

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: P310512

Luminaire Tested: **24FCZ2-30HE-UNV-L82765-CP125-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: P310512
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-CP125-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" POLYCARB SHEET
Light Source: (336) 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: 2786.0 lumens
Efficiency: N/A
Efficacy: 129.6 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

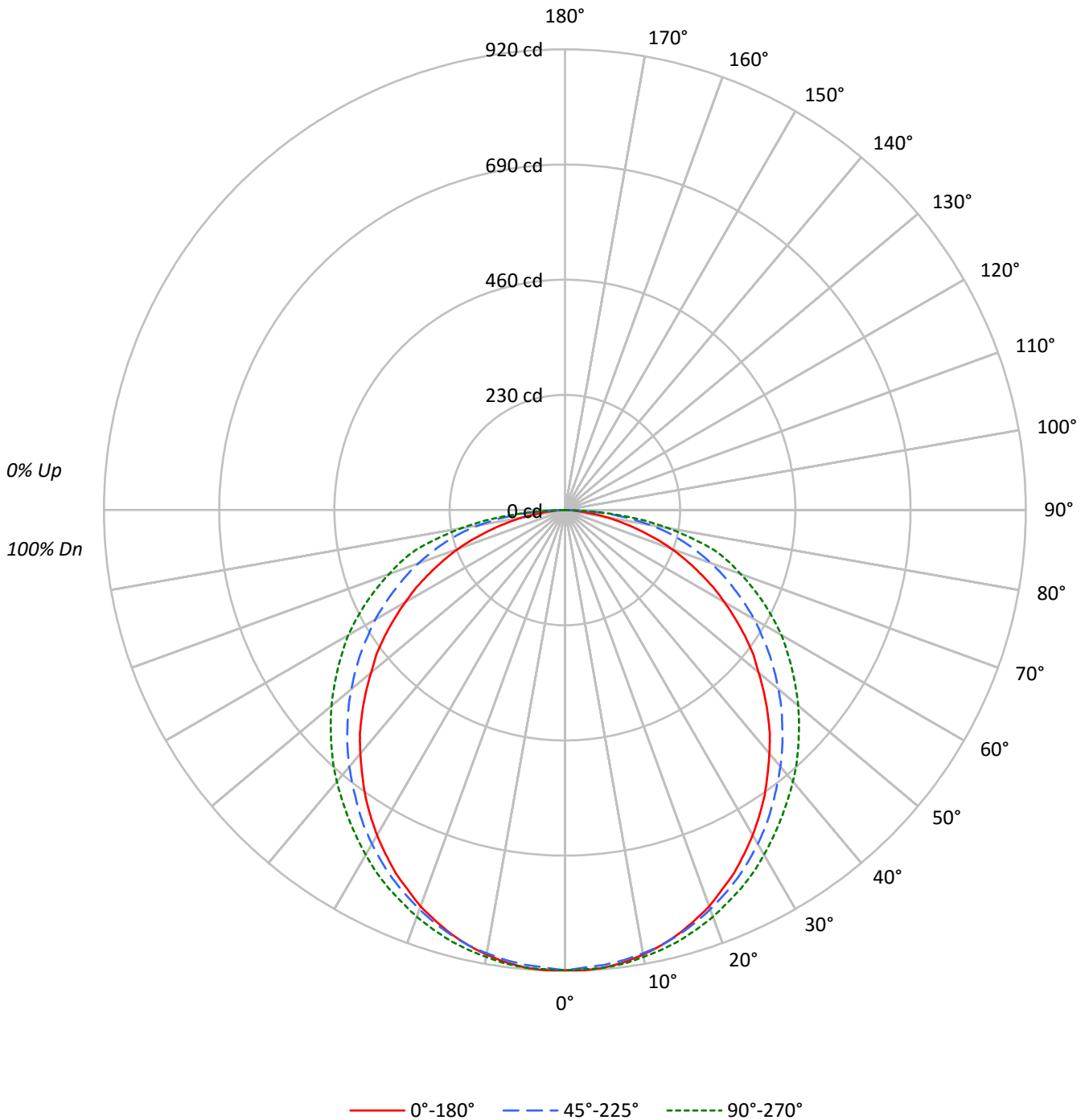
Input Watts (W): 21.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1236	1236	1236
5°	1238	1231	1238
10°	1231	1228	1238
15°	1221	1223	1239
20°	1206	1215	1238
25°	1187	1206	1236
30°	1165	1196	1235
35°	1142	1184	1236
40°	1115	1175	1244
45°	1089	1168	1254
50°	1056	1165	1273
55°	1030	1167	1299
60°	990	1176	1343
65°	945	1189	1392
70°	895	1225	1469
75°	797	1278	1605
80°	680	1354	1640
85°	485	1342	1570



