

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: P310132

Luminaire Tested: **24FCZ2-45-UNV-L82765-RDP-CA08-W2A-U-3500K**

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: P310132
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-CA08-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC SHEET
Light Source: (168) 3500K 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: 2722.0 lumens
Efficiency: N/A
Efficacy: 72.0 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

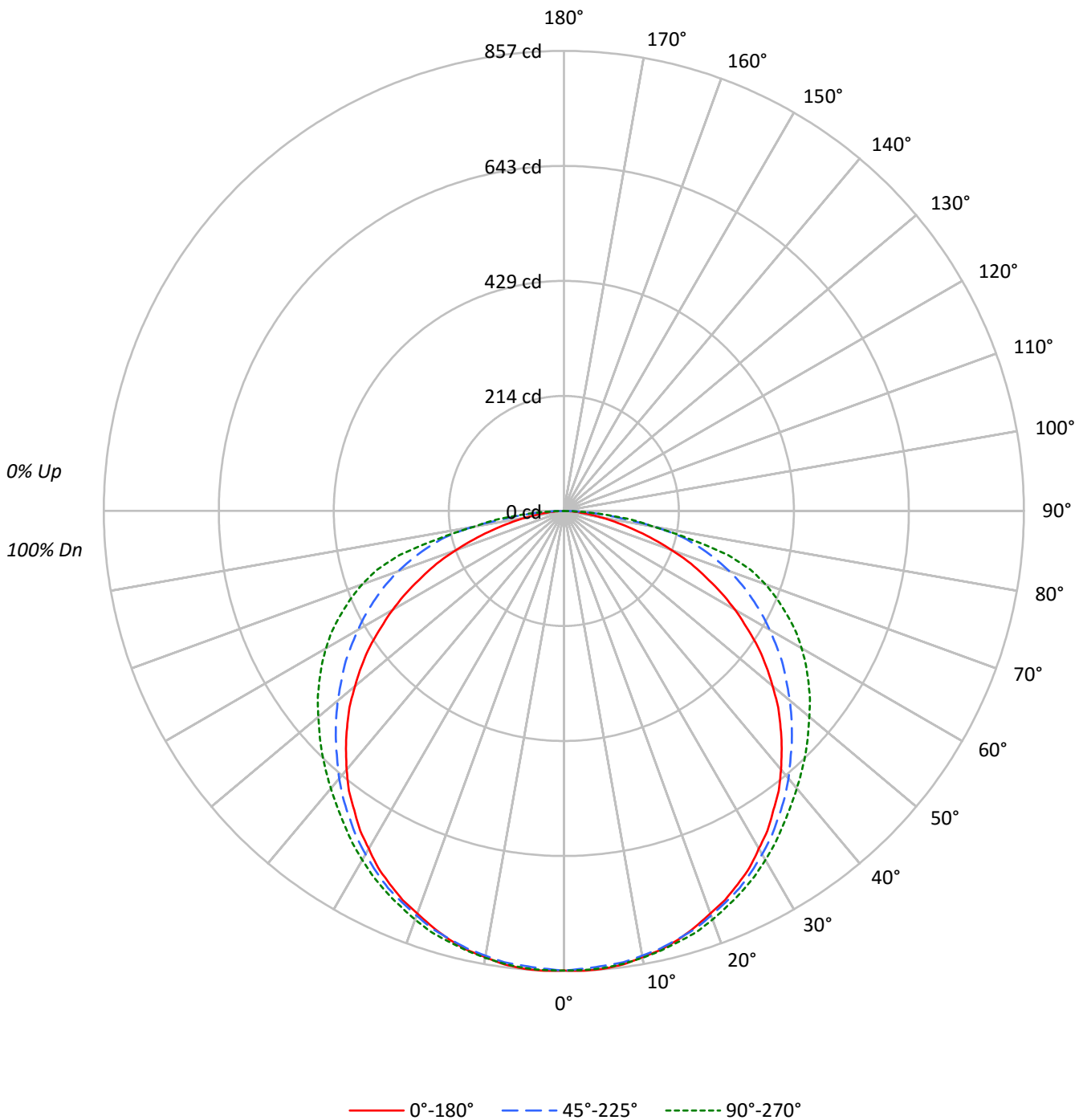
Input Watts (W): 37.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1152	1152	1152
5°	1156	1149	1154
10°	1153	1149	1155
15°	1151	1149	1157
20°	1142	1148	1160
25°	1139	1151	1163
30°	1129	1147	1166
35°	1118	1144	1171
40°	1105	1143	1186
45°	1087	1143	1213
50°	1063	1150	1249
55°	1036	1169	1305
60°	992	1192	1377
65°	928	1234	1461
70°	845	1291	1572
75°	716	1362	1642
80°	565	1371	1329
85°	417	1042	1167



