

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: P310666

Luminaire Tested: **24FCZ2-35-UNV-L82765-CP250-W2A-U-5000K**

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: P310666
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-CP250-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.250" POLYCARB SHEET
Light Source: (168) 5000K 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: 3107.0 lumens
Efficiency: N/A
Efficacy: 108.3 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

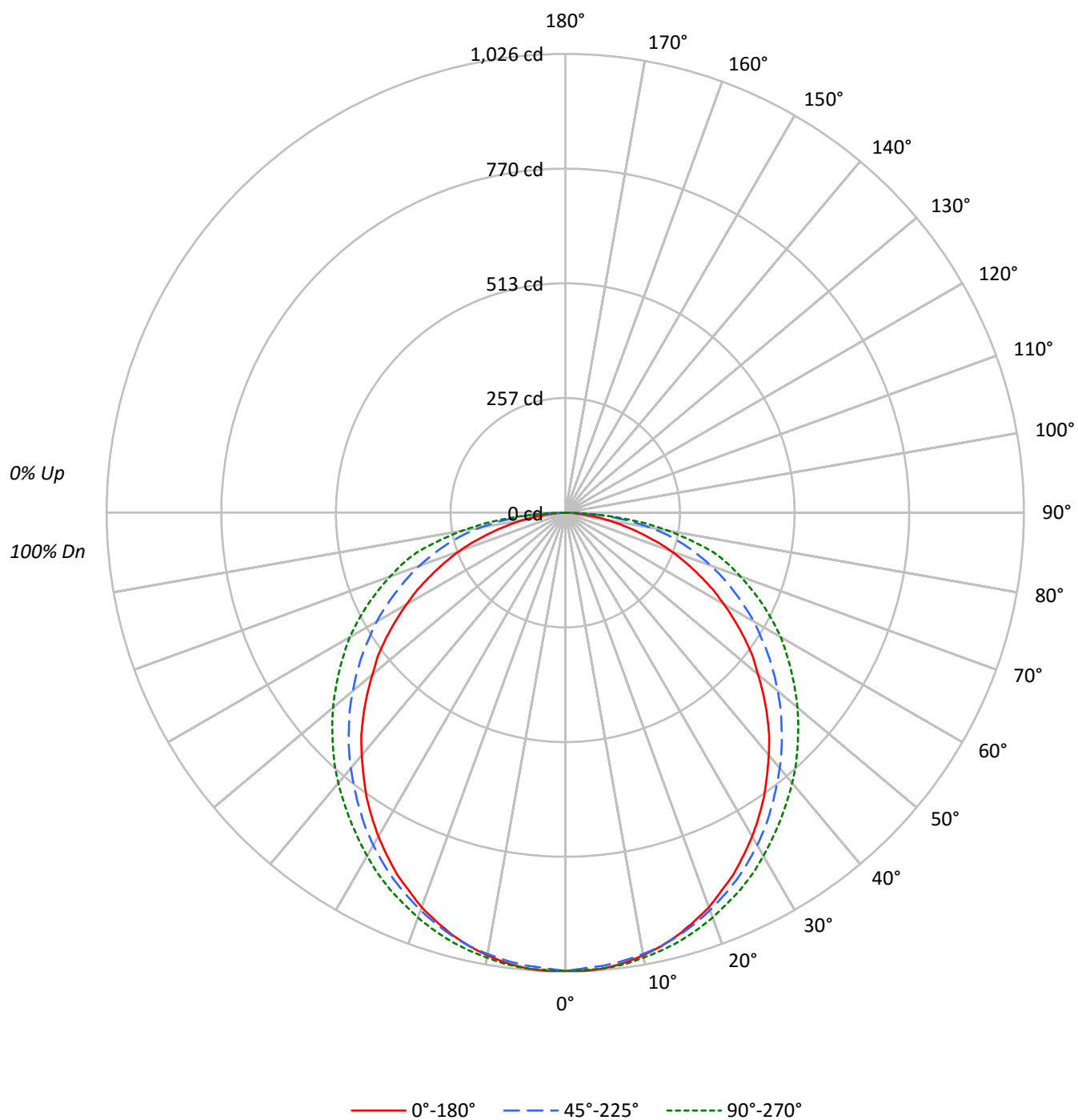
Input Watts (W): 28.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1379	1379	1379
5°	1381	1373	1381
10°	1373	1369	1380
15°	1361	1364	1381
20°	1345	1355	1380
25°	1324	1345	1379
30°	1299	1334	1377
35°	1273	1321	1378
40°	1244	1311	1387
45°	1214	1302	1399
50°	1178	1299	1420
55°	1149	1301	1449
60°	1104	1312	1498
65°	1053	1326	1552
70°	998	1367	1638
75°	889	1425	1790
80°	759	1509	1829
85°	540	1496	1751