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	87.0	3.1
10°-20°	248.6	8.9
20°-30°	375.5	13.5
30°-40°	452.6	16.2
40°-50°	475.2	17.1
50°-60°	444.5	16.0
60°-70°	367.1	13.2
70°-80°	250.2	9.0
80°-90°	85.3	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°	711.1	25.5
0°-40°	1163.7	41.8
0°-60°	2083.4	74.8
0°-90°	2786.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2786.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	919	919	919	919	919	
5°	917	916	911	917	917	87
15°	876	877	878	887	889	247
25°	800	803	812	828	833	368
35°	695	702	721	745	752	434
45°	572	584	614	647	659	441
55°	439	457	497	538	554	392
65°	297	322	373	421	437	294
75°	153	189	246	292	309	164
85°	31	62	87	98	102	39
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	918.8	918.8	918.8	918.8	918.8
2.5°	919.7	918.8	914.2	918.8	917.9
5°	916.9	916.0	911.4	916.9	916.9
7.5°	910.5	910.5	905.9	912.3	913.3
10°	901.2	901.2	898.5	905.9	905.9
12.5°	890.1	890.1	890.1	897.5	898.5
15°	876.3	877.2	878.1	887.4	889.2
17.5°	859.6	861.5	864.3	875.4	877.2
20°	842.1	843.9	848.5	861.5	864.3
22.5°	819.9	824.5	831.0	845.8	848.5
25°	799.6	803.3	812.5	828.2	832.8
27.5°	774.6	780.1	792.2	808.8	815.3
30°	749.6	755.2	770.0	789.4	794.9
32.5°	722.8	731.2	746.9	767.2	773.7
35°	695.1	702.5	721.0	745.0	752.4
37.5°	664.6	674.8	695.1	721.0	730.2
40°	635.0	646.1	669.2	697.0	708.0
42.5°	605.4	616.5	642.4	673.8	684.9
45°	572.2	584.2	613.8	647.0	659.1
47.5°	538.9	553.7	586.0	621.2	634.1
50°	504.7	521.3	556.5	593.4	608.2
52.5°	474.2	489.9	526.9	566.6	580.5
55°	439.1	456.6	497.3	538.0	553.7
57.5°	403.0	422.4	465.9	510.2	526.0
60°	367.9	389.1	437.2	481.6	499.1
62.5°	333.7	354.9	404.9	451.1	468.6
65°	296.7	321.7	373.4	420.6	437.2
67.5°	261.6	288.4	342.9	389.1	405.8
70°	227.4	253.3	311.5	356.8	373.4
72.5°	190.4	220.0	278.2	325.4	342.9
75°	153.4	188.6	245.9	292.1	308.7
77.5°	119.2	155.3	212.6	250.5	258.8
80°	87.8	124.8	174.7	201.5	211.7
82.5°	56.4	93.4	133.1	152.5	160.8
85°	31.4	61.9	86.9	98.0	101.7
87.5°	12.9	26.8	35.1	39.7	39.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)