

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: P310294

Luminaire Tested: **24FCZ2-55HE-UNV-L82765-RDP-CP187-W2A-U-3500K**

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: P310294
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: 24FCZ2-55HE-UNV-L82765-RDP-CP187-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" POLYCARB SHEET
Light Source: (336) 3500K 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: 3119.0 lumens
Efficiency: N/A
Efficacy: 72.0 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

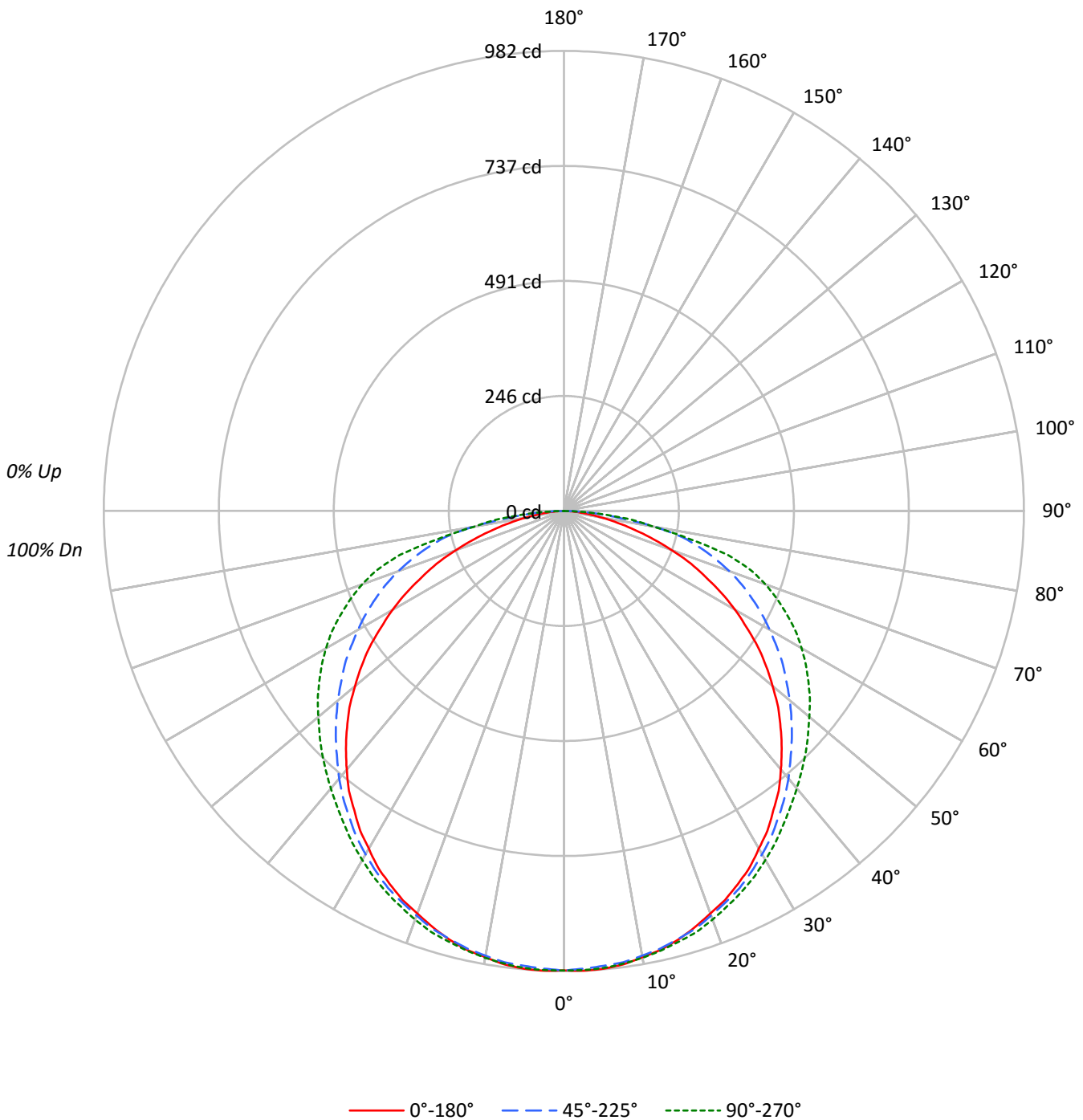
Input Watts (W): 43.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				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°	1320	1320	1320
5°	1325	1316	1323
10°	1321	1317	1323
15°	1319	1317	1325
20°	1309	1316	1329
25°	1305	1318	1332
30°	1293	1315	1336
35°	1281	1311	1342
40°	1266	1310	1359
45°	1245	1310	1389
50°	1218	1318	1431
55°	1187	1339	1495
60°	1136	1365	1578
65°	1064	1414	1675
70°	968	1479	1801
75°	820	1560	1882
80°	647	1571	1523
85°	477	1195	1337



