

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: P311339

Luminaire Tested: **24FCZ2-35-UNV-L82765-S-CP250-W2A-U-4000K**

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: P311339
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)
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-S-CP250-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.250" POLYCARB SHEET
Light Source: (168) 4000K 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: 3166.0 lumens
Efficiency: N/A
Efficacy: 111.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.27 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

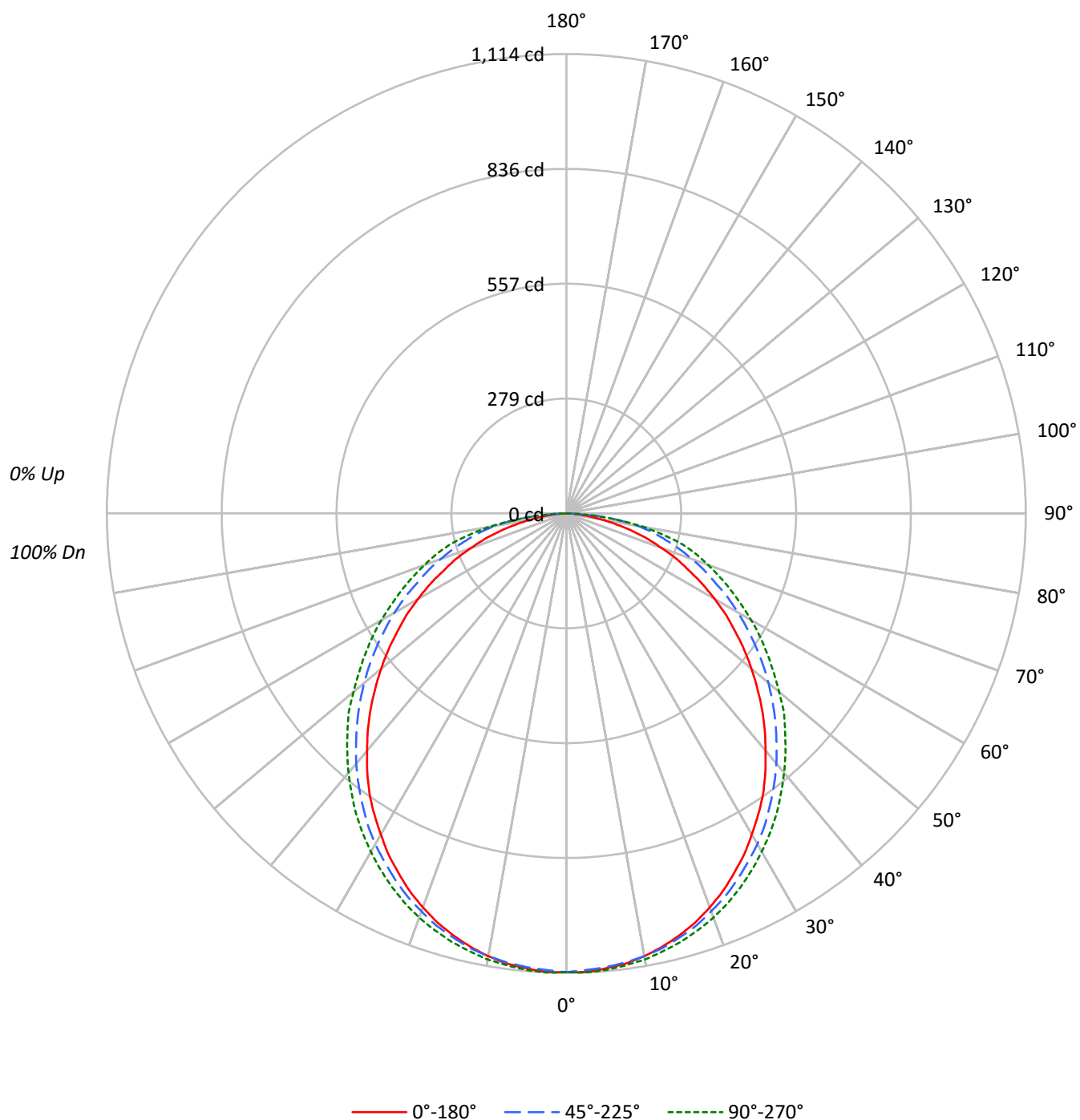
Input Watts (W): 28.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				0
RW	70	50	30	10	70	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		100
1	108	103	99	95	106	101	97	93	97	93	90		93	90	88		83
2	98	90	83	77	96	88	81	76	84	79	74		81	76	72		69
3	89	79	70	64	87	77	69	63	74	67	62		71	66	61		58
4	82	70	61	54	80	68	60	54	66	59	53		63	57	52		49
5	75	62	53	46	73	61	53	46	59	51	46		57	50	45		42
6	70	56	47	40	68	55	47	40	53	46	40		52	45	40		37
7	64	51	42	36	63	50	42	36	48	41	35		47	40	35		33
8	60	46	38	32	58	46	37	32	44	37	32		43	36	31		29
9	56	43	34	29	55	42	34	29	41	34	28		40	33	28		26
10	53	39	31	26	51	39	31	26	38	31	26		37	30	26		24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1496	1496	1496
5°	1495	1491	1501
10°	1489	1489	1500
15°	1475	1482	1497
20°	1456	1470	1493
25°	1429	1456	1484
30°	1397	1439	1472
35°	1366	1416	1460
40°	1319	1392	1443
45°	1276	1364	1427
50°	1227	1339	1410
55°	1172	1314	1396
60°	1118	1294	1394
65°	1047	1271	1402
70°	969	1278	1440
75°	868	1302	1521
80°	701	1379	1488
85°	528	1210	1179



