

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: P309454

Luminaire Tested: **24FCZ2-45HE-UNV-L82765-HRP-CP250-W2A-U-6500K**

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: P309454
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: 24FCZ2-45HE-UNV-L82765-HRP-CP250-W2A-U-6500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
POLYCARB SHEET
Light Source: (336) 6500K 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: 3018.0 lumens
Efficiency: N/A
Efficacy: 85.5 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

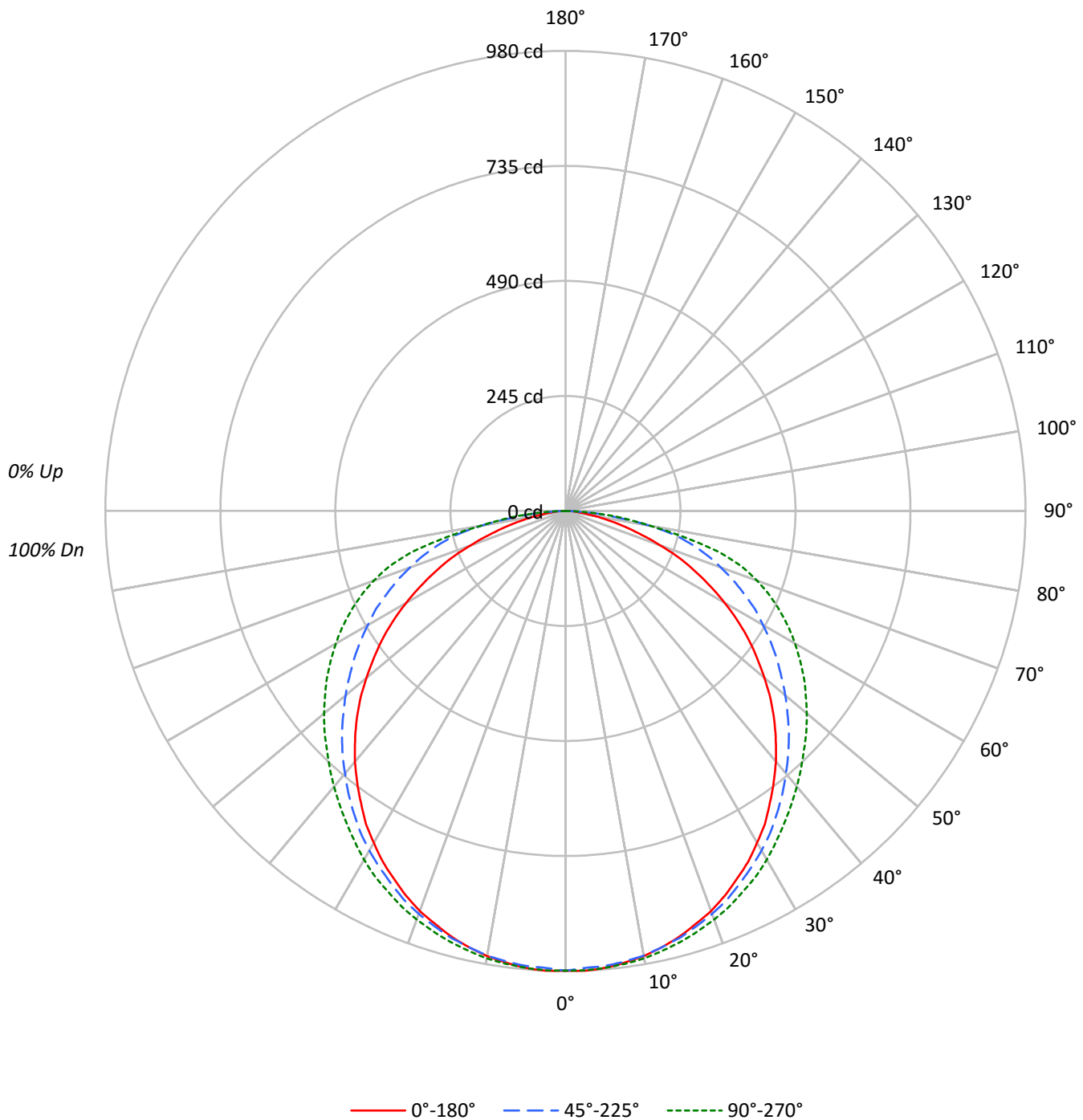
Input Watts (W): 35.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1318	1318	1318
5°	1319	1314	1319
10°	1315	1314	1322
15°	1308	1311	1323
20°	1299	1308	1326
25°	1283	1302	1328
30°	1268	1298	1333
35°	1247	1291	1334
40°	1225	1283	1347
45°	1197	1281	1368
50°	1158	1280	1404
55°	1117	1289	1455
60°	1054	1309	1520
65°	974	1339	1605
70°	850	1387	1710
75°	690	1458	1767
80°	509	1430	1430
85°	391	1053	1190