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.2	3.0
10°-20°	233.7	8.6
20°-30°	357.4	13.1
30°-40°	436.9	16.0
40°-50°	465.6	17.1
50°-60°	445.2	16.4
60°-70°	377.1	13.9
70°-80°	253.5	9.3
80°-90°	71.5	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°	672.2	24.7
0°-40°	1109.1	40.7
0°-60°	2019.9	74.2
0°-90°	2722.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2722.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	856	856	856	856	856	
5°	856	855	851	855	855	81
15°	826	826	825	832	830	233
25°	767	770	775	782	783	353
35°	680	686	697	710	713	426
45°	571	581	601	626	637	441
55°	442	458	498	537	556	393
65°	292	321	388	439	459	290
75°	138	188	262	306	316	147
85°	27	55	68	73	76	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	856.0	856.0	856.0	856.0	856.0
2.5°	857.3	857.3	853.3	856.0	856.0
5°	856.0	854.6	850.6	854.6	854.6
7.5°	851.9	850.6	847.9	851.9	850.6
10°	843.8	843.8	841.1	845.2	845.2
12.5°	837.1	835.7	834.4	839.8	838.4
15°	826.3	826.3	824.9	831.7	830.3
17.5°	812.8	814.1	815.5	820.9	822.2
20°	797.9	800.6	802.0	810.1	810.1
22.5°	784.4	785.8	788.5	796.6	796.6
25°	766.9	769.6	775.0	781.7	783.1
27.5°	749.3	750.7	757.4	766.9	768.2
30°	726.4	730.4	738.5	749.3	750.7
32.5°	706.1	710.2	719.6	730.4	733.1
35°	680.5	685.9	696.7	710.2	712.9
37.5°	657.5	661.6	675.1	689.9	694.0
40°	629.2	637.3	650.8	668.3	675.1
42.5°	600.8	608.9	625.1	648.1	656.2
45°	571.1	580.6	600.8	626.5	637.3
47.5°	541.4	552.2	575.2	604.9	617.0
50°	507.7	521.2	549.5	583.3	596.8
52.5°	475.3	491.5	522.5	560.3	577.9
55°	441.5	457.7	498.2	537.4	556.3
57.5°	403.7	425.3	469.9	514.4	534.7
60°	368.6	388.8	442.8	491.5	511.7
62.5°	330.8	357.8	415.8	467.1	487.4
65°	291.6	321.3	387.5	438.8	459.0
67.5°	256.5	288.9	359.1	410.4	430.7
70°	214.7	255.2	328.1	379.4	399.6
72.5°	175.5	220.1	295.7	345.6	364.5
75°	137.7	187.7	261.9	306.5	315.9
77.5°	102.6	155.3	226.8	245.7	239.0
80°	72.9	124.2	176.9	167.4	171.5
82.5°	47.3	94.5	109.4	124.2	128.3
85°	27.0	55.4	67.5	72.9	75.6
87.5°	12.2	20.3	27.0	27.0	25.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)