

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: P310527

Luminaire Tested: **24FCZ2-30HE-UNV-L82765-CP250-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: P310527
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: 24FCZ2-30HE-UNV-L82765-CP250-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.250" POLYCARB SHEET
Light Source: (336) 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: 2459.0 lumens
Efficiency: N/A
Efficacy: 117.1 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

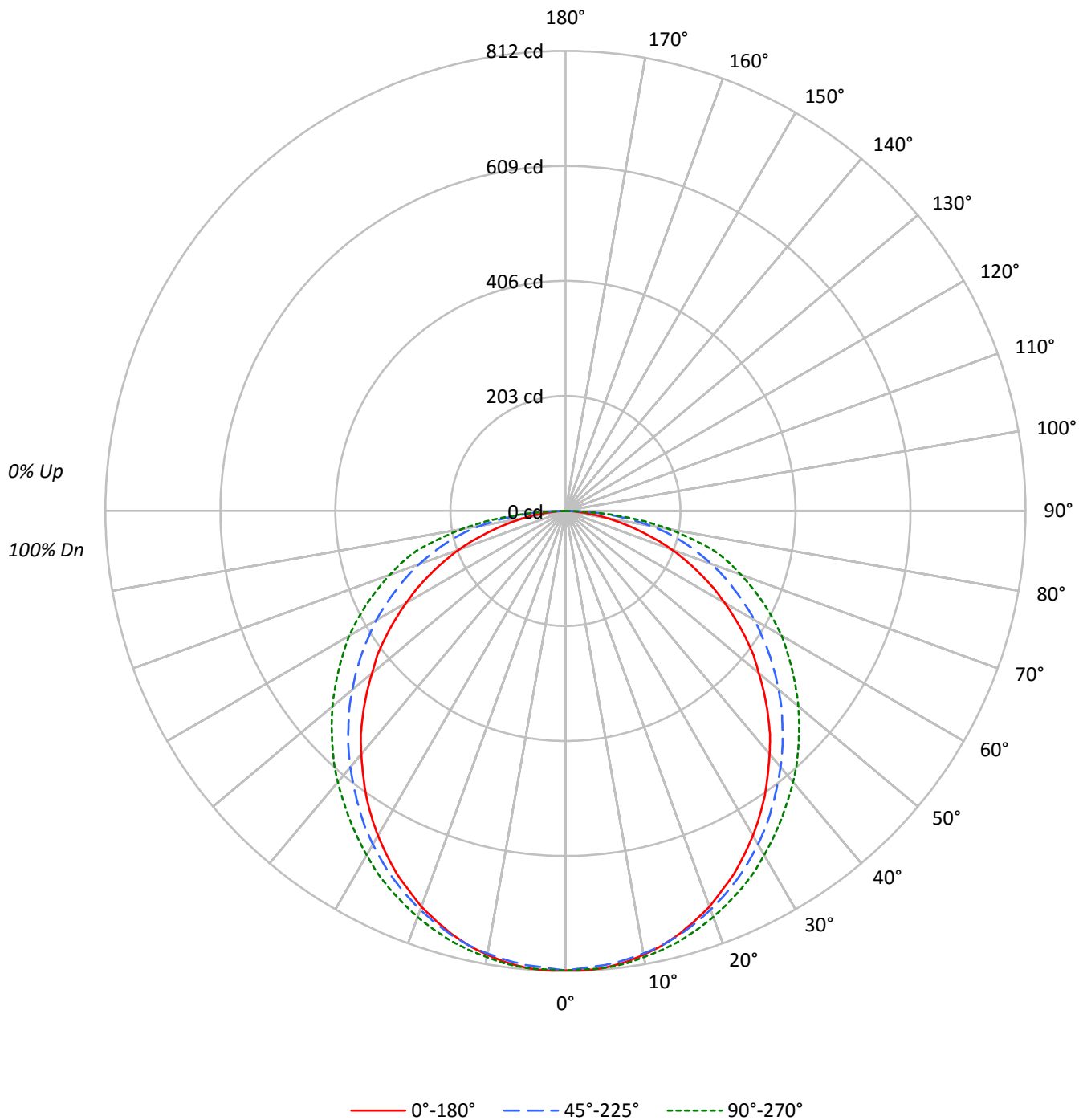
Input Watts (W): 21
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1091	1091	1091
5°	1093	1086	1093
10°	1087	1083	1092
15°	1077	1080	1093
20°	1064	1072	1092
25°	1048	1065	1091
30°	1028	1056	1090
35°	1008	1045	1091
40°	984	1038	1098
45°	961	1031	1107
50°	933	1028	1124
55°	909	1030	1146
60°	874	1038	1186
65°	834	1049	1229
70°	790	1081	1297
75°	704	1128	1417
80°	600	1195	1447
85°	428	1184	1385