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	105.3	3.3
10°-20°	300.9	9.5
20°-30°	452.3	14.3
30°-40°	538.7	17.0
40°-50°	551.4	17.4
50°-60°	496.4	15.7
60°-70°	389.8	12.3
70°-80°	253.0	8.0
80°-90°	78.2	2.5
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°	858.4	27.1
0°-40°	1397.2	44.1
0°-60°	2444.9	77.2
0°-90°	3166.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3166.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1112	1112	1112	1112	1112	
5°	1107	1109	1104	1110	1111	105
15°	1059	1062	1064	1073	1075	299
25°	962	970	980	997	1000	443
35°	832	842	862	883	889	519
45°	671	687	717	744	750	517
55°	500	522	560	589	595	448
65°	329	354	399	432	440	327
75°	167	199	250	285	293	177
85°	34	63	78	76	76	41
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1112.2	1112.2	1112.2	1112.2	1112.2
2.5°	1113.2	1113.2	1108.2	1113.2	1114.2
5°	1107.2	1109.2	1104.2	1110.2	1111.2
7.5°	1101.2	1101.2	1098.2	1104.2	1105.2
10°	1090.1	1091.1	1090.1	1097.2	1098.2
12.5°	1076.0	1078.0	1079.1	1086.1	1087.1
15°	1058.9	1062.0	1064.0	1073.0	1075.0
17.5°	1039.8	1042.8	1047.9	1057.9	1059.9
20°	1016.7	1020.7	1026.8	1039.8	1042.8
22.5°	991.6	995.6	1005.6	1017.7	1022.7
25°	962.4	970.4	980.5	996.6	999.6
27.5°	933.2	940.3	953.3	970.4	974.5
30°	899.0	910.1	926.2	943.3	947.3
32.5°	865.9	876.9	896.0	914.1	919.2
35°	831.7	841.7	861.8	883.0	889.0
37.5°	792.4	805.5	827.6	848.8	854.8
40°	751.2	767.3	792.4	814.6	821.6
42.5°	712.0	729.1	754.2	778.4	786.4
45°	670.8	686.9	717.0	744.2	750.2
47.5°	628.5	646.6	678.8	706.0	716.0
50°	586.3	605.4	639.6	667.7	673.8
52.5°	544.1	564.2	600.4	630.5	633.6
55°	499.8	521.9	560.1	589.3	595.3
57.5°	459.6	478.7	519.9	550.1	557.1
60°	415.3	436.4	480.7	508.9	517.9
62.5°	373.1	395.2	441.5	469.6	477.7
65°	328.8	354.0	399.2	432.4	440.5
67.5°	290.6	314.8	363.0	395.2	403.3
70°	246.4	273.5	324.8	358.0	366.1
72.5°	208.2	236.3	287.6	319.8	331.9
75°	166.9	199.1	250.4	284.6	292.6
77.5°	126.7	163.9	216.2	242.4	242.4
80°	90.5	129.7	178.0	190.1	192.1
82.5°	59.3	97.5	131.7	130.7	130.7
85°	34.2	63.4	78.4	76.4	76.4
87.5°	13.1	26.1	28.2	28.2	27.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)