

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: P309158

Luminaire Tested: **24FCZ2-30HE-UNV-L82765-HRP-CP125-W2A-U-2700K**

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: P309158
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)
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-HRP-CP125-W2A-U-2700K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" POLYCARB SHEET
Light Source: (336) 2700K 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: 1909.0 lumens
Efficiency: N/A
Efficacy: 90.5 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

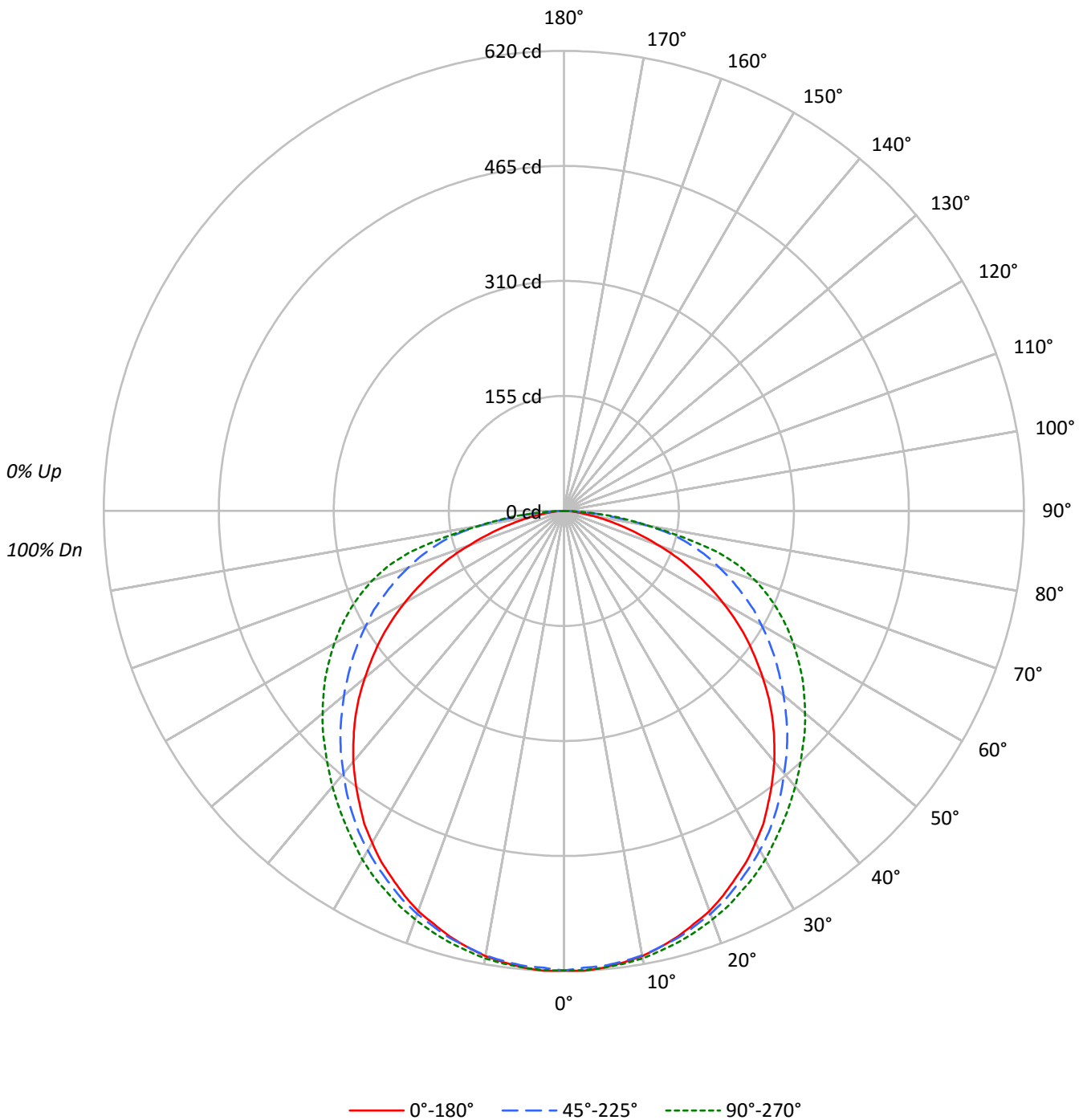
Input Watts (W): 21.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				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	101	96	93	96	93	90	92	90	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	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	24	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	833	833	833
5°	834	831	834
10°	832	831	836
15°	827	829	837
20°	822	827	839
25°	811	823	840
30°	802	821	843
35°	789	817	844
40°	775	811	852
45°	757	811	865
50°	733	810	888
55°	707	816	920
60°	667	828	961
65°	616	847	1015
70°	538	877	1081
75°	436	922	1118
80°	322	904	904
85°	247	667	753



