

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: P313166

Luminaire Tested: **24FCZ2-40-UNV-L83050-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: P313166
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-L83050-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

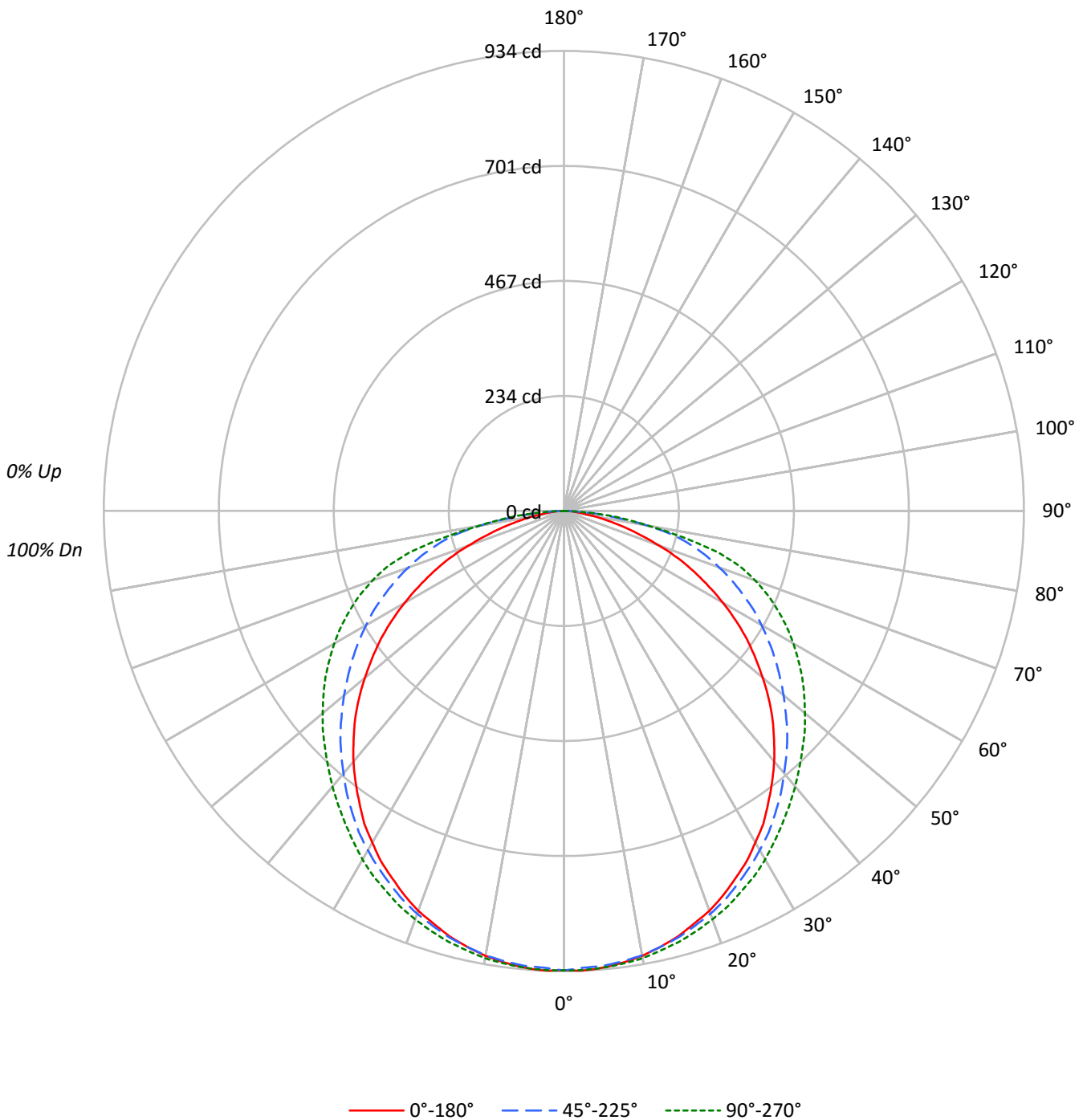
Lumens per Lamp: N/A
Luminaire Lumens: 2875.0 lumens
Efficiency: N/A
Efficacy: 87.9 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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



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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°	1255	1255	1255
5°	1257	1252	1257
10°	1253	1251	1260
15°	1246	1249	1261
20°	1237	1246	1263
25°	1222	1240	1265
30°	1208	1236	1270
35°	1188	1230	1271
40°	1167	1222	1283
45°	1141	1221	1303
50°	1104	1219	1338
55°	1065	1228	1386
60°	1004	1247	1448
65°	927	1276	1529
70°	810	1321	1629
75°	657	1389	1683
80°	485	1361	1361
85°	372	1003	1133



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	88.4	3.1
10°-20°	253.7	8.8
20°-30°	386.3	13.4
30°-40°	469.1	16.3
40°-50°	495.6	17.2
50°-60°	467.6	16.3
60°-70°	388.8	13.5
70°-80°	255.8	8.9
80°-90°	69.7	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°	728.4	25.3
0°-40°	1197.5	41.7
0°-60°	2160.7	75.2
0°-90°	2875.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2875.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	933	933	933	933	933	
5°	930	930	927	930	930	88
15°	894	896	897	905	905	252
25°	823	828	835	850	852	380
35°	723	732	749	768	774	453
45°	599	611	642	673	685	462
55°	454	473	524	573	591	404
65°	291	325	401	460	480	288
75°	126	184	267	316	324	136
85°	24	53	65	72	73	29
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	932.8	932.8	932.8	932.8	932.8
2.5°	934.0	932.8	928.0	932.8	932.8
5°	930.4	930.4	926.8	930.4	930.4
7.5°	924.4	924.4	922.0	926.8	926.8
10°	917.1	917.1	915.9	922.0	922.0
12.5°	906.3	907.5	906.3	913.5	913.5
15°	894.3	895.5	896.7	905.1	905.1
17.5°	878.6	881.0	883.4	893.1	894.3
20°	864.2	865.4	870.2	881.0	882.2
22.5°	844.9	848.5	854.6	865.4	869.0
25°	823.3	828.1	835.3	849.7	852.2
27.5°	802.8	806.4	816.0	831.7	836.5
30°	777.5	783.5	795.6	811.2	817.2
32.5°	753.5	759.5	773.9	790.8	795.6
35°	723.4	731.8	748.6	767.9	773.9
37.5°	694.5	702.9	723.4	745.0	752.3
40°	664.4	674.0	695.7	721.0	730.6
42.5°	631.9	645.1	669.2	696.9	707.7
45°	599.4	611.4	641.5	672.8	684.9
47.5°	564.5	578.9	611.4	648.7	663.2
50°	527.2	545.2	582.5	623.5	639.1
52.5°	489.9	510.3	552.5	598.2	615.0
55°	453.8	473.0	523.6	572.9	591.0
57.5°	414.0	438.1	493.5	546.4	564.5
60°	373.1	399.6	463.4	518.8	538.0
62.5°	332.2	362.3	434.5	489.9	510.3
65°	291.3	325.0	400.8	459.8	480.2
67.5°	251.6	288.9	369.5	428.5	448.9
70°	205.8	252.8	335.8	393.6	414.0
72.5°	163.7	217.9	303.3	357.5	375.5
75°	126.4	184.2	267.2	316.5	323.8
77.5°	92.7	150.5	229.9	246.7	247.9
80°	62.6	120.4	175.7	173.3	175.7
82.5°	40.9	90.3	110.7	124.0	125.2
85°	24.1	53.0	65.0	72.2	73.4
87.5°	12.0	18.1	22.9	24.1	26.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)