

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: P313888

Luminaire Tested: **24FCZ2-35-UNV-L83050-CP250-W2A-U-4500K**

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: P313888
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-L83050-CP250-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.250" POLYCARB SHEET
Light Source: (168) 4500K 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: 3199.0 lumens
Efficiency: N/A
Efficacy: 108.8 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

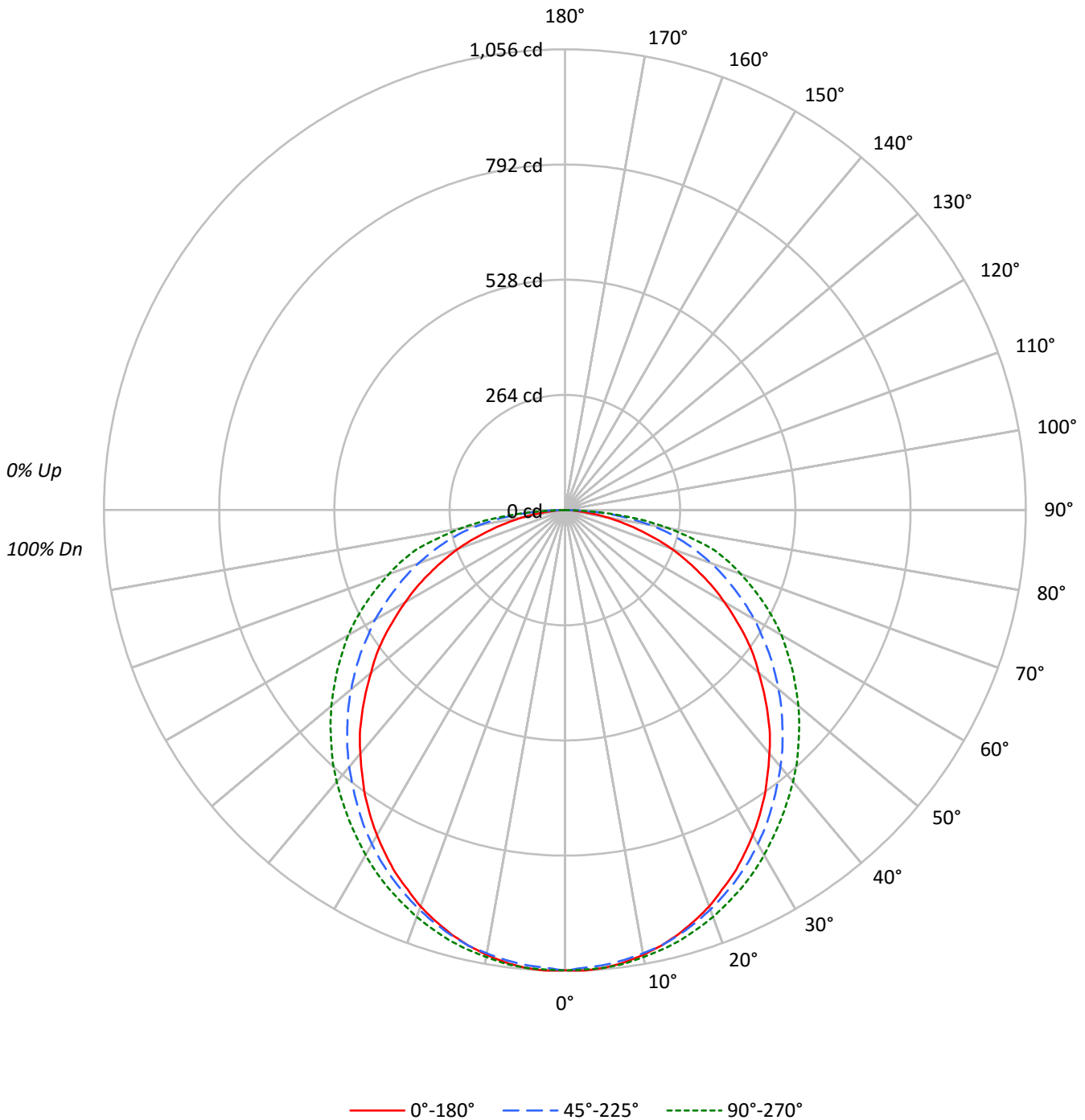
Input Watts (W): 29.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1419	1419	1419
5°	1422	1413	1422
10°	1414	1410	1421
15°	1402	1405	1422
20°	1384	1395	1421
25°	1363	1385	1420
30°	1337	1374	1418
35°	1311	1360	1419
40°	1281	1350	1428
45°	1250	1341	1440
50°	1213	1337	1462
55°	1183	1339	1491
60°	1137	1351	1542
65°	1085	1365	1598
70°	1027	1407	1687
75°	916	1468	1843
80°	781	1554	1884
85°	557	1541	1803



