

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: P313865

Luminaire Tested: **24FCZ2-35-UNV-L83050-CA08-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: P313865
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-CA08-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.08" ACRYLIC 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: 3073.0 lumens
Efficiency: N/A
Efficacy: 110.1 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

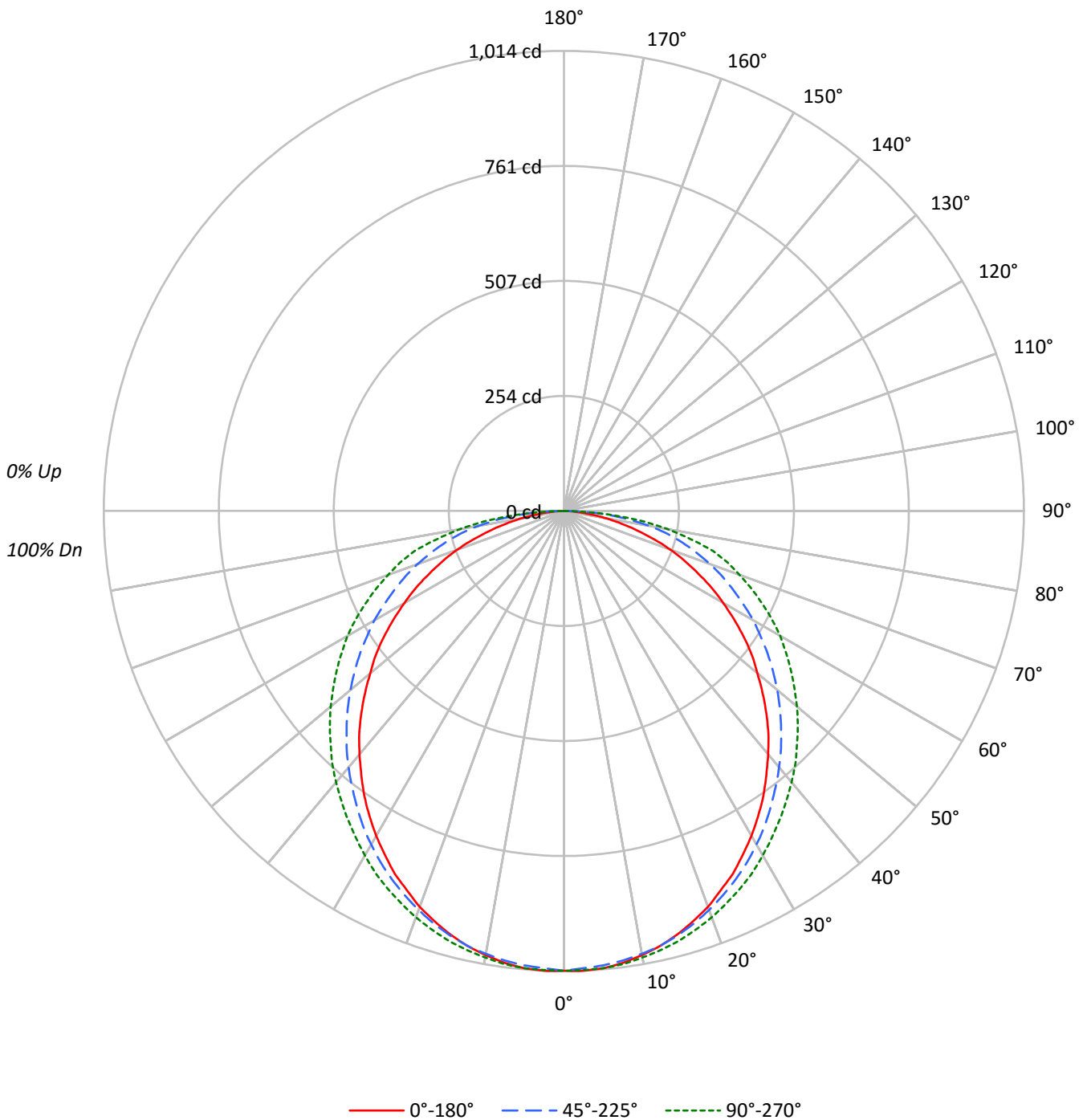
Input Watts (W): 27.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1364	1364	1364
5°	1366	1358	1366
10°	1358	1354	1365
15°	1346	1349	1366
20°	1330	1340	1365
25°	1309	1330	1364
30°	1285	1320	1362
35°	1259	1306	1363
40°	1230	1297	1372
45°	1201	1288	1383
50°	1165	1285	1404
55°	1136	1287	1433
60°	1092	1298	1482
65°	1042	1311	1535
70°	987	1352	1620
75°	880	1410	1770
80°	751	1493	1809
85°	536	1479	1732



