

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: P310653

Luminaire Tested: **24FCZ2-35-UNV-L82765-CP187-W2A-U-3000K**

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: P310653
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-15)
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-CP187-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.187" POLYCARB SHEET
Light Source: (168) 3000K 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: 2873.0 lumens
Efficiency: N/A
Efficacy: 103.3 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

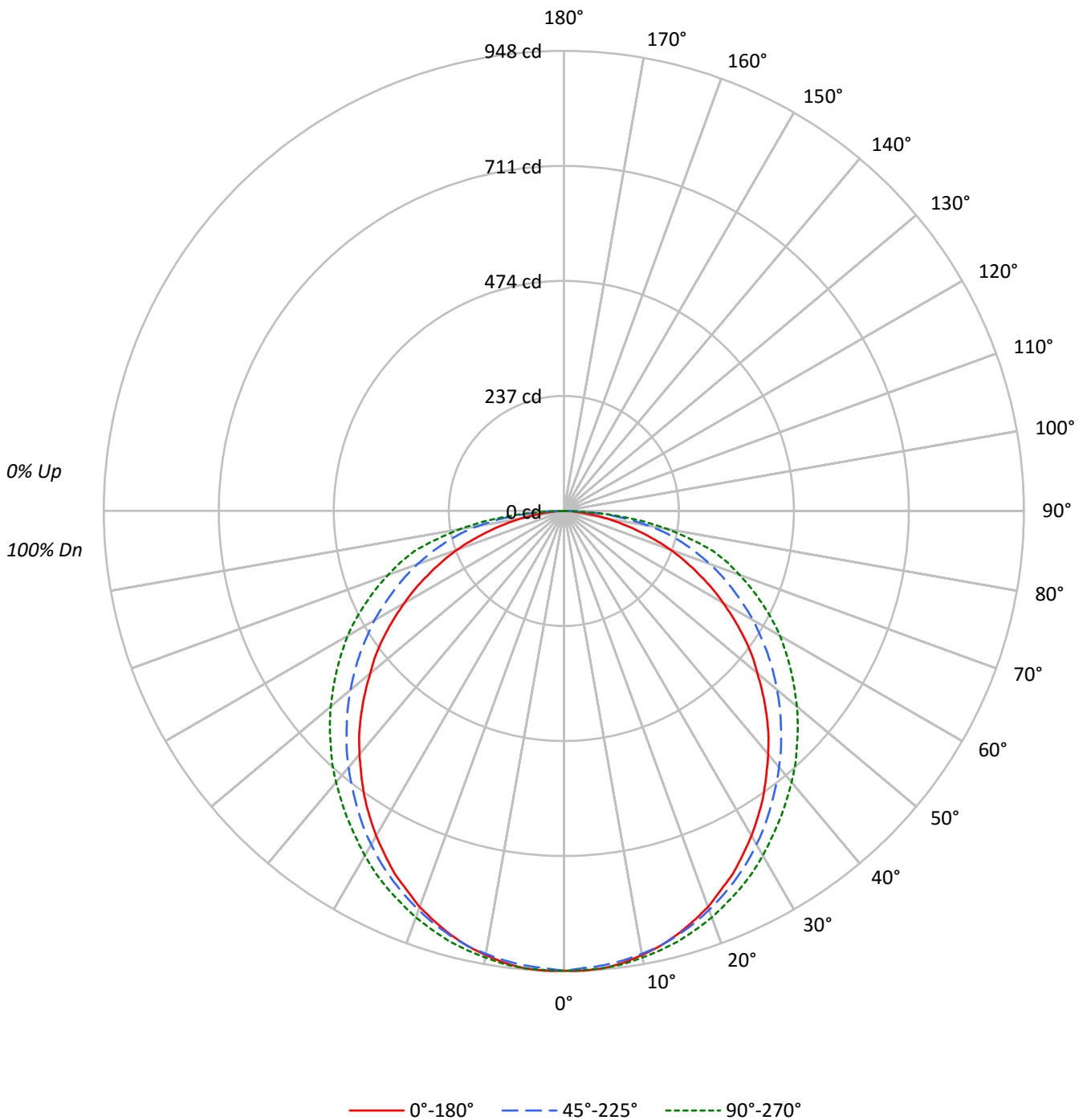
Input Watts (W): 27.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	100	96	92	96	92	89	92	89	87	88	86	84	82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	64	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	37	31	57	45	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	25	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1275	1275	1275
5°	1277	1269	1277
10°	1270	1266	1276
15°	1259	1261	1277
20°	1243	1253	1276
25°	1224	1244	1275
30°	1201	1234	1274
35°	1177	1221	1274
40°	1150	1212	1283
45°	1123	1204	1293
50°	1090	1201	1313
55°	1062	1203	1339
60°	1021	1213	1385
65°	974	1226	1436
70°	923	1264	1515
75°	822	1318	1655
80°	702	1396	1691
85°	500	1383	1619



