

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: P309243

Luminaire Tested: **24FCZ2-35HE-UNV-L82765-HRP-CA125-W2A-U-4500K**

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: P309243
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: 24FCZ2-35HE-UNV-L82765-HRP-CA125-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" ACRYLIC SHEET
Light Source: (336) 4500K 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: 2471.0 lumens
Efficiency: N/A
Efficacy: 93.2 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

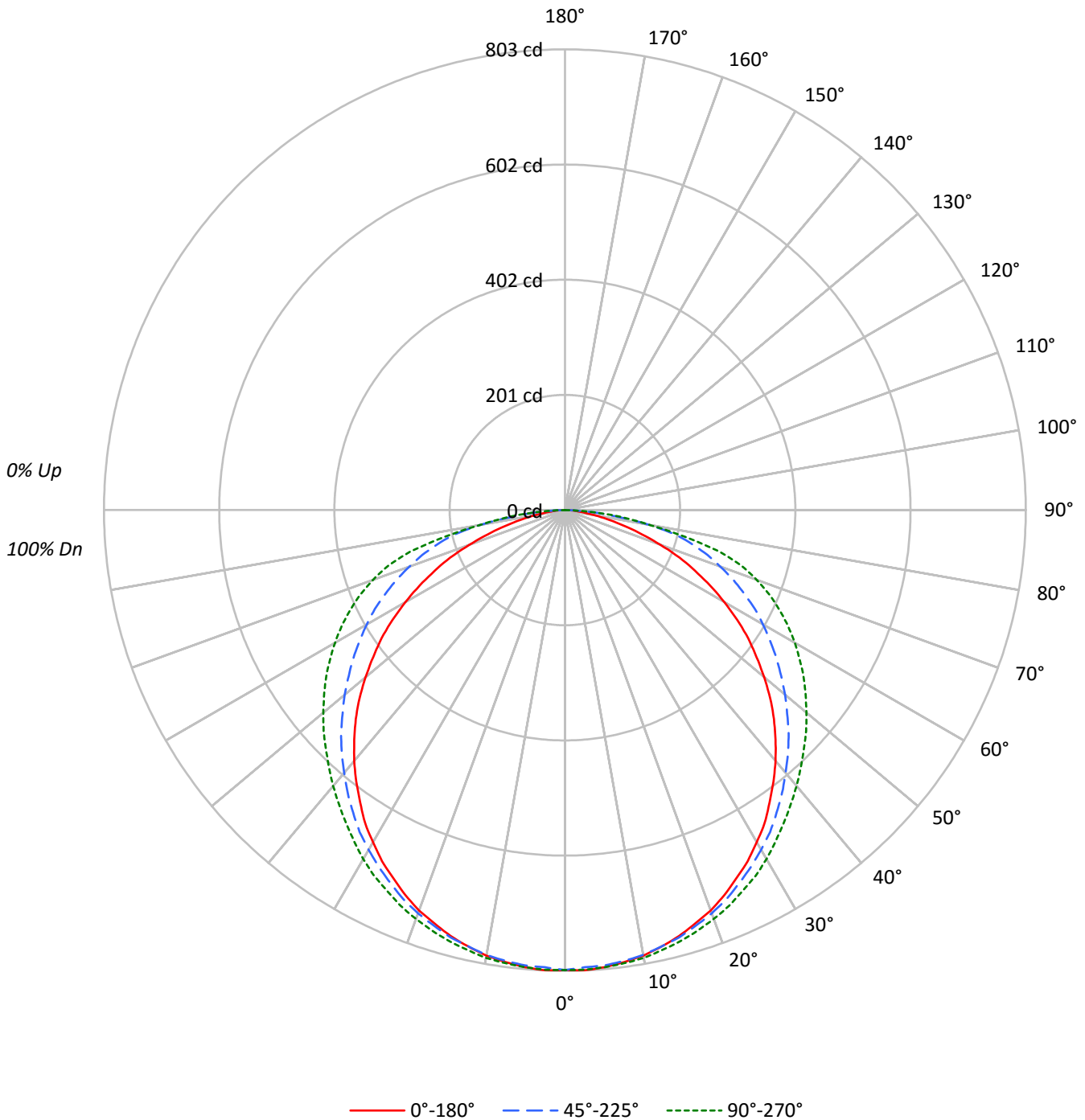
Input Watts (W): 26.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				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	101	96	93	96	93	90	92	90	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	24	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1079	1079	1079
5°	1080	1076	1080
10°	1077	1076	1083
15°	1071	1074	1084
20°	1064	1071	1086
25°	1050	1066	1087
30°	1038	1062	1091
35°	1021	1057	1093
40°	1003	1050	1103
45°	980	1049	1120
50°	948	1048	1150
55°	915	1056	1191
60°	863	1072	1244
65°	797	1097	1314
70°	696	1135	1400
75°	565	1194	1447
80°	417	1170	1170
85°	320	863	974



