

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: P309400

Luminaire Tested: **24FCZ2-40-UNV-L82765-HRP-CP187-W2A-U-6500K**

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: P309400
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-CP187-W2A-U-6500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.187"
POLYCARB SHEET
Light Source: (168) 6500K 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: 2746.0 lumens
Efficiency: N/A
Efficacy: 80.3 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

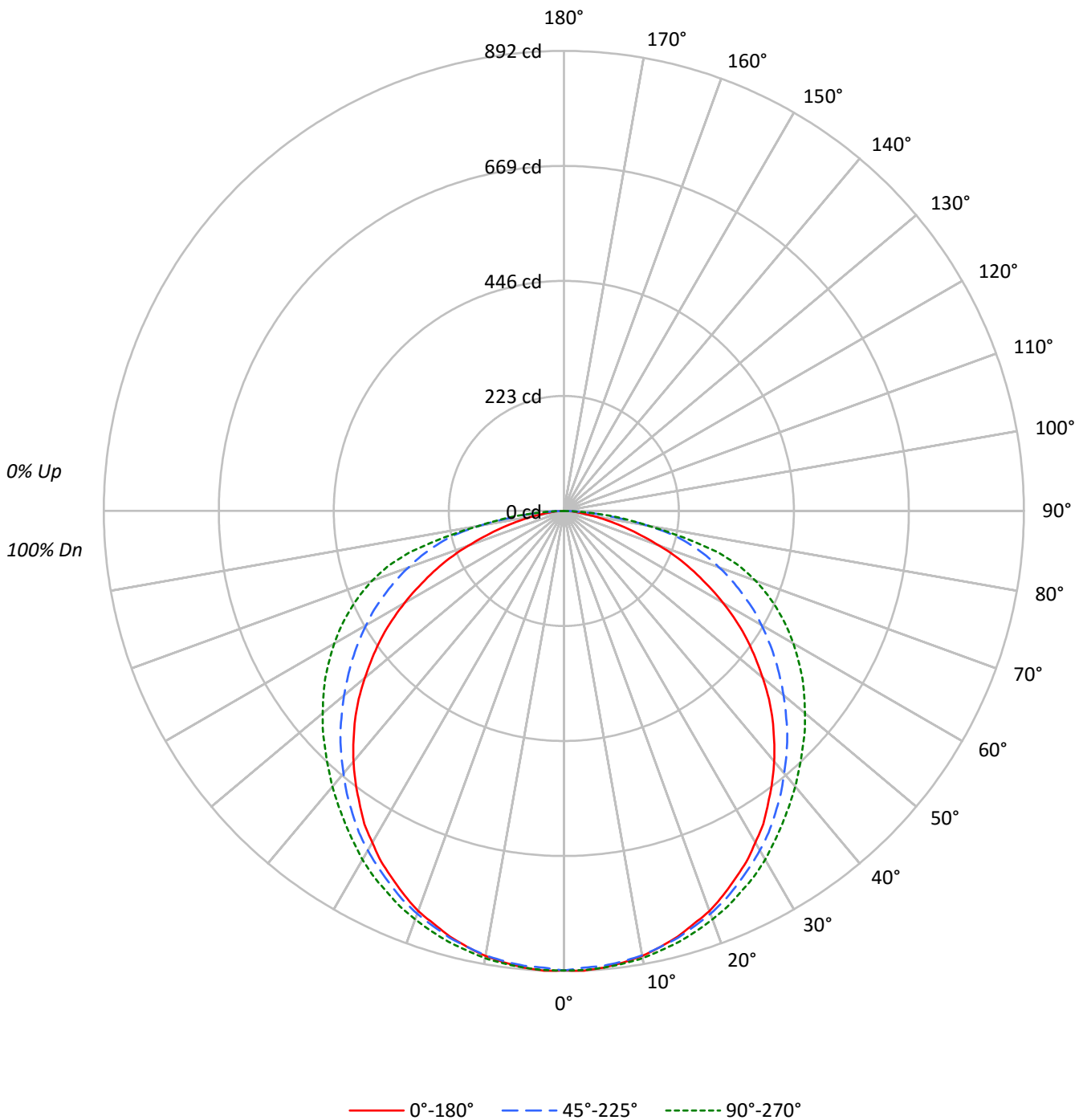
Input Watts (W): 34.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1199	1199	1199
5°	1200	1196	1200
10°	1197	1195	1203
15°	1190	1193	1204
20°	1182	1190	1207
25°	1167	1184	1208
30°	1154	1181	1213
35°	1135	1175	1214
40°	1115	1167	1226
45°	1089	1166	1245
50°	1054	1165	1278
55°	1017	1173	1324
60°	959	1191	1383
65°	886	1219	1460
70°	773	1262	1556
75°	627	1327	1607
80°	463	1300	1300
85°	355	959	1082



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	84.4	3.1
10°-20°	242.4	8.8
20°-30°	369.0	13.4
30°-40°	448.0	16.3
40°-50°	473.3	17.2
50°-60°	446.6	16.3
60°-70°	371.4	13.5
70°-80°	244.3	8.9
80°-90°	66.6	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°	695.7	25.3
0°-40°	1143.8	41.7
0°-60°	2063.7	75.2
0°-90°	2746.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2746.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	891	891	891	891	891	
5°	889	889	885	889	889	84
15°	854	855	856	864	864	241
25°	786	791	798	812	814	363
35°	691	699	715	733	739	433
45°	572	584	613	643	654	441
55°	433	452	500	547	564	386
65°	278	310	383	439	459	275
75°	121	176	255	302	309	130
85°	23	51	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°	890.9	890.9	890.9	890.9	890.9
2.5°	892.1	890.9	886.3	890.9	890.9
5°	888.6	888.6	885.2	888.6	888.6
7.5°	882.9	882.9	880.6	885.2	885.2
10°	876.0	876.0	874.8	880.6	880.6
12.5°	865.7	866.8	865.7	872.5	872.5
15°	854.2	855.3	856.5	864.5	864.5
17.5°	839.2	841.5	843.8	853.0	854.2
20°	825.4	826.6	831.2	841.5	842.7
22.5°	807.0	810.5	816.2	826.6	830.0
25°	786.3	790.9	797.8	811.6	813.9
27.5°	766.8	770.2	779.4	794.4	799.0
30°	742.6	748.4	759.9	774.8	780.6
32.5°	719.7	725.4	739.2	755.3	759.9
35°	690.9	699.0	715.1	733.4	739.2
37.5°	663.3	671.4	690.9	711.6	718.5
40°	634.6	643.8	664.5	688.6	697.8
42.5°	603.5	616.2	639.2	665.6	676.0
45°	572.5	584.0	612.7	642.6	654.1
47.5°	539.2	553.0	584.0	619.6	633.4
50°	503.5	520.8	556.4	595.5	610.4
52.5°	467.9	487.4	527.7	571.4	587.4
55°	433.4	451.8	500.1	547.2	564.5
57.5°	395.5	418.5	471.3	521.9	539.2
60°	356.4	381.7	442.6	495.5	513.9
62.5°	317.3	346.0	415.0	467.9	487.4
65°	278.2	310.4	382.8	439.1	458.7
67.5°	240.3	275.9	352.9	409.3	428.8
70°	196.6	241.4	320.7	375.9	395.5
72.5°	156.3	208.1	289.7	341.4	358.7
75°	120.7	175.9	255.2	302.3	309.2
77.5°	88.5	143.7	219.6	235.7	236.8
80°	59.8	115.0	167.8	165.5	167.8
82.5°	39.1	86.2	105.8	118.4	119.6
85°	23.0	50.6	62.1	69.0	70.1
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)