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.7	3.1
10°-20°	256.4	8.9
20°-30°	387.3	13.5
30°-40°	466.7	16.2
40°-50°	490.0	17.1
50°-60°	458.4	16.0
60°-70°	378.6	13.2
70°-80°	258.0	9.0
80°-90°	88.0	3.1
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°	733.3	25.5
0°-40°	1200.1	41.8
0°-60°	2148.5	74.8
0°-90°	2873.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2873.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	948	948	948	948	948	
5°	946	945	940	946	946	90
15°	904	905	906	915	917	255
25°	824	828	838	854	859	379
35°	717	724	744	768	776	448
45°	590	602	633	667	680	455
55°	453	471	513	555	571	404
65°	306	332	385	434	451	304
75°	158	194	254	301	318	169
85°	32	64	90	101	105	41
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	947.5	947.5	947.5	947.5	947.5
2.5°	948.4	947.5	942.7	947.5	946.5
5°	945.6	944.6	939.9	945.6	945.6
7.5°	938.9	938.9	934.1	940.8	941.8
10°	929.4	929.4	926.5	934.1	934.1
12.5°	917.9	917.9	917.9	925.6	926.5
15°	903.6	904.6	905.5	915.1	917.0
17.5°	886.5	888.4	891.3	902.7	904.6
20°	868.4	870.3	875.0	888.4	891.3
22.5°	845.5	850.3	856.9	872.2	875.0
25°	824.5	828.3	837.9	854.1	858.8
27.5°	798.8	804.5	816.9	834.1	840.7
30°	773.1	778.8	794.0	814.0	819.8
32.5°	745.4	754.0	770.2	791.2	797.8
35°	716.8	724.4	743.5	768.3	775.9
37.5°	685.4	695.8	716.8	743.5	753.0
40°	654.9	666.3	690.1	718.7	730.2
42.5°	624.4	635.8	662.5	694.9	706.3
45°	590.0	602.4	632.9	667.2	679.6
47.5°	555.7	571.0	604.3	640.6	653.9
50°	520.5	537.6	573.8	612.0	627.2
52.5°	489.0	505.2	543.3	584.3	598.6
55°	452.8	470.9	512.8	554.8	571.0
57.5°	415.6	435.6	480.4	526.2	542.4
60°	379.4	401.3	450.9	496.6	514.7
62.5°	344.1	366.0	417.5	465.2	483.3
65°	306.0	331.7	385.1	433.7	450.9
67.5°	269.8	297.4	353.6	401.3	418.5
70°	234.5	261.2	321.2	367.9	385.1
72.5°	196.4	226.9	286.9	335.5	353.6
75°	158.2	194.5	253.6	301.2	318.4
77.5°	123.0	160.1	219.2	258.3	266.9
80°	90.6	128.7	180.2	207.8	218.3
82.5°	58.1	96.3	137.3	157.3	165.9
85°	32.4	63.9	89.6	101.0	104.9
87.5°	13.3	27.6	36.2	41.0	41.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)