

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: P313856

Luminaire Tested: **24FCZ2-35HE-UNV-L83050-CP187-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: P313856
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: 24FCZ2-35HE-UNV-L83050-CP187-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.187" POLYCARB SHEET
Light Source: (336) 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: 3011.0 lumens
Efficiency: N/A
Efficacy: 115.8 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

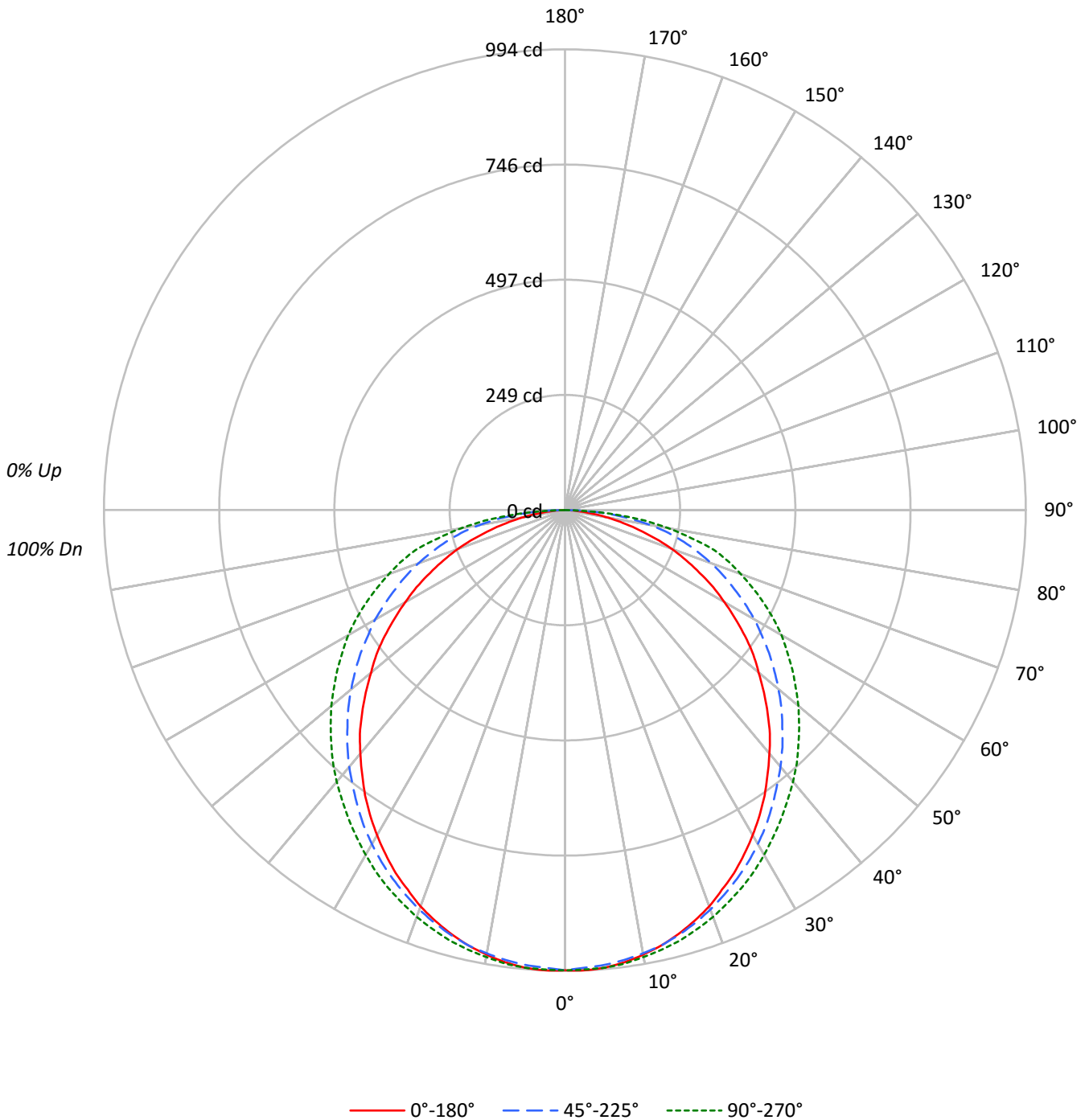
Input Watts (W): 26
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100
1	108	103	98	94	105	100	96	92	96	92	89	92	89	87	88	86	84	82				82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67				67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56				56
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47				47
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41				41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36				36
7	64	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31				31
8	59	45	37	31	57	45	36	30	43	36	30	42	35	30	41	34	30	28				28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25				25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23				23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1336	1336	1336
5°	1338	1330	1338
10°	1331	1327	1338
15°	1319	1322	1339
20°	1303	1313	1337
25°	1283	1304	1336
30°	1259	1293	1335
35°	1234	1280	1336
40°	1205	1270	1344
45°	1177	1262	1355
50°	1142	1259	1376
55°	1113	1261	1404
60°	1070	1271	1452
65°	1021	1285	1504
70°	967	1325	1588
75°	862	1381	1735
80°	735	1463	1773
85°	525	1450	1697



