

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: P310144

Luminaire Tested: **24FCZ2-45-UNV-L82765-RDP-CA125-W2A-U-5000K**

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: P310144
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-45-UNV-L82765-RDP-CA125-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" ACRYLIC SHEET
Light Source: (168) 5000K 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: 2859.0 lumens
Efficiency: N/A
Efficacy: 74.3 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

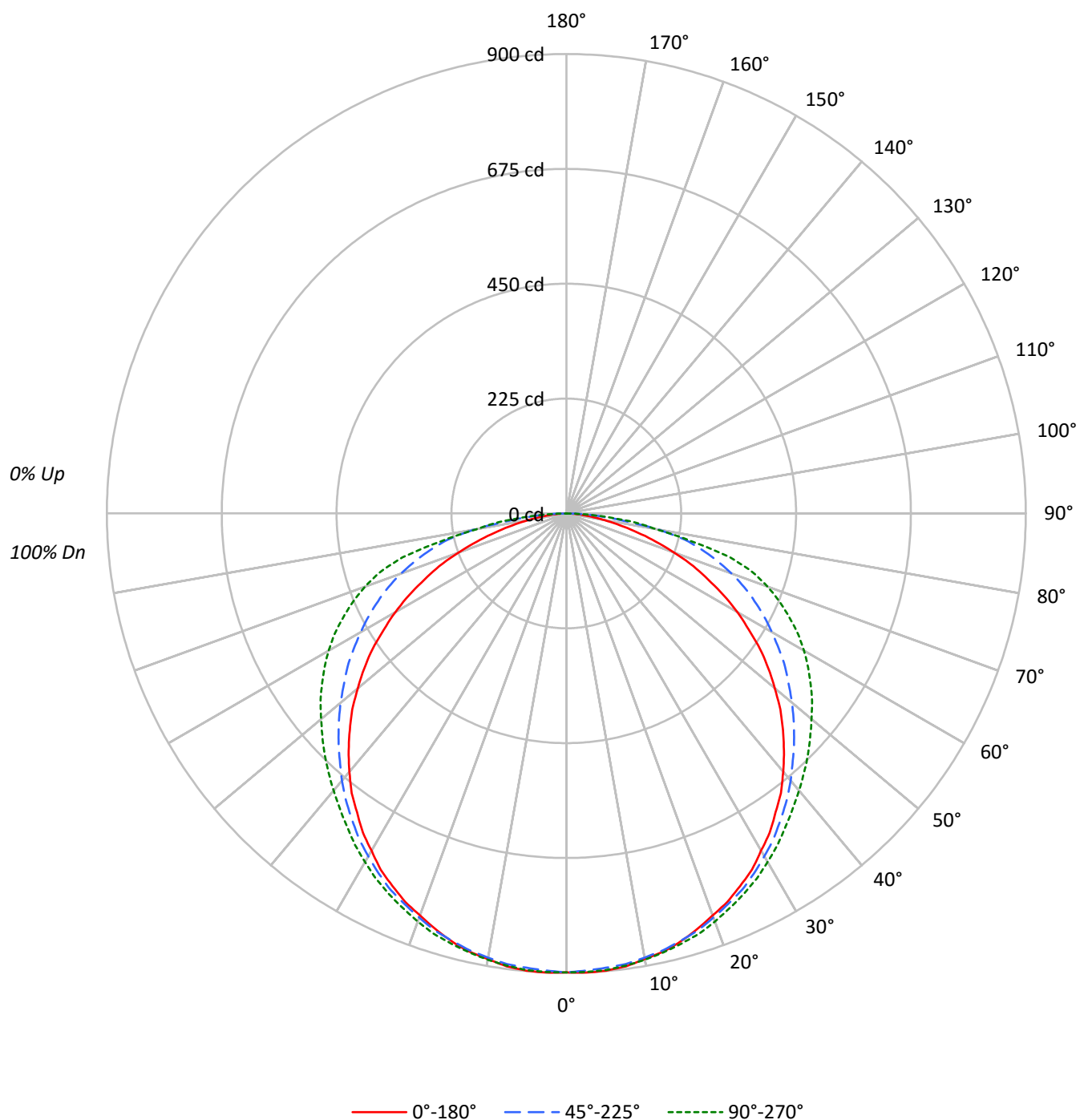
Input Watts (W): 38.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	50	30	10
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	93	89	92	89	87	88	86	84	82		
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67		
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56		
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47		
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40		
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35		
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31		
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27		
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24		
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1210	1210	1210
5°	1214	1207	1212
10°	1211	1207	1213
15°	1209	1207	1215
20°	1200	1206	1218
25°	1196	1208	1221
30°	1185	1205	1225
35°	1174	1202	1230
40°	1161	1201	1245
45°	1141	1201	1274
50°	1116	1208	1312
55°	1088	1228	1371
60°	1042	1252	1446
65°	975	1296	1535
70°	887	1356	1651
75°	752	1430	1725
80°	594	1440	1395
85°	438	1095	1226



