

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: P313803

Luminaire Tested: **24FCZ2-30HE-UNV-L83050-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: P313803
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-L83050-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: 2907.0 lumens
Efficiency: N/A
Efficacy: 131.5 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

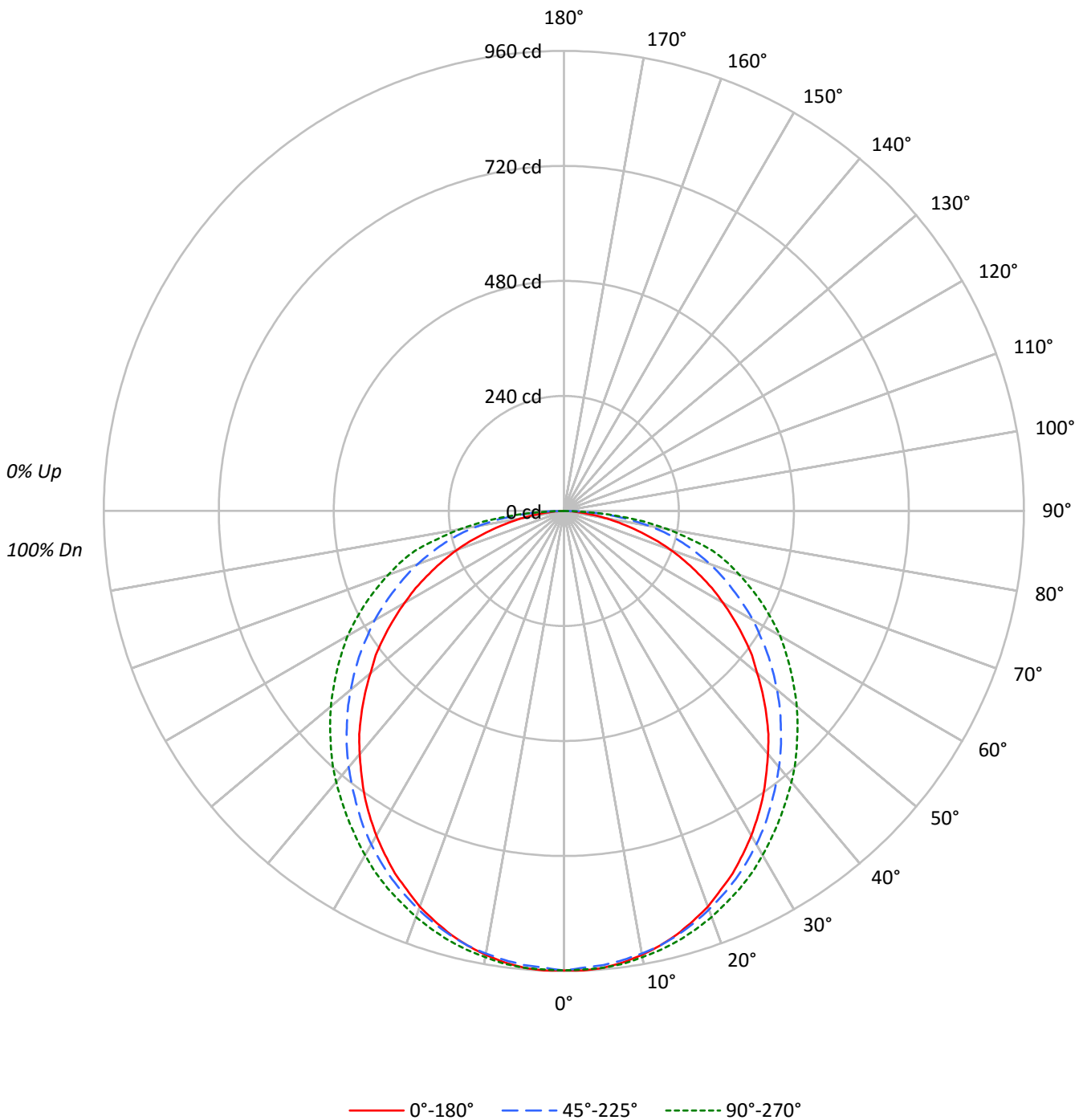
Input Watts (W): 22.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1290	1290	1290
5°	1292	1284	1292
10°	1285	1281	1291
15°	1274	1276	1292
20°	1258	1268	1291
25°	1239	1259	1290
30°	1215	1248	1289
35°	1191	1236	1290
40°	1164	1227	1298
45°	1136	1219	1309
50°	1102	1215	1328
55°	1075	1217	1355
60°	1033	1228	1401
65°	986	1241	1452
70°	934	1279	1533
75°	832	1334	1674
80°	710	1413	1712
85°	506	1400	1638



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	90.7	3.1
10°-20°	259.4	8.9
20°-30°	391.8	13.5
30°-40°	472.3	16.2
40°-50°	495.8	17.1
50°-60°	463.8	16.0
60°-70°	383.1	13.2
70°-80°	261.0	9.0
80°-90°	89.0	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°	742.0	25.5
0°-40°	1214.3	41.8
0°-60°	2173.9	74.8
0°-90°	2907.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2907.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	959	959	959	959	959	
5°	957	956	951	957	957	91
15°	914	915	916	926	928	258
25°	834	838	848	864	869	384
35°	725	733	752	777	785	453
45°	597	610	640	675	688	460
55°	458	476	519	561	578	409
65°	310	336	390	439	456	307
75°	160	197	257	305	322	171
85°	33	65	91	102	106	41
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	958.7	958.7	958.7	958.7	958.7
2.5°	959.7	958.7	953.9	958.7	957.7
5°	956.8	955.8	951.0	956.8	956.8
7.5°	950.0	950.0	945.2	952.0	952.9
10°	940.4	940.4	937.5	945.2	945.2
12.5°	928.8	928.8	928.8	936.5	937.5
15°	914.3	915.3	916.3	925.9	927.8
17.5°	897.0	898.9	901.8	913.4	915.3
20°	878.7	880.6	885.4	898.9	901.8
22.5°	855.5	860.3	867.1	882.5	885.4
25°	834.3	838.1	847.8	864.2	869.0
27.5°	808.2	814.0	826.6	843.9	850.7
30°	782.2	788.0	803.4	823.7	829.5
32.5°	754.2	762.9	779.3	800.5	807.3
35°	725.3	733.0	752.3	777.4	785.1
37.5°	693.5	704.1	725.3	752.3	761.9
40°	662.6	674.2	698.3	727.2	738.8
42.5°	631.7	643.3	670.3	703.1	714.7
45°	597.0	609.6	640.4	675.1	687.7
47.5°	562.3	577.7	611.5	648.1	661.6
50°	526.6	544.0	580.6	619.2	634.6
52.5°	494.8	511.2	549.8	591.2	605.7
55°	458.1	476.5	518.9	561.3	577.7
57.5°	420.5	440.8	486.1	532.4	548.8
60°	383.9	406.1	456.2	502.5	520.8
62.5°	348.2	370.4	422.4	470.7	489.0
65°	309.6	335.6	389.7	438.8	456.2
67.5°	273.0	300.9	357.8	406.1	423.4
70°	237.3	264.3	325.0	372.3	389.7
72.5°	198.7	229.5	290.3	339.5	357.8
75°	160.1	196.8	256.6	304.8	322.1
77.5°	124.4	162.0	221.8	261.4	270.1
80°	91.6	130.2	182.3	210.3	220.9
82.5°	58.8	97.4	138.9	159.1	167.8
85°	32.8	64.6	90.7	102.2	106.1
87.5°	13.5	28.0	36.7	41.5	41.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)