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	58.7	3.1
10°-20°	168.5	8.8
20°-30°	256.5	13.4
30°-40°	311.5	16.3
40°-50°	329.1	17.2
50°-60°	310.5	16.3
60°-70°	258.2	13.5
70°-80°	169.8	8.9
80°-90°	46.3	2.4
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°	483.7	25.3
0°-40°	795.1	41.7
0°-60°	1434.7	75.2
0°-90°	1909.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1909.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	619	619	619	619	619	
5°	618	618	615	618	618	59
15°	594	595	595	601	601	167
25°	547	550	555	564	566	252
35°	480	486	497	510	514	301
45°	398	406	426	447	455	306
55°	301	314	348	380	392	268
65°	193	216	266	305	319	191
75°	84	122	177	210	215	90
85°	16	35	43	48	49	20
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	619.4	619.4	619.4	619.4	619.4
2.5°	620.2	619.4	616.2	619.4	619.4
5°	617.8	617.8	615.4	617.8	617.8
7.5°	613.8	613.8	612.2	615.4	615.4
10°	609.0	609.0	608.2	612.2	612.2
12.5°	601.8	602.6	601.8	606.6	606.6
15°	593.8	594.6	595.4	601.0	601.0
17.5°	583.4	585.0	586.6	593.0	593.8
20°	573.8	574.6	577.8	585.0	585.8
22.5°	561.0	563.4	567.4	574.6	577.0
25°	546.6	549.8	554.6	564.2	565.8
27.5°	533.1	535.5	541.9	552.2	555.4
30°	516.3	520.3	528.3	538.7	542.7
32.5°	500.3	504.3	513.9	525.1	528.3
35°	480.3	485.9	497.1	509.9	513.9
37.5°	461.1	466.7	480.3	494.7	499.5
40°	441.2	447.5	461.9	478.7	485.1
42.5°	419.6	428.4	444.4	462.7	469.9
45°	398.0	406.0	426.0	446.8	454.7
47.5°	374.8	384.4	406.0	430.8	440.4
50°	350.0	362.0	386.8	414.0	424.4
52.5°	325.3	338.9	366.8	397.2	408.4
55°	301.3	314.1	347.7	380.4	392.4
57.5°	274.9	290.9	327.7	362.8	374.8
60°	247.8	265.3	307.7	344.5	357.2
62.5°	220.6	240.6	288.5	325.3	338.9
65°	193.4	215.8	266.1	305.3	318.9
67.5°	167.0	191.8	245.4	284.5	298.1
70°	136.7	167.8	223.0	261.3	274.9
72.5°	108.7	144.7	201.4	237.4	249.3
75°	83.9	122.3	177.4	210.2	215.0
77.5°	61.5	99.9	152.6	163.8	164.6
80°	41.6	79.9	116.7	115.1	116.7
82.5°	27.2	59.9	73.5	82.3	83.1
85°	16.0	35.2	43.2	48.0	48.8
87.5°	8.0	12.0	15.2	16.0	17.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)