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	76.7	3.1
10°-20°	219.5	8.9
20°-30°	331.5	13.5
30°-40°	399.5	16.2
40°-50°	419.4	17.1
50°-60°	392.4	16.0
60°-70°	324.0	13.2
70°-80°	220.8	9.0
80°-90°	75.3	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°	627.7	25.5
0°-40°	1027.1	41.8
0°-60°	1838.9	74.8
0°-90°	2459.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2459.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	811	811	811	811	811	
5°	809	808	804	809	809	77
15°	773	774	775	783	785	218
25°	706	709	717	731	735	325
35°	614	620	636	658	664	383
45°	505	516	542	571	582	389
55°	388	403	439	475	489	346
65°	262	284	330	371	386	260
75°	135	166	217	258	272	144
85°	28	55	77	86	90	35
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	811.0	811.0	811.0	811.0	811.0
2.5°	811.8	811.0	806.9	811.0	810.1
5°	809.3	808.5	804.4	809.3	809.3
7.5°	803.6	803.6	799.5	805.2	806.1
10°	795.5	795.5	793.0	799.5	799.5
12.5°	785.7	785.7	785.7	792.2	793.0
15°	773.4	774.2	775.1	783.2	784.8
17.5°	758.7	760.4	762.8	772.6	774.2
20°	743.2	744.9	749.0	760.4	762.8
22.5°	723.7	727.7	733.5	746.5	749.0
25°	705.7	709.0	717.1	731.0	735.1
27.5°	683.7	688.6	699.2	713.9	719.6
30°	661.7	666.6	679.6	696.7	701.6
32.5°	638.0	645.3	659.2	677.2	682.9
35°	613.5	620.0	636.4	657.6	664.1
37.5°	586.6	595.6	613.5	636.4	644.5
40°	560.5	570.3	590.7	615.2	624.9
42.5°	534.4	544.2	567.0	594.8	604.5
45°	505.0	515.6	541.7	571.1	581.7
47.5°	475.6	488.7	517.3	548.3	559.7
50°	445.5	460.1	491.1	523.8	536.8
52.5°	418.5	432.4	465.0	500.1	512.4
55°	387.5	403.0	438.9	474.8	488.7
57.5°	355.7	372.8	411.2	450.4	464.2
60°	324.7	343.5	385.9	425.1	440.6
62.5°	294.5	313.3	357.3	398.1	413.6
65°	261.9	283.9	329.6	371.2	385.9
67.5°	230.9	254.5	302.7	343.5	358.2
70°	200.7	223.5	274.9	314.9	329.6
72.5°	168.1	194.2	245.6	287.2	302.7
75°	135.4	166.4	217.0	257.8	272.5
77.5°	105.2	137.1	187.6	221.1	228.4
80°	77.5	110.1	154.2	177.9	186.8
82.5°	49.8	82.4	117.5	134.6	142.0
85°	27.7	54.7	76.7	86.5	89.7
87.5°	11.4	23.7	31.0	35.1	35.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)