

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: P311245

Luminaire Tested: **24FCZ2-30-UNV-L82765-S-CP187-W2A-U-6500K**

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: P311245
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: 24FCZ2-30-UNV-L82765-S-CP187-W2A-U-6500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.187" POLYCARB SHEET
Light Source: (168) 6500K 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: 2850.0 lumens
Efficiency: N/A
Efficacy: 116.8 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

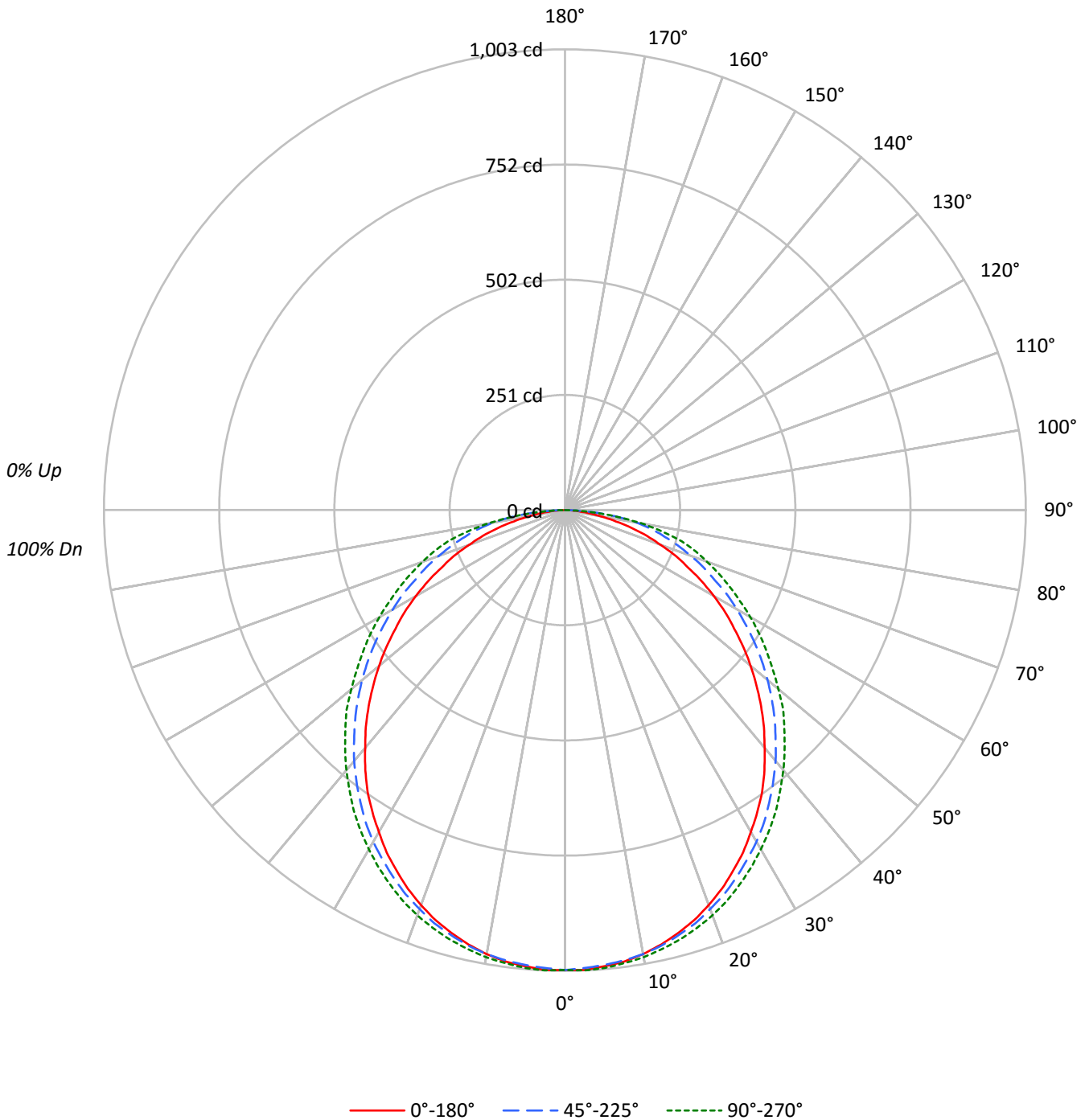
Input Watts (W): 24.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1347	1347	1347
5°	1346	1343	1351
10°	1341	1341	1351
15°	1328	1334	1348
20°	1310	1323	1344
25°	1286	1310	1336
30°	1257	1295	1325
35°	1230	1274	1315
40°	1188	1253	1299
45°	1149	1228	1285
50°	1105	1205	1270
55°	1055	1183	1257
60°	1006	1164	1255
65°	942	1144	1262
70°	873	1150	1296
75°	781	1172	1369
80°	631	1241	1340
85°	475	1090	1062