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	94.0	3.1
10°-20°	268.7	8.9
20°-30°	405.9	13.5
30°-40°	489.2	16.2
40°-50°	513.5	17.1
50°-60°	480.4	16.0
60°-70°	396.8	13.2
70°-80°	270.4	9.0
80°-90°	92.2	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°	768.5	25.5
0°-40°	1257.7	41.8
0°-60°	2251.7	74.8
0°-90°	3011.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3011.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	993	993	993	993	993	
5°	991	990	985	991	991	94
15°	947	948	949	959	961	267
25°	864	868	878	895	900	398
35°	751	759	779	805	813	469
45°	618	631	663	699	712	477
55°	474	494	538	581	598	424
65°	321	348	404	454	472	318
75°	166	204	266	316	334	177
85°	34	67	94	106	110	43
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	993.0	993.0	993.0	993.0	993.0
2.5°	994.0	993.0	988.0	993.0	992.0
5°	991.0	990.0	985.0	991.0	991.0
7.5°	984.0	984.0	979.0	986.0	987.0
10°	974.0	974.0	971.0	979.0	979.0
12.5°	962.0	962.0	962.0	970.0	971.0
15°	947.0	948.0	949.0	959.0	961.0
17.5°	929.1	931.1	934.1	946.0	948.0
20°	910.1	912.1	917.1	931.1	934.1
22.5°	886.1	891.1	898.1	914.1	917.1
25°	864.1	868.1	878.1	895.1	900.1
27.5°	837.2	843.2	856.1	874.1	881.1
30°	810.2	816.2	832.2	853.1	859.1
32.5°	781.2	790.2	807.2	829.2	836.2
35°	751.2	759.2	779.2	805.2	813.2
37.5°	718.3	729.3	751.2	779.2	789.2
40°	686.3	698.3	723.3	753.2	765.2
42.5°	654.3	666.3	694.3	728.3	740.3
45°	618.4	631.4	663.3	699.3	712.3
47.5°	582.4	598.4	633.4	671.3	685.3
50°	545.5	563.4	601.4	641.4	657.3
52.5°	512.5	529.5	569.4	612.4	627.4
55°	474.5	493.5	537.5	581.4	598.4
57.5°	435.6	456.5	503.5	551.4	568.4
60°	397.6	420.6	472.5	520.5	539.5
62.5°	360.6	383.6	437.6	487.5	506.5
65°	320.7	347.7	403.6	454.5	472.5
67.5°	282.7	311.7	370.6	420.6	438.6
70°	245.8	273.7	336.7	385.6	403.6
72.5°	205.8	237.8	300.7	351.6	370.6
75°	165.8	203.8	265.7	315.7	333.7
77.5°	128.9	167.8	229.8	270.7	279.7
80°	94.9	134.9	188.8	217.8	228.8
82.5°	60.9	100.9	143.9	164.8	173.8
85°	34.0	66.9	93.9	105.9	109.9
87.5°	14.0	29.0	38.0	43.0	43.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)