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	97.0	3.1
10°-20°	277.3	8.9
20°-30°	418.8	13.5
30°-40°	504.8	16.2
40°-50°	529.9	17.1
50°-60°	495.8	16.0
60°-70°	409.4	13.2
70°-80°	279.0	9.0
80°-90°	95.1	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°	793.0	25.5
0°-40°	1297.8	41.8
0°-60°	2323.5	74.8
0°-90°	3107.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3107.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1025	1025	1025	1025	1025	
5°	1023	1022	1016	1023	1023	97
15°	977	978	979	990	992	275
25°	892	896	906	924	929	410
35°	775	783	804	831	839	484
45°	638	652	684	722	735	492
55°	490	509	555	600	618	437
65°	331	359	416	469	488	328
75°	171	210	274	326	344	182
85°	35	69	97	109	113	44
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1024.7	1024.7	1024.7	1024.7	1024.7
2.5°	1025.7	1024.7	1019.5	1024.7	1023.6
5°	1022.6	1021.6	1016.4	1022.6	1022.6
7.5°	1015.4	1015.4	1010.2	1017.4	1018.5
10°	1005.1	1005.1	1002.0	1010.2	1010.2
12.5°	992.7	992.7	992.7	1001.0	1002.0
15°	977.2	978.3	979.3	989.6	991.7
17.5°	958.7	960.7	963.8	976.2	978.3
20°	939.1	941.2	946.3	960.7	963.8
22.5°	914.4	919.5	926.7	943.2	946.3
25°	891.7	895.8	906.1	923.6	928.8
27.5°	863.8	870.0	883.4	902.0	909.2
30°	836.0	842.2	858.7	880.3	886.5
32.5°	806.1	815.4	832.9	855.6	862.8
35°	775.2	783.4	804.1	830.9	839.1
37.5°	741.2	752.5	775.2	804.1	814.4
40°	708.2	720.6	746.3	777.3	789.6
42.5°	675.2	687.6	716.4	751.5	763.9
45°	638.1	651.5	684.5	721.6	735.0
47.5°	601.0	617.5	653.6	692.7	707.2
50°	562.8	581.4	620.6	661.8	678.3
52.5°	528.8	546.3	587.6	631.9	647.4
55°	489.7	509.2	554.6	600.0	617.5
57.5°	449.4	471.1	519.5	569.0	586.6
60°	410.3	434.0	487.6	537.1	556.7
62.5°	372.1	395.8	451.5	503.1	522.6
65°	330.9	358.7	416.5	469.0	487.6
67.5°	291.7	321.6	382.4	434.0	452.5
70°	253.6	282.5	347.4	397.9	416.5
72.5°	212.4	245.3	310.3	362.9	382.4
75°	171.1	210.3	274.2	325.7	344.3
77.5°	133.0	173.2	237.1	279.4	288.6
80°	97.9	139.2	194.8	224.7	236.1
82.5°	62.9	104.1	148.4	170.1	179.4
85°	35.0	69.1	96.9	109.3	113.4
87.5°	14.4	29.9	39.2	44.3	44.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)