

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: P309527

Luminaire Tested: **24FCZ2-50HE-UNV-L82765-HRP-CP187-W2A-U-2700K**

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: P309527
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: 24FCZ2-50HE-UNV-L82765-HRP-CP187-W2A-U-2700K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.187"
POLYCARB SHEET
Light Source: (336) 2700K 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: 2993.0 lumens
Efficiency: N/A
Efficacy: 77.9 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

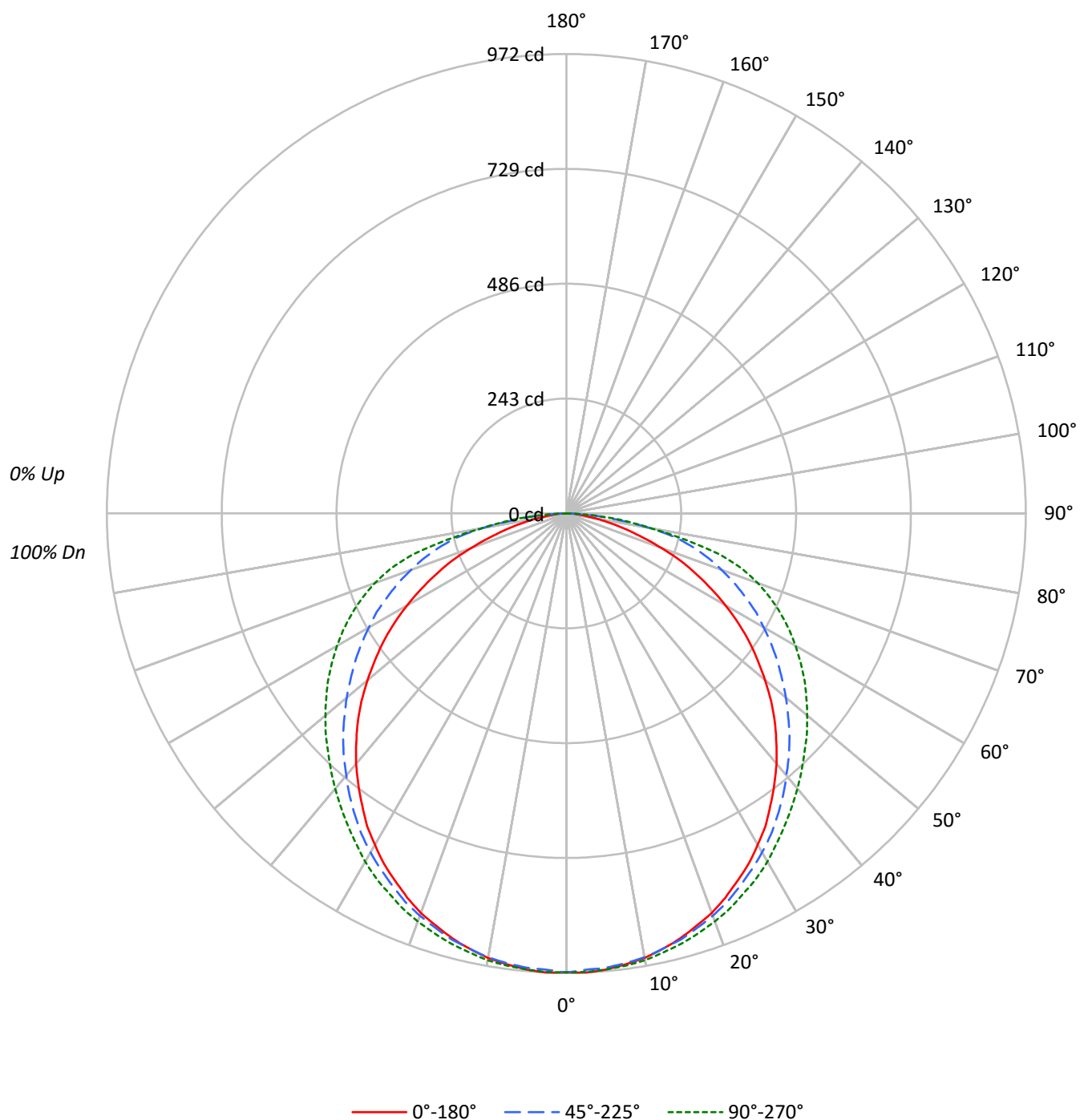
Input Watts (W): 38.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1307	1307	1307
5°	1308	1303	1308
10°	1304	1303	1311
15°	1297	1300	1313
20°	1288	1297	1315
25°	1272	1291	1317
30°	1258	1287	1322
35°	1237	1280	1323
40°	1215	1272	1336
45°	1187	1271	1357
50°	1149	1270	1393
55°	1108	1279	1443
60°	1045	1298	1507
65°	965	1329	1592
70°	843	1375	1696
75°	684	1446	1752
80°	505	1417	1417
85°	387	1045	1179