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	85.3	3.0
10°-20°	245.5	8.6
20°-30°	375.4	13.1
30°-40°	458.8	16.0
40°-50°	489.1	17.1
50°-60°	467.6	16.4
60°-70°	396.1	13.9
70°-80°	266.2	9.3
80°-90°	75.1	2.6
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°	706.1	24.7
0°-40°	1164.9	40.7
0°-60°	2121.6	74.2
0°-90°	2859.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2859.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	899	899	899	899	899	
5°	899	898	893	898	898	85
15°	868	868	866	874	872	245
25°	806	808	814	821	822	371
35°	715	720	732	746	749	448
45°	600	610	631	658	669	463
55°	464	481	523	564	584	413
65°	306	338	407	461	482	304
75°	145	197	275	322	332	155
85°	28	58	71	77	79	35
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	899.1	899.1	899.1	899.1	899.1
2.5°	900.5	900.5	896.2	899.1	899.1
5°	899.1	897.7	893.4	897.7	897.7
7.5°	894.8	893.4	890.6	894.8	893.4
10°	886.3	886.3	883.5	887.7	887.7
12.5°	879.2	877.8	876.4	882.1	880.6
15°	867.9	867.9	866.5	873.5	872.1
17.5°	853.7	855.1	856.5	862.2	863.6
20°	838.1	840.9	842.3	850.9	850.9
22.5°	823.9	825.3	828.2	836.7	836.7
25°	805.5	808.3	814.0	821.1	822.5
27.5°	787.0	788.5	795.6	805.5	806.9
30°	762.9	767.2	775.7	787.0	788.5
32.5°	741.7	745.9	755.8	767.2	770.0
35°	714.7	720.4	731.7	745.9	748.8
37.5°	690.6	694.9	709.0	724.6	728.9
40°	660.8	669.3	683.5	702.0	709.0
42.5°	631.1	639.6	656.6	680.7	689.2
45°	599.9	609.8	631.1	658.0	669.3
47.5°	568.7	580.0	604.1	635.3	648.1
50°	533.2	547.4	577.2	612.6	626.8
52.5°	499.2	516.2	548.8	588.5	606.9
55°	463.7	480.7	523.3	564.4	584.3
57.5°	424.0	446.7	493.5	540.3	561.6
60°	387.1	408.4	465.1	516.2	537.5
62.5°	347.4	375.8	436.8	490.7	511.9
65°	306.3	337.5	407.0	460.9	482.2
67.5°	269.4	303.5	377.2	431.1	452.4
70°	225.5	268.0	344.6	398.5	419.8
72.5°	184.4	231.1	310.6	363.0	382.9
75°	144.6	197.1	275.1	321.9	331.8
77.5°	107.8	163.1	238.2	258.1	251.0
80°	76.6	130.5	185.8	175.8	180.1
82.5°	49.6	99.3	114.9	130.5	134.7
85°	28.4	58.1	70.9	76.6	79.4
87.5°	12.8	21.3	28.4	28.4	26.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)