

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: P310101

Luminaire Tested: **24FCZ2-45HE-UNV-L82765-RDP-CA125-W2A-U-5700K**

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: P310101
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: 24FCZ2-45HE-UNV-L82765-RDP-CA125-W2A-U-5700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" ACRYLIC SHEET
Light Source: (336) 5700K 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: 2865.0 lumens
Efficiency: N/A
Efficacy: 82.6 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

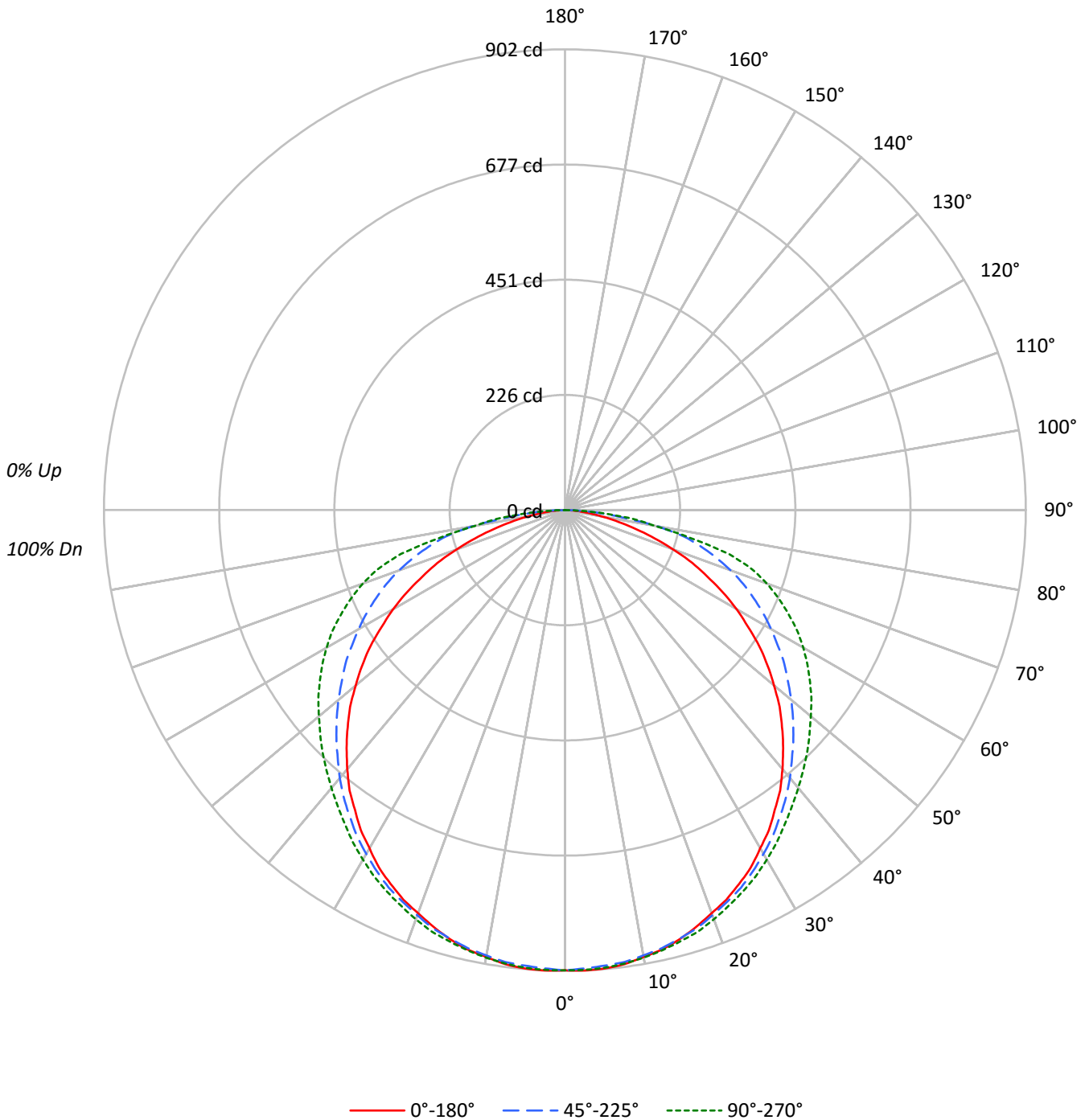
Input Watts (W): 34.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P310101

