

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: P309492

Luminaire Tested: **24FCZ2-45-UNV-L82765-HRP-CP250-W2A-U-3000K**

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: P309492
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: 24FCZ2-45-UNV-L82765-HRP-CP250-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
POLYCARB SHEET
Light Source: (168) 3000K 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: 2754.0 lumens
Efficiency: N/A
Efficacy: 73.8 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

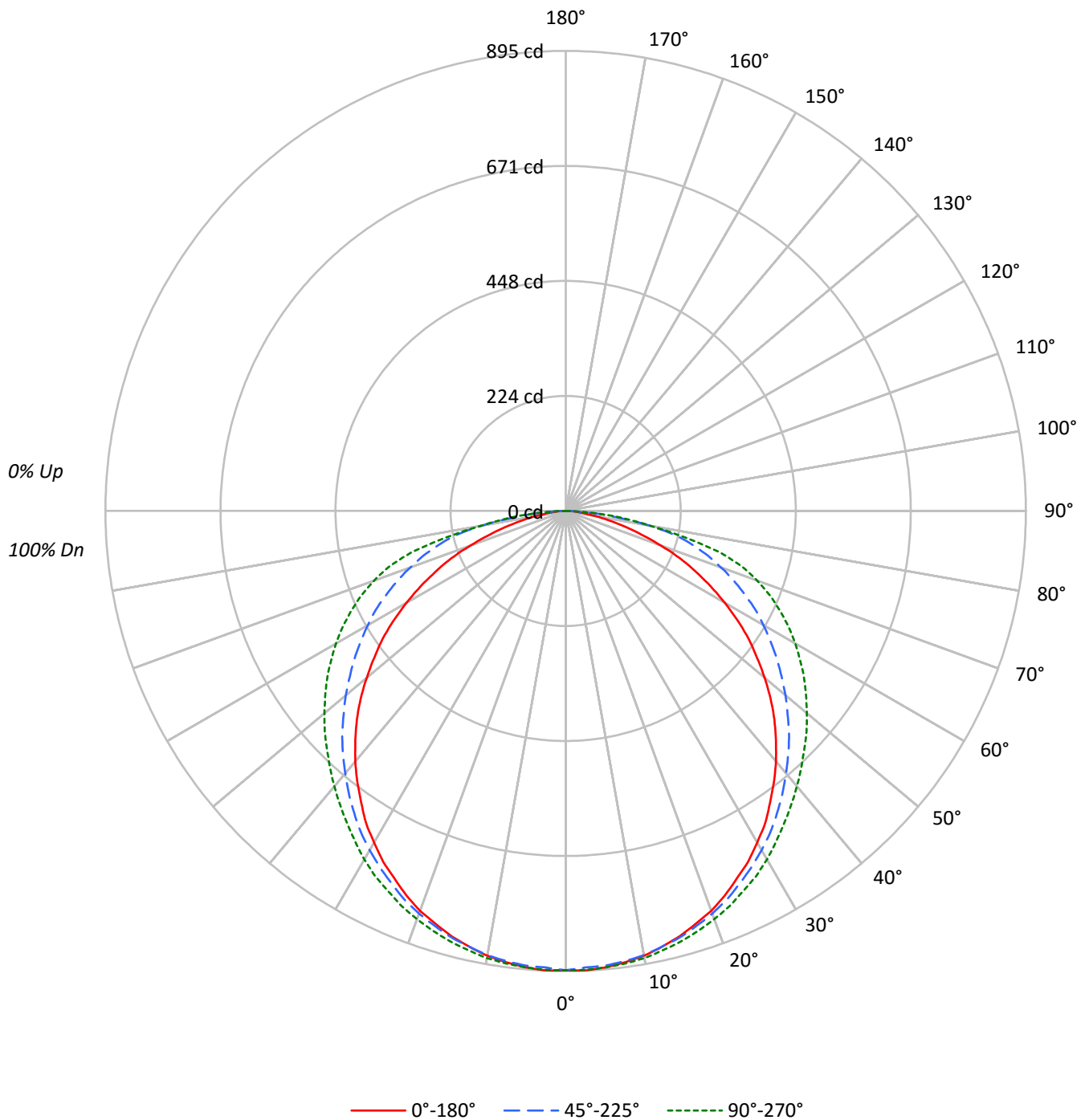
Input Watts (W): 37.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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		0
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		100
1	108	103	98	94	105	101	96	93	96	93	90		92	90	87		82
2	98	89	82	76	95	87	80	75	83	78	73		80	75	71		67
3	89	78	69	62	86	76	68	62	73	66	61		70	64	59		56
4	81	68	59	52	79	67	59	52	65	57	51		62	56	50		48
5	74	61	52	45	72	60	51	45	58	50	44		56	49	44		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	63	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	36	30	57	44	36	30	43	36	30		42	35	30		28
9	55	41	33	27	54	41	33	27	40	32	27		39	32	27		25
10	52	38	30	25	50	38	30	25	37	30	25		36	29	24		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1202	1202	1202
5°	1204	1199	1204
10°	1200	1199	1207
15°	1193	1196	1208
20°	1185	1194	1210
25°	1171	1188	1212
30°	1157	1184	1216
35°	1138	1178	1218
40°	1118	1170	1229
45°	1093	1169	1248
50°	1057	1168	1281
55°	1020	1176	1328
60°	962	1195	1387
65°	888	1222	1465
70°	776	1266	1560
75°	630	1331	1612
80°	465	1304	1304
85°	357	962	1085



