

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: P310611

Luminaire Tested: **24FCZ2-35HE-UNV-L82765-CP187-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: P310611
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-15)
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-CP187-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.187" POLYCARB 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: 3058.0 lumens
Efficiency: N/A
Efficacy: 115.4 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

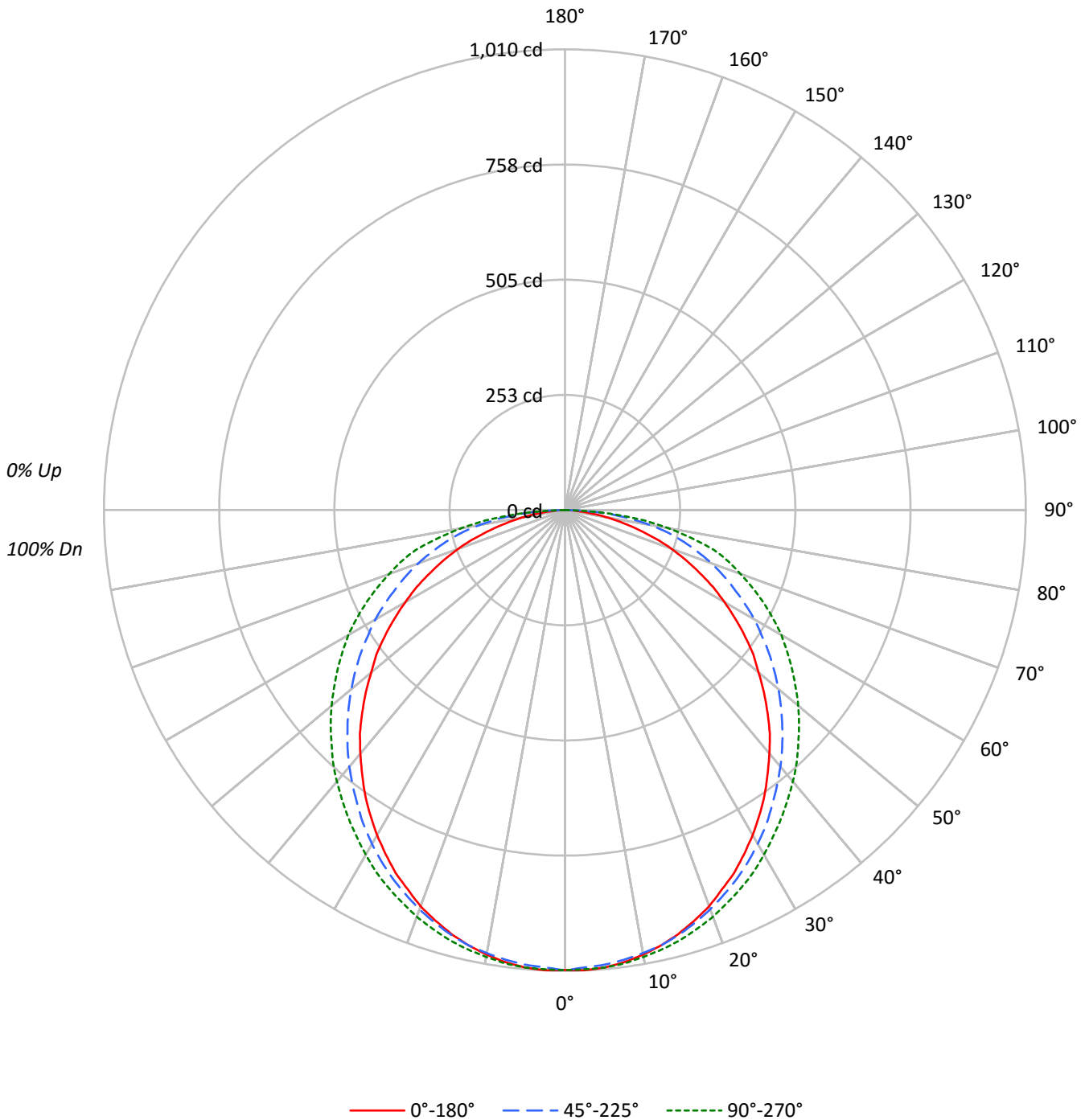
Input Watts (W): 26.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	92	89	92	89	87	88	86	84	82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	64	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	37	31	57	45	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	25	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1357	1357	1357
5°	1359	1351	1359
10°	1351	1347	1358
15°	1340	1343	1360
20°	1323	1334	1358
25°	1303	1324	1357
30°	1278	1313	1356
35°	1253	1300	1357
40°	1224	1290	1365
45°	1195	1282	1376
50°	1160	1279	1397
55°	1130	1280	1426
60°	1087	1291	1474
65°	1037	1305	1528
70°	982	1345	1613
75°	875	1403	1762
80°	747	1486	1800
85°	533	1473	1723