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	93.0	3.0
10°-20°	267.8	8.6
20°-30°	409.5	13.1
30°-40°	500.6	16.0
40°-50°	533.5	17.1
50°-60°	510.1	16.4
60°-70°	432.1	13.9
70°-80°	290.4	9.3
80°-90°	81.9	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°	770.3	24.7
0°-40°	1270.9	40.7
0°-60°	2314.5	74.2
0°-90°	3119.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3119.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	981	981	981	981	981	
5°	981	979	975	979	979	93
15°	947	947	945	953	951	267
25°	879	882	888	896	897	405
35°	780	786	798	814	817	488
45°	654	665	688	718	730	505
55°	506	524	571	616	637	451
65°	334	368	444	503	526	332
75°	158	215	300	351	362	169
85°	31	63	77	84	87	38
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	980.8	980.8	980.8	980.8	980.8
2.5°	982.4	982.4	977.7	980.8	980.8
5°	980.8	979.3	974.6	979.3	979.3
7.5°	976.2	974.6	971.6	976.2	974.6
10°	966.9	966.9	963.8	968.5	968.5
12.5°	959.2	957.6	956.1	962.3	960.7
15°	946.8	946.8	945.3	953.0	951.4
17.5°	931.3	932.9	934.4	940.6	942.2
20°	914.3	917.4	919.0	928.2	928.2
22.5°	898.8	900.4	903.5	912.8	912.8
25°	878.7	881.8	888.0	895.7	897.3
27.5°	858.6	860.2	867.9	878.7	880.3
30°	832.3	837.0	846.2	858.6	860.2
32.5°	809.1	813.8	824.6	837.0	840.1
35°	779.7	785.9	798.3	813.8	816.8
37.5°	753.4	758.1	773.5	790.5	795.2
40°	720.9	730.2	745.7	765.8	773.5
42.5°	688.4	697.7	716.3	742.6	751.9
45°	654.4	665.2	688.4	717.8	730.2
47.5°	620.4	632.7	659.0	693.1	707.0
50°	581.7	597.2	629.7	668.3	683.8
52.5°	544.6	563.1	598.7	642.0	662.1
55°	505.9	524.5	570.9	615.7	637.4
57.5°	462.6	487.3	538.4	589.4	612.6
60°	422.3	445.6	507.4	563.1	586.3
62.5°	379.0	410.0	476.5	535.3	558.5
65°	334.2	368.2	444.0	502.8	526.0
67.5°	293.9	331.1	411.5	470.3	493.5
70°	246.0	292.4	375.9	434.7	457.9
72.5°	201.1	252.2	338.8	396.0	417.7
75°	157.8	215.0	300.1	351.2	362.0
77.5°	117.6	177.9	259.9	281.6	273.8
80°	83.5	142.3	202.7	191.8	196.5
82.5°	54.1	108.3	125.3	142.3	147.0
85°	30.9	63.4	77.4	83.5	86.6
87.5°	13.9	23.2	30.9	30.9	29.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)