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	75.9	3.1
10°-20°	218.1	8.8
20°-30°	332.0	13.4
30°-40°	403.1	16.3
40°-50°	425.9	17.2
50°-60°	401.9	16.3
60°-70°	334.2	13.5
70°-80°	219.9	8.9
80°-90°	59.9	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°	626.1	25.3
0°-40°	1029.2	41.7
0°-60°	1857.0	75.2
0°-90°	2471.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2471.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	802	802	802	802	802	
5°	800	800	796	800	800	76
15°	769	770	771	778	778	217
25°	708	712	718	730	732	326
35°	622	629	643	660	665	389
45°	515	526	551	578	589	397
55°	390	406	450	492	508	347
65°	250	279	344	395	413	247
75°	109	158	230	272	278	117
85°	21	46	56	62	63	25
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	801.7	801.7	801.7	801.7	801.7
2.5°	802.8	801.7	797.6	801.7	801.7
5°	799.6	799.6	796.5	799.6	799.6
7.5°	794.5	794.5	792.4	796.5	796.5
10°	788.3	788.3	787.2	792.4	792.4
12.5°	779.0	780.0	779.0	785.2	785.2
15°	768.6	769.6	770.7	777.9	777.9
17.5°	755.2	757.2	759.3	767.6	768.6
20°	742.8	743.8	747.9	757.2	758.3
22.5°	726.2	729.3	734.5	743.8	746.9
25°	707.6	711.7	717.9	730.3	732.4
27.5°	690.0	693.1	701.4	714.8	719.0
30°	668.3	673.4	683.8	697.2	702.4
32.5°	647.6	652.8	665.2	679.6	683.8
35°	621.7	629.0	643.4	660.0	665.2
37.5°	596.9	604.1	621.7	640.3	646.5
40°	571.0	579.3	597.9	619.7	627.9
42.5°	543.1	554.5	575.2	599.0	608.3
45°	515.2	525.5	551.4	578.3	588.6
47.5°	485.2	497.6	525.5	557.6	570.0
50°	453.1	468.6	500.7	535.9	549.3
52.5°	421.0	438.6	474.8	514.1	528.6
55°	390.0	406.5	450.0	492.4	507.9
57.5°	355.9	376.5	424.1	469.7	485.2
60°	320.7	343.4	398.3	445.9	462.4
62.5°	285.5	311.4	373.4	421.0	438.6
65°	250.3	279.3	344.5	395.2	412.8
67.5°	216.2	248.3	317.6	368.3	385.9
70°	176.9	217.2	288.6	338.3	355.9
72.5°	140.7	187.2	260.7	307.2	322.8
75°	108.6	158.3	229.7	272.1	278.3
77.5°	79.7	129.3	197.6	212.1	213.1
80°	53.8	103.4	151.0	149.0	151.0
82.5°	35.2	77.6	95.2	106.6	107.6
85°	20.7	45.5	55.9	62.1	63.1
87.5°	10.3	15.5	19.7	20.7	22.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)