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	95.4	3.1
10°-20°	272.9	8.9
20°-30°	412.2	13.5
30°-40°	496.8	16.2
40°-50°	521.5	17.1
50°-60°	487.9	16.0
60°-70°	402.9	13.2
70°-80°	274.6	9.0
80°-90°	93.6	3.1
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°	780.5	25.5
0°-40°	1277.3	41.8
0°-60°	2286.8	74.8
0°-90°	3058.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3058.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1008	1008	1008	1008	1008	
5°	1006	1006	1000	1006	1006	96
15°	962	963	964	974	976	271
25°	878	882	892	909	914	404
35°	763	771	791	818	826	477
45°	628	641	674	710	723	484
55°	482	501	546	590	608	430
65°	326	353	410	462	480	323
75°	168	207	270	321	339	180
85°	34	68	95	108	112	43
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1008.5	1008.5	1008.5	1008.5	1008.5
2.5°	1009.5	1008.5	1003.4	1008.5	1007.5
5°	1006.5	1005.5	1000.4	1006.5	1006.5
7.5°	999.4	999.4	994.3	1001.4	1002.4
10°	989.2	989.2	986.2	994.3	994.3
12.5°	977.0	977.0	977.0	985.2	986.2
15°	961.8	962.8	963.9	974.0	976.0
17.5°	943.6	945.6	948.6	960.8	962.8
20°	924.3	926.3	931.4	945.6	948.6
22.5°	899.9	905.0	912.1	928.3	931.4
25°	877.6	881.7	891.8	909.1	914.1
27.5°	850.2	856.3	869.5	887.8	894.9
30°	822.8	828.9	845.2	866.5	872.5
32.5°	793.4	802.5	819.8	842.1	849.2
35°	763.0	771.1	791.4	817.8	825.9
37.5°	729.5	740.7	763.0	791.4	801.5
40°	697.0	709.2	734.6	765.0	777.2
42.5°	664.6	676.7	705.1	739.6	751.8
45°	628.0	641.2	673.7	710.2	723.4
47.5°	591.5	607.7	643.2	681.8	696.0
50°	554.0	572.2	610.8	651.4	667.6
52.5°	520.5	537.7	578.3	621.9	637.2
55°	481.9	501.2	545.8	590.5	607.7
57.5°	442.4	463.7	511.4	560.1	577.3
60°	403.8	427.1	479.9	528.6	547.9
62.5°	366.3	389.6	444.4	495.1	514.4
65°	325.7	353.1	409.9	461.6	479.9
67.5°	287.1	316.6	376.4	427.1	445.4
70°	249.6	278.0	341.9	391.6	409.9
72.5°	209.0	241.5	305.4	357.1	376.4
75°	168.4	207.0	269.9	320.6	338.9
77.5°	130.9	170.5	233.4	275.0	284.1
80°	96.4	137.0	191.8	221.2	232.3
82.5°	61.9	102.5	146.1	167.4	176.5
85°	34.5	68.0	95.4	107.5	111.6
87.5°	14.2	29.4	38.6	43.6	43.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)