

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: P310295

Luminaire Tested: **24FCZ2-55HE-UNV-L82765-RDP-CP187-W2A-U-4000K**

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: P310295
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-4000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" POLYCARB SHEET
Light Source: (336) 4000K 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: 3188.0 lumens
Efficiency: N/A
Efficacy: 73.1 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

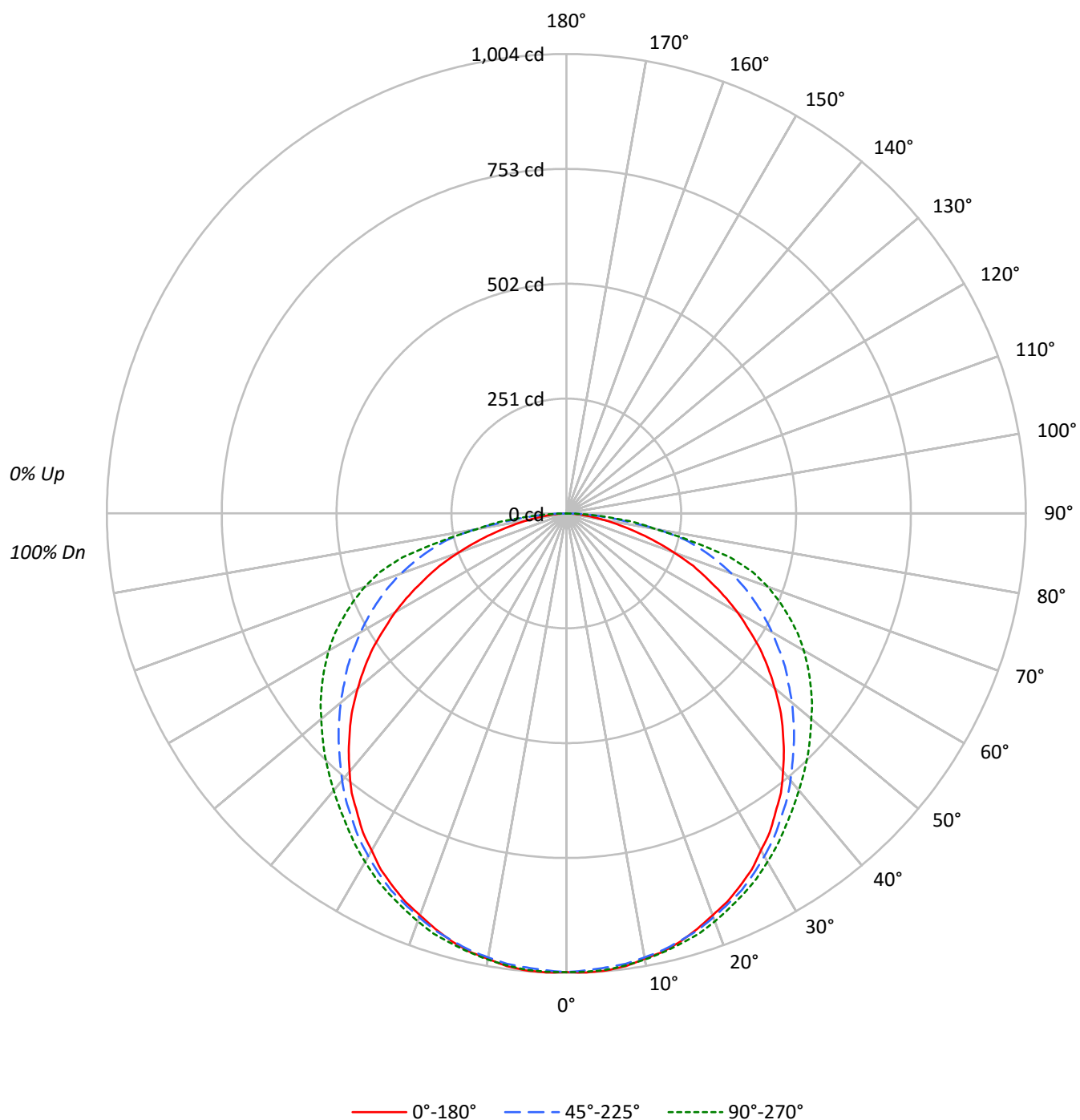
Input Watts (W): 43.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	50	30	10
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	67	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°	1349	1349	1349
5°	1354	1345	1352
10°	1350	1346	1352
15°	1348	1346	1355
20°	1338	1345	1359
25°	1333	1348	1362
30°	1322	1344	1366
35°	1309	1340	1371
40°	1294	1339	1389
45°	1273	1339	1420
50°	1245	1347	1463
55°	1213	1369	1528
60°	1162	1396	1613
65°	1088	1445	1712
70°	989	1512	1841
75°	839	1595	1923
80°	662	1605	1556
85°	488	1221	1368



