

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: P311247

Luminaire Tested: **24FCZ2-30-UNV-L82765-S-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: P311247
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-CP250-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.250" POLYCARB 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: 2553.0 lumens
Efficiency: N/A
Efficacy: 110.0 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

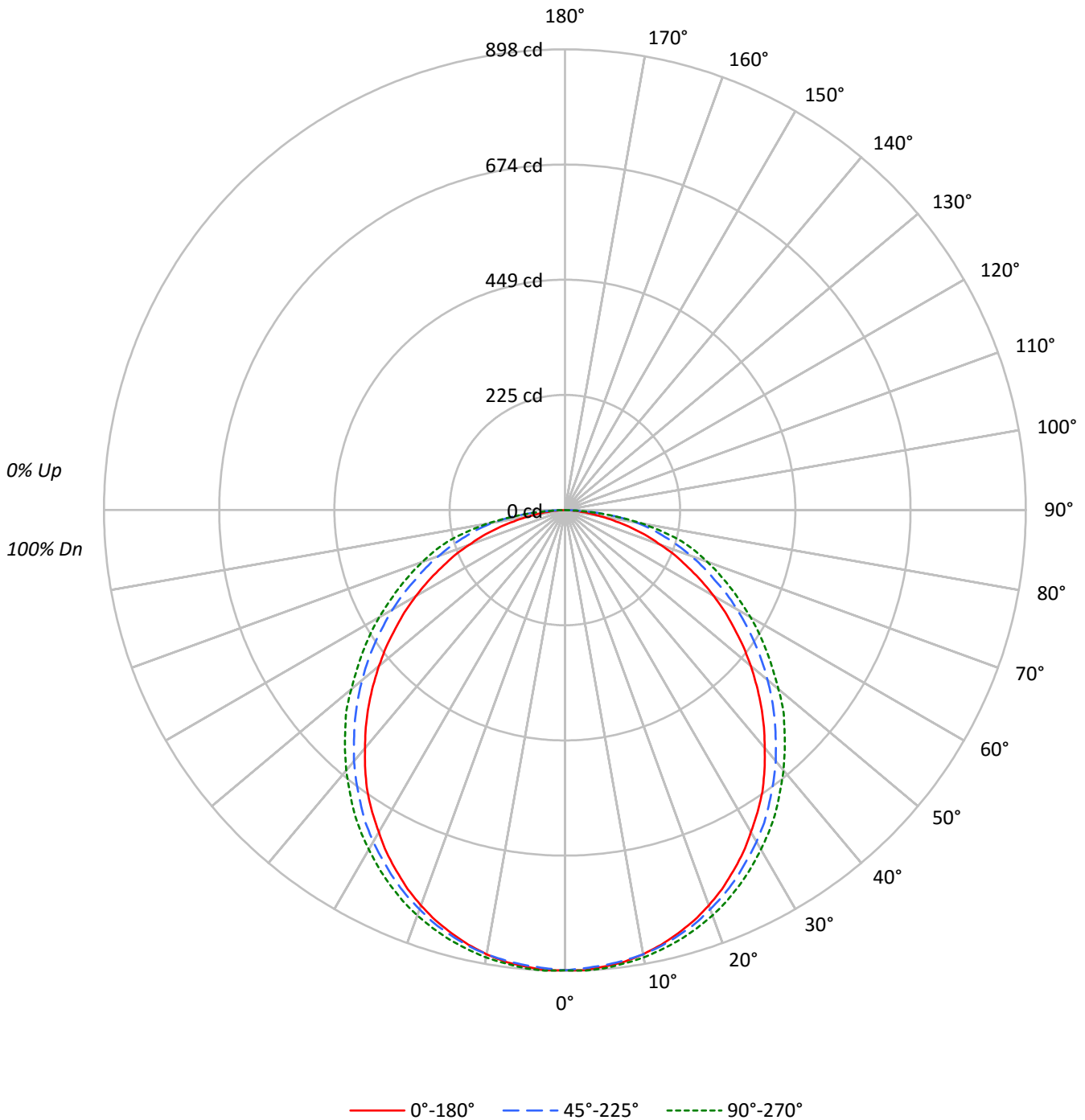
Input Watts (W): 23.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1207	1207	1207
5°	1206	1203	1210
10°	1201	1201	1210
15°	1189	1195	1208
20°	1174	1186	1204
25°	1152	1174	1197
30°	1126	1160	1187
35°	1101	1142	1178
40°	1064	1122	1164
45°	1029	1100	1151
50°	990	1079	1137
55°	945	1060	1126
60°	901	1043	1124
65°	844	1025	1131
70°	782	1030	1161
75°	700	1050	1227
80°	566	1112	1200
85°	426	977	951



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	84.9	3.3
10°-20°	242.6	9.5
20°-30°	364.7	14.3
30°-40°	434.4	17.0
40°-50°	444.6	17.4
50°-60°	400.3	15.7
60°-70°	314.3	12.3
70°-80°	204.0	8.0
80°-90°	63.1	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°	692.2	27.1
0°-40°	1126.6	44.1
0°-60°	1971.5	77.2
0°-90°	2553.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2553.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	897	897	897	897	897	
5°	893	894	890	895	896	85
15°	854	856	858	865	867	241
25°	776	782	791	804	806	358
35°	671	679	695	712	717	418
45°	541	554	578	600	605	417
55°	403	421	452	475	480	361
65°	265	285	322	349	355	264
75°	135	161	202	230	236	142
85°	28	51	63	62	62	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	896.9	896.9	896.9	896.9	896.9
2.5°	897.7	897.7	893.6	897.7	898.5
5°	892.8	894.5	890.4	895.3	896.1
7.5°	888.0	888.0	885.5	890.4	891.2
10°	879.0	879.9	879.0	884.7	885.5
12.5°	867.7	869.3	870.1	875.8	876.6
15°	853.9	856.3	858.0	865.3	866.9
17.5°	838.5	840.9	845.0	853.1	854.7
20°	819.8	823.1	828.0	838.5	840.9
22.5°	799.6	802.8	810.9	820.7	824.7
25°	776.1	782.5	790.7	803.6	806.1
27.5°	752.5	758.2	768.8	782.5	785.8
30°	725.0	733.9	746.9	760.6	763.9
32.5°	698.2	707.1	722.5	737.1	741.2
35°	670.6	678.7	695.0	712.0	716.9
37.5°	639.0	649.6	667.4	684.4	689.3
40°	605.8	618.7	639.0	656.9	662.5
42.5°	574.1	587.9	608.2	627.7	634.1
45°	540.9	553.9	578.2	600.1	605.0
47.5°	506.8	521.4	547.4	569.3	577.4
50°	472.8	488.2	515.7	538.5	543.3
52.5°	438.7	454.9	484.1	508.5	510.9
55°	403.0	420.9	451.7	475.2	480.1
57.5°	370.6	386.0	419.2	443.6	449.3
60°	334.9	351.9	387.6	410.3	417.6
62.5°	300.9	318.7	356.0	378.7	385.2
65°	265.2	285.4	321.9	348.7	355.2
67.5°	234.4	253.8	292.7	318.7	325.2
70°	198.7	220.6	261.9	288.7	295.2
72.5°	167.9	190.6	231.9	257.9	267.6
75°	134.6	160.6	201.9	229.5	236.0
77.5°	102.2	132.2	174.3	195.4	195.4
80°	73.0	104.6	143.5	153.3	154.9
82.5°	47.8	78.7	106.2	105.4	105.4
85°	27.6	51.1	63.3	61.6	61.6
87.5°	10.5	21.1	22.7	22.7	21.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)