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	92.0	3.1
10°-20°	264.2	8.8
20°-30°	402.2	13.4
30°-40°	488.3	16.3
40°-50°	515.9	17.2
50°-60°	486.8	16.3
60°-70°	404.8	13.5
70°-80°	266.3	8.9
80°-90°	72.6	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°	758.3	25.3
0°-40°	1246.6	41.7
0°-60°	2249.3	75.2
0°-90°	2993.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2993.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	971	971	971	971	971	
5°	969	969	965	969	969	92
15°	931	932	934	942	942	263
25°	857	862	870	885	887	395
35°	753	762	779	799	806	471
45°	624	636	668	700	713	481
55°	472	492	545	596	615	421
65°	303	338	417	479	500	300
75°	132	192	278	330	337	142
85°	25	55	68	75	76	31
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	971.1	971.1	971.1	971.1	971.1
2.5°	972.3	971.1	966.1	971.1	971.1
5°	968.6	968.6	964.8	968.6	968.6
7.5°	962.3	962.3	959.8	964.8	964.8
10°	954.8	954.8	953.5	959.8	959.8
12.5°	943.5	944.8	943.5	951.0	951.0
15°	931.0	932.2	933.5	942.3	942.3
17.5°	914.7	917.2	919.7	929.7	931.0
20°	899.7	900.9	905.9	917.2	918.5
22.5°	879.6	883.4	889.6	900.9	904.7
25°	857.1	862.1	869.6	884.6	887.1
27.5°	835.8	839.5	849.5	865.8	870.8
30°	809.4	815.7	828.2	844.5	850.8
32.5°	784.4	790.6	805.7	823.2	828.2
35°	753.1	761.8	779.4	799.4	805.7
37.5°	723.0	731.8	753.1	775.6	783.1
40°	691.7	701.7	724.2	750.6	760.6
42.5°	657.8	671.6	696.7	725.5	736.8
45°	624.0	636.5	667.9	700.4	713.0
47.5°	587.7	602.7	636.5	675.4	690.4
50°	548.8	567.6	606.5	649.1	665.3
52.5°	510.0	531.3	575.1	622.7	640.3
55°	472.4	492.4	545.1	596.4	615.2
57.5°	431.0	456.1	513.7	568.9	587.7
60°	388.4	416.0	482.4	540.0	560.1
62.5°	345.8	377.2	452.3	510.0	531.3
65°	303.2	338.3	417.3	478.6	500.0
67.5°	261.9	300.7	384.7	446.1	467.4
70°	214.3	263.1	349.6	409.7	431.0
72.5°	170.4	226.8	315.8	372.1	390.9
75°	131.6	191.7	278.2	329.5	337.1
77.5°	96.5	156.6	239.3	256.9	258.1
80°	65.2	125.3	182.9	180.4	182.9
82.5°	42.6	94.0	115.3	129.1	130.3
85°	25.1	55.1	67.7	75.2	76.4
87.5°	12.5	18.8	23.8	25.1	27.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)