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	92.8	3.1
10°-20°	266.4	8.8
20°-30°	405.5	13.4
30°-40°	492.4	16.3
40°-50°	520.2	17.2
50°-60°	490.9	16.3
60°-70°	408.1	13.5
70°-80°	268.5	8.9
80°-90°	73.2	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°	764.7	25.3
0°-40°	1257.0	41.7
0°-60°	2268.1	75.2
0°-90°	3018.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3018.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	979	979	979	979	979	
5°	977	977	973	977	977	93
15°	939	940	941	950	950	265
25°	864	869	877	892	894	399
35°	759	768	786	806	812	475
45°	629	642	673	706	719	485
55°	476	496	550	601	620	424
65°	306	341	421	483	504	302
75°	133	193	280	332	340	143
85°	25	56	68	76	77	31
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	979.2	979.2	979.2	979.2	979.2
2.5°	980.5	979.2	974.1	979.2	979.2
5°	976.7	976.7	972.9	976.7	976.7
7.5°	970.3	970.3	967.8	972.9	972.9
10°	962.8	962.8	961.5	967.8	967.8
12.5°	951.4	952.7	951.4	959.0	959.0
15°	938.8	940.0	941.3	950.1	950.1
17.5°	922.3	924.9	927.4	937.5	938.8
20°	907.2	908.4	913.5	924.9	926.1
22.5°	887.0	890.7	897.1	908.4	912.2
25°	864.2	869.3	876.9	892.0	894.5
27.5°	842.7	846.5	856.6	873.1	878.1
30°	816.2	822.5	835.2	851.6	857.9
32.5°	790.9	797.3	812.4	830.1	835.2
35°	759.3	768.2	785.9	806.1	812.4
37.5°	729.0	737.9	759.3	782.1	789.7
40°	697.4	707.5	730.3	756.8	766.9
42.5°	663.3	677.2	702.5	731.6	742.9
45°	629.2	641.8	673.4	706.3	718.9
47.5°	592.6	607.7	641.8	681.0	696.2
50°	553.4	572.4	611.5	654.5	670.9
52.5°	514.2	535.7	579.9	627.9	645.6
55°	476.3	496.5	549.6	601.4	620.4
57.5°	434.6	459.9	518.0	573.6	592.6
60°	391.7	419.5	486.4	544.6	564.8
62.5°	348.7	380.3	456.1	514.2	535.7
65°	305.8	341.1	420.7	482.6	504.1
67.5°	264.1	303.2	387.9	449.8	471.3
70°	216.1	265.3	352.5	413.2	434.6
72.5°	171.8	228.7	318.4	375.3	394.2
75°	132.7	193.3	280.5	332.3	339.9
77.5°	97.3	157.9	241.3	259.0	260.3
80°	65.7	126.3	184.5	181.9	184.5
82.5°	43.0	94.8	116.2	130.1	131.4
85°	25.3	55.6	68.2	75.8	77.1
87.5°	12.6	19.0	24.0	25.3	27.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)