CATALOG NUMBER: 24FCZ2-45HE-UNV-L82765-RDP-CA125-W2A-U-5700K

Luminous Intensity Polar Plot





TEST NUMBER: P310101

CATALOG NUMBER: 24FCZ2-45HE-UNV-L82765-RDP-CA125-W2A-U-5700K

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	68	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°	1212	1212	1212
5°	1217	1209	1215
10°	1213	1210	1215
15°	1211	1210	1217
20°	1203	1209	1221
25°	1198	1211	1224
30°	1188	1208	1228
35°	1176	1204	1232
40°	1163	1203	1248
45°	1144	1203	1276
50°	1118	1211	1315
55°	1090	1230	1373
60°	1044	1254	1449
65°	977	1298	1538
70°	889	1358	1655
75°	753	1433	1729
80°	594	1443	1399
85°	438	1098	1229



TEST NUMBER: P310101

CATALOG NUMBER: 24FCZ2-45HE-UNV-L82765-RDP-CA125-W2A-U-5700K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	85.5	3.0
10°-20°	246.0	8.6
20°-30°	376.1	13.1
30°-40°	459.8	16.0
40°-50°	490.1	17.1
50°-60°	468.6	16.4
60°-70°	396.9	13.9
70°-80°	266.8	9.3
80°-90°	75.2	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°	707.6	24.7
0°-40°	1167.4	40.7
0°-60°	2126.0	74.2
0°-90°	2865.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2865.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	901	901	901	901	901	
5°	901	900	895	900	900	86
15°	870	870	868	875	874	245
25°	807	810	816	823	824	372
35°	716	722	733	748	750	449
45°	601	611	632	659	671	464
55°	465	482	524	566	586	414
65°	307	338	408	462	483	305
75°	145	198	276	323	332	155
85°	28	58	71	77	80	35
90°	0	0	0	0	0	



TEST NUMBER: P310101

CATALOG NUMBER: 24FCZ2-45HE-UNV-L82765-RDP-CA125-W2A-U-5700K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	901.0	901.0	901.0	901.0	901.0
2.5°	902.4	902.4	898.1	901.0	901.0
5°	901.0	899.5	895.3	899.5	899.5
7.5°	896.7	895.3	892.4	896.7	895.3
10°	888.2	888.2	885.3	889.6	889.6
12.5°	881.1	879.6	878.2	883.9	882.5
15°	869.7	869.7	868.3	875.4	874.0
17.5°	855.5	856.9	858.3	864.0	865.4
20°	839.9	842.7	844.1	852.6	852.6
22.5°	825.6	827.1	829.9	838.4	838.4
25°	807.2	810.0	815.7	822.8	824.2
27.5°	788.7	790.1	797.2	807.2	808.6
30°	764.5	768.8	777.3	788.7	790.1
32.5°	743.2	747.5	757.4	768.8	771.6
35°	716.2	721.9	733.3	747.5	750.3
37.5°	692.1	696.3	710.5	726.2	730.4
40°	662.2	670.7	685.0	703.4	710.5
42.5°	632.4	640.9	658.0	682.1	690.6
45°	601.1	611.1	632.4	659.4	670.7
47.5°	569.9	581.2	605.4	636.6	649.4
50°	534.3	548.5	578.4	613.9	628.1
52.5°	500.2	517.3	550.0	589.7	608.2
55°	464.7	481.7	524.4	565.6	585.5
57.5°	424.9	447.6	494.5	541.4	562.7
60°	388.0	409.3	466.1	517.3	538.6
62.5°	348.2	376.6	437.7	491.7	513.0
65°	307.0	338.2	407.8	461.8	483.2
67.5°	270.0	304.1	378.0	432.0	453.3
70°	226.0	268.6	345.3	399.3	420.6
72.5°	184.7	231.6	311.2	363.8	383.7
75°	144.9	197.5	275.7	322.6	332.5
77.5°	108.0	163.4	238.7	258.6	251.5
80°	76.7	130.7	186.2	176.2	180.5
82.5°	49.7	99.5	115.1	130.7	135.0
85°	28.4	58.3	71.1	76.7	79.6
87.5°	12.8	21.3	28.4	28.4	27.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)