST NUMBER: P309365

CATALOG NUMBER: 24FCZ2-40-UNV-L82765-HRP-CA08-W2A-U-2700K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	79.2	3.1
10°-20°	227.4	8.8
20°-30°	346.1	13.4
30°-40°	420.3	16.3
40°-50°	444.0	17.2
50°-60°	419.0	16.3
60°-70°	348.4	13.5
70°-80°	229.2	8.9
80°-90°	62.5	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°	652.7	25.3
0°-40°	1072.9	41.7
0°-60°	1935.9	75.2
0°-90°	2576.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2576.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	836	836	836	836	836	
5°	834	834	830	834	834	79
15°	801	802	803	811	811	226
25°	738	742	748	761	764	340
35°	648	656	671	688	693	406
45°	537	548	575	603	614	414
55°	407	424	469	513	530	362
65°	261	291	359	412	430	258
75°	113	165	239	284	290	122
85°	22	48	58	65	66	26
90°	0	0	0	0	0	



TEST NUMBER: P309365

CATALOG NUMBER: 24FCZ2-40-UNV-L82765-HRP-CA08-W2A-U-2700K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	835.8	835.8	835.8	835.8	835.8
2.5°	836.9	835.8	831.5	835.8	835.8
5°	833.6	833.6	830.4	833.6	833.6
7.5°	828.2	828.2	826.1	830.4	830.4
10°	821.8	821.8	820.7	826.1	826.1
12.5°	812.1	813.1	812.1	818.5	818.5
15°	801.3	802.4	803.4	811.0	811.0
17.5°	787.3	789.4	791.6	800.2	801.3
20°	774.3	775.4	779.7	789.4	790.5
22.5°	757.1	760.3	765.7	775.4	778.6
25°	737.6	742.0	748.4	761.4	763.5
27.5°	719.3	722.5	731.2	745.2	749.5
30°	696.7	702.1	712.8	726.9	732.3
32.5°	675.1	680.5	693.4	708.5	712.8
35°	648.1	655.7	670.8	688.0	693.4
37.5°	622.3	629.8	648.1	667.5	674.0
40°	595.3	603.9	623.3	646.0	654.6
42.5°	566.2	578.0	599.6	624.4	634.1
45°	537.1	547.8	574.8	602.8	613.6
47.5°	505.8	518.7	547.8	581.3	594.2
50°	472.4	488.5	522.0	558.6	572.6
52.5°	438.9	457.3	495.0	536.0	551.1
55°	406.6	423.8	469.1	513.3	529.5
57.5°	371.0	392.5	442.2	489.6	505.8
60°	334.3	358.0	415.2	464.8	482.1
62.5°	297.6	324.6	389.3	438.9	457.3
65°	261.0	291.2	359.1	412.0	430.3
67.5°	225.4	258.8	331.1	383.9	402.3
70°	184.4	226.5	300.9	352.6	371.0
72.5°	146.7	195.2	271.8	320.3	336.5
75°	113.2	165.0	239.4	283.6	290.1
77.5°	83.0	134.8	206.0	221.1	222.2
80°	56.1	107.8	157.5	155.3	157.5
82.5°	36.7	80.9	99.2	111.1	112.2
85°	21.6	47.5	58.2	64.7	65.8
87.5°	10.8	16.2	20.5	21.6	23.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)