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	95.1	3.0
10°-20°	273.7	8.6
20°-30°	418.5	13.1
30°-40°	511.7	16.0
40°-50°	545.3	17.1
50°-60°	521.4	16.4
60°-70°	441.7	13.9
70°-80°	296.9	9.3
80°-90°	83.7	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°	787.3	24.7
0°-40°	1299.0	40.7
0°-60°	2365.7	74.2
0°-90°	3188.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3188.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1002	1002	1002	1002	1002	
5°	1002	1001	996	1001	1001	95
15°	968	968	966	974	972	273
25°	898	901	908	916	917	414
35°	797	803	816	832	835	499
45°	669	680	704	734	746	516
55°	517	536	584	629	652	461
65°	342	376	454	514	538	339
75°	161	220	307	359	370	173
85°	32	65	79	85	89	39
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1002.5	1002.5	1002.5	1002.5	1002.5
2.5°	1004.1	1004.1	999.4	1002.5	1002.5
5°	1002.5	1001.0	996.2	1001.0	1001.0
7.5°	997.8	996.2	993.0	997.8	996.2
10°	988.3	988.3	985.1	989.9	989.9
12.5°	980.4	978.8	977.2	983.6	982.0
15°	967.7	967.7	966.2	974.1	972.5
17.5°	951.9	953.5	955.1	961.4	963.0
20°	934.5	937.7	939.3	948.8	948.8
22.5°	918.7	920.3	923.5	933.0	933.0
25°	898.2	901.3	907.7	915.6	917.1
27.5°	877.6	879.2	887.1	898.2	899.8
30°	850.7	855.5	865.0	877.6	879.2
32.5°	827.0	831.8	842.8	855.5	858.6
35°	797.0	803.3	815.9	831.8	834.9
37.5°	770.1	774.8	790.6	808.0	812.8
40°	736.9	746.4	762.2	782.7	790.6
42.5°	703.7	713.2	732.1	759.0	768.5
45°	668.9	680.0	703.7	733.7	746.4
47.5°	634.1	646.7	673.6	708.4	722.6
50°	594.6	610.4	643.6	683.1	698.9
52.5°	556.6	575.6	612.0	656.2	676.8
55°	517.1	536.1	583.5	629.4	651.5
57.5°	472.8	498.1	550.3	602.5	626.2
60°	431.7	455.4	518.7	575.6	599.3
62.5°	387.4	419.0	487.0	547.1	570.8
65°	341.6	376.3	453.8	513.9	537.6
67.5°	300.4	338.4	420.6	480.7	504.4
70°	251.4	298.9	384.3	444.3	468.1
72.5°	205.6	257.7	346.3	404.8	426.9
75°	161.3	219.8	306.8	359.0	370.0
77.5°	120.2	181.8	265.7	287.8	279.9
80°	85.4	145.5	207.1	196.1	200.8
82.5°	55.3	110.7	128.1	145.5	150.2
85°	31.6	64.8	79.1	85.4	88.6
87.5°	14.2	23.7	31.6	31.6	30.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)