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	95.9	3.1
10°-20°	274.2	8.9
20°-30°	414.2	13.5
30°-40°	499.2	16.2
40°-50°	524.1	17.1
50°-60°	490.3	16.0
60°-70°	404.9	13.2
70°-80°	275.9	9.0
80°-90°	94.1	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°	784.4	25.5
0°-40°	1283.6	41.8
0°-60°	2298.1	74.8
0°-90°	3073.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3073.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1013	1013	1013	1013	1013	
5°	1011	1010	1005	1011	1011	96
15°	966	968	969	979	981	272
25°	882	886	896	914	919	406
35°	767	775	795	822	830	479
45°	631	644	677	714	727	487
55°	484	504	548	593	611	432
65°	327	355	412	464	482	325
75°	169	208	271	322	340	180
85°	35	68	96	108	112	43
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1013.4	1013.4	1013.4	1013.4	1013.4
2.5°	1014.5	1013.4	1008.4	1013.4	1012.4
5°	1011.4	1010.4	1005.3	1011.4	1011.4
7.5°	1004.3	1004.3	999.2	1006.3	1007.3
10°	994.1	994.1	991.0	999.2	999.2
12.5°	981.8	981.8	981.8	990.0	991.0
15°	966.5	967.6	968.6	978.8	980.8
17.5°	948.2	950.2	953.3	965.5	967.6
20°	928.8	930.9	936.0	950.2	953.3
22.5°	904.4	909.5	916.6	932.9	936.0
25°	881.9	886.0	896.2	913.5	918.6
27.5°	854.4	860.5	873.8	892.1	899.3
30°	826.9	833.0	849.3	870.7	876.8
32.5°	797.3	806.5	823.8	846.2	853.4
35°	766.7	774.9	795.3	821.8	829.9
37.5°	733.1	744.3	766.7	795.3	805.5
40°	700.4	712.7	738.2	768.8	781.0
42.5°	667.8	680.1	708.6	743.3	755.5
45°	631.1	644.4	677.0	713.7	727.0
47.5°	594.4	610.7	646.4	685.1	699.4
50°	556.7	575.0	613.8	654.6	670.9
52.5°	523.0	540.4	581.2	625.0	640.3
55°	484.3	503.7	548.5	593.4	610.7
57.5°	444.5	465.9	513.9	562.8	580.1
60°	405.8	429.2	482.3	531.2	550.6
62.5°	368.1	391.5	446.6	497.5	516.9
65°	327.3	354.8	411.9	463.9	482.3
67.5°	288.5	318.1	378.3	429.2	447.6
70°	250.8	279.4	343.6	393.6	411.9
72.5°	210.0	242.7	306.9	358.9	378.3
75°	169.2	208.0	271.2	322.2	340.5
77.5°	131.5	171.3	234.5	276.3	285.5
80°	96.9	137.6	192.7	222.3	233.5
82.5°	62.2	103.0	146.8	168.2	177.4
85°	34.7	68.3	95.8	108.1	112.2
87.5°	14.3	29.6	38.7	43.8	43.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)