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	99.8	3.1
10°-20°	285.5	8.9
20°-30°	431.2	13.5
30°-40°	519.7	16.2
40°-50°	545.6	17.1
50°-60°	510.4	16.0
60°-70°	421.5	13.2
70°-80°	287.2	9.0
80°-90°	98.0	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°	816.5	25.5
0°-40°	1336.2	41.8
0°-60°	2392.3	74.8
0°-90°	3199.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3199.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1055	1055	1055	1055	1055	
5°	1053	1052	1046	1053	1053	100
15°	1006	1007	1008	1019	1021	284
25°	918	922	933	951	956	422
35°	798	807	828	856	864	499
45°	657	671	705	743	757	507
55°	504	524	571	618	636	450
65°	341	369	429	483	502	338
75°	176	216	282	335	354	188
85°	36	71	100	112	117	45
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1055.0	1055.0	1055.0	1055.0	1055.0
2.5°	1056.1	1055.0	1049.7	1055.0	1053.9
5°	1052.9	1051.8	1046.5	1052.9	1052.9
7.5°	1045.5	1045.5	1040.1	1047.6	1048.6
10°	1034.8	1034.8	1031.7	1040.1	1040.1
12.5°	1022.1	1022.1	1022.1	1030.6	1031.7
15°	1006.2	1007.2	1008.3	1018.9	1021.0
17.5°	987.1	989.2	992.4	1005.1	1007.2
20°	966.9	969.0	974.3	989.2	992.4
22.5°	941.4	946.7	954.2	971.2	974.3
25°	918.1	922.3	932.9	951.0	956.3
27.5°	889.4	895.8	909.6	928.7	936.1
30°	860.8	867.1	884.1	906.4	912.8
32.5°	830.0	839.5	857.6	880.9	888.4
35°	798.2	806.6	827.9	855.5	864.0
37.5°	763.1	774.8	798.2	827.9	838.5
40°	729.2	741.9	768.4	800.3	813.0
42.5°	695.2	707.9	737.7	773.7	786.5
45°	657.0	670.8	704.8	743.0	756.8
47.5°	618.8	635.8	672.9	713.2	728.1
50°	579.5	598.6	638.9	681.4	698.4
52.5°	544.5	562.5	605.0	650.6	666.5
55°	504.2	524.3	571.0	617.7	635.8
57.5°	462.8	485.0	534.9	585.9	603.9
60°	422.4	446.8	502.0	553.0	573.1
62.5°	383.2	407.6	464.9	517.9	538.1
65°	340.7	369.4	428.8	482.9	502.0
67.5°	300.4	331.1	393.8	446.8	465.9
70°	261.1	290.8	357.7	409.7	428.8
72.5°	218.6	252.6	319.5	373.6	393.8
75°	176.2	216.5	282.3	335.4	354.5
77.5°	136.9	178.3	244.1	287.6	297.2
80°	100.8	143.3	200.6	231.4	243.1
82.5°	64.7	107.2	152.8	175.1	184.7
85°	36.1	71.1	99.8	112.5	116.8
87.5°	14.9	30.8	40.3	45.6	45.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)