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	94.8	3.3
10°-20°	270.8	9.5
20°-30°	407.1	14.3
30°-40°	485.0	17.0
40°-50°	496.3	17.4
50°-60°	446.8	15.7
60°-70°	350.9	12.3
70°-80°	227.8	8.0
80°-90°	70.4	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°	772.8	27.1
0°-40°	1257.7	44.1
0°-60°	2200.9	77.2
0°-90°	2850.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2850.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1001	1001	1001	1001	1001	
5°	997	998	994	999	1000	95
15°	953	956	958	966	968	269
25°	866	874	883	897	900	399
35°	749	758	776	795	800	467
45°	604	618	646	670	675	466
55°	450	470	504	530	536	403
65°	296	319	359	389	396	295
75°	150	179	225	256	263	159
85°	31	57	71	69	69	37
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1001.2	1001.2	1001.2	1001.2	1001.2
2.5°	1002.1	1002.1	997.6	1002.1	1003.0
5°	996.7	998.5	994.0	999.4	1000.3
7.5°	991.3	991.3	988.5	994.0	994.9
10°	981.3	982.2	981.3	987.6	988.5
12.5°	968.6	970.4	971.3	977.7	978.6
15°	953.2	956.0	957.8	965.9	967.7
17.5°	936.0	938.8	943.3	952.3	954.1
20°	915.2	918.8	924.3	936.0	938.8
22.5°	892.6	896.2	905.3	916.1	920.7
25°	866.3	873.6	882.6	897.1	899.8
27.5°	840.1	846.4	858.2	873.6	877.2
30°	809.3	819.3	833.7	849.1	852.8
32.5°	779.4	789.4	806.6	822.9	827.4
35°	748.7	757.7	775.8	794.8	800.3
37.5°	713.3	725.1	745.0	764.0	769.5
40°	676.2	690.7	713.3	733.3	739.6
42.5°	640.9	656.3	678.9	700.7	707.9
45°	603.8	618.3	645.5	669.9	675.3
47.5°	565.8	582.1	611.1	635.5	644.5
50°	527.8	545.0	575.7	601.1	606.5
52.5°	489.7	507.9	540.4	567.6	570.3
55°	449.9	469.8	504.2	530.5	535.9
57.5°	413.7	430.9	468.0	495.2	501.5
60°	373.9	392.9	432.7	458.1	466.2
62.5°	335.9	355.8	397.4	422.8	430.0
65°	296.0	318.7	359.4	389.3	396.5
67.5°	261.6	283.3	326.8	355.8	363.0
70°	221.8	246.2	292.4	322.3	329.5
72.5°	187.4	212.7	258.9	287.9	298.7
75°	150.3	179.2	225.4	256.2	263.4
77.5°	114.1	147.6	194.6	218.2	218.2
80°	81.5	116.8	160.2	171.1	172.9
82.5°	53.4	87.8	118.6	117.7	117.7
85°	30.8	57.0	70.6	68.8	68.8
87.5°	11.8	23.5	25.3	25.3	24.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)