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	84.6	3.1
10°-20°	243.1	8.8
20°-30°	370.0	13.4
30°-40°	449.3	16.3
40°-50°	474.7	17.2
50°-60°	447.9	16.3
60°-70°	372.4	13.5
70°-80°	245.0	8.9
80°-90°	66.8	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°	697.8	25.3
0°-40°	1147.1	41.7
0°-60°	2069.7	75.2
0°-90°	2754.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2754.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	894	894	894	894	894	
5°	891	891	888	891	891	85
15°	857	858	859	867	867	242
25°	789	793	800	814	816	364
35°	693	701	717	736	741	434
45°	574	586	614	644	656	442
55°	435	453	502	549	566	387
65°	279	311	384	440	460	276
75°	121	176	256	303	310	130
85°	23	51	62	69	70	28
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	893.5	893.5	893.5	893.5	893.5
2.5°	894.7	893.5	888.9	893.5	893.5
5°	891.2	891.2	887.8	891.2	891.2
7.5°	885.5	885.5	883.2	887.8	887.8
10°	878.5	878.5	877.4	883.2	883.2
12.5°	868.2	869.3	868.2	875.1	875.1
15°	856.6	857.8	858.9	867.0	867.0
17.5°	841.7	844.0	846.3	855.5	856.6
20°	827.8	829.0	833.6	844.0	845.1
22.5°	809.4	812.8	818.6	829.0	832.4
25°	788.6	793.2	800.1	814.0	816.3
27.5°	769.0	772.5	781.7	796.7	801.3
30°	744.8	750.6	762.1	777.1	782.9
32.5°	721.7	727.5	741.3	757.5	762.1
35°	692.9	701.0	717.1	735.6	741.3
37.5°	665.3	673.3	692.9	713.7	720.6
40°	636.4	645.7	666.4	690.6	699.8
42.5°	605.3	618.0	641.0	667.6	677.9
45°	574.2	585.7	614.5	644.5	656.0
47.5°	540.7	554.6	585.7	621.4	635.3
50°	505.0	522.3	558.0	597.2	612.2
52.5°	469.3	488.9	529.2	573.0	589.2
55°	434.7	453.1	501.5	548.8	566.1
57.5°	396.6	419.7	472.7	523.4	540.7
60°	357.4	382.8	443.9	496.9	515.4
62.5°	318.2	347.0	416.2	469.3	488.9
65°	279.0	311.3	383.9	440.4	460.0
67.5°	241.0	276.7	354.0	410.5	430.1
70°	197.2	242.1	321.7	377.0	396.6
72.5°	156.8	208.7	290.5	342.4	359.7
75°	121.1	176.4	256.0	303.2	310.1
77.5°	88.8	144.1	220.2	236.4	237.5
80°	60.0	115.3	168.3	166.0	168.3
82.5°	39.2	86.5	106.1	118.8	119.9
85°	23.1	50.7	62.3	69.2	70.3
87.5°	11.5	17.3	21.9	23.1	25.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)