

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: P313780

Luminaire Tested: **24FCZ2-75HE-UNV-L83050-RDP-CP187-W2A-U-3000K**

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: P313780
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: 24FCZ2-75HE-UNV-L83050-RDP-CP187-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" POLYCARB SHEET
Light Source: (336) 3000K 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: 4099.0 lumens
Efficiency: N/A
Efficacy: 65.4 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

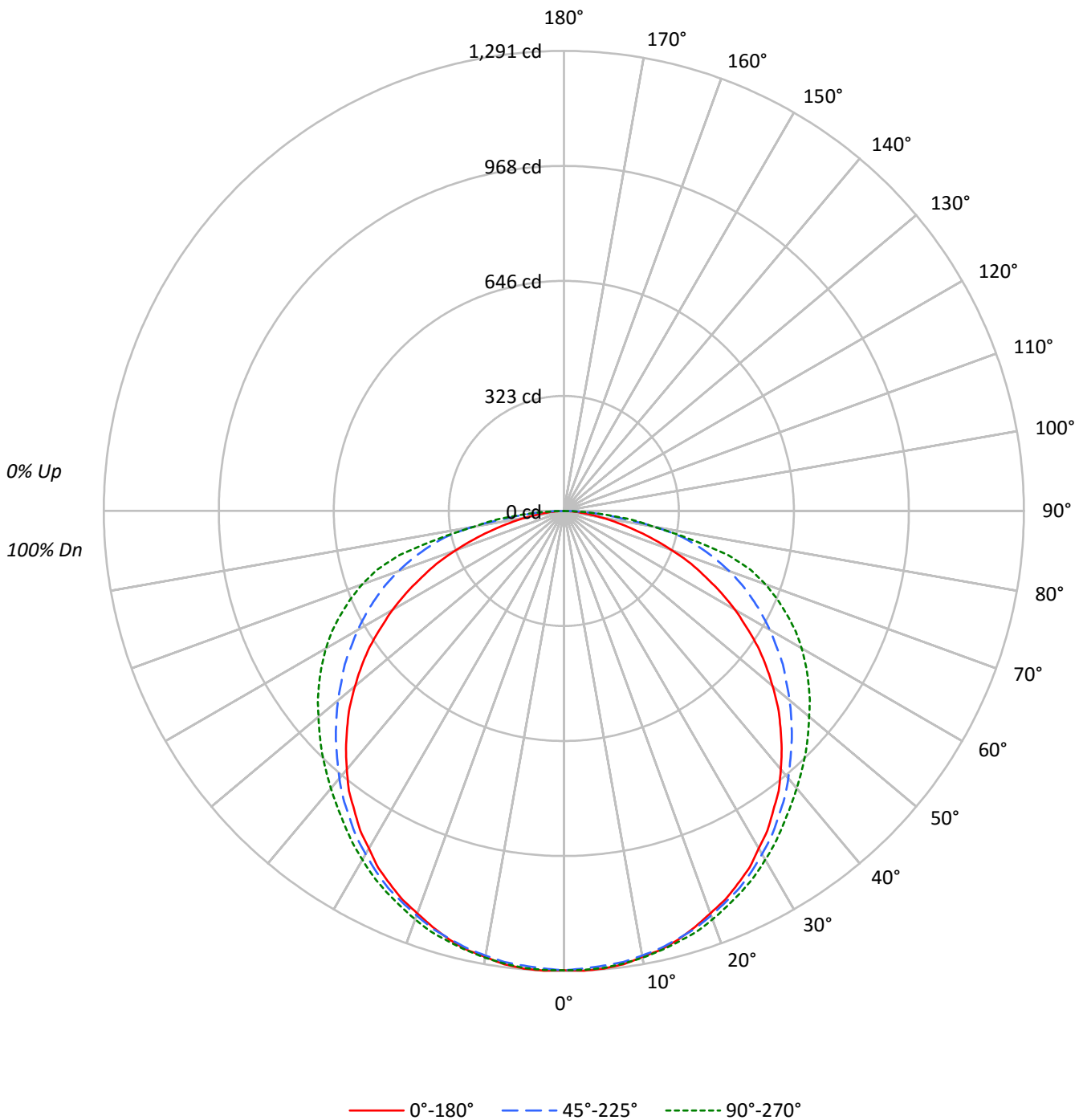
Input Watts (W): 62.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1734	1734	1734
5°	1741	1730	1738
10°	1736	1731	1739
15°	1733	1730	1742
20°	1720	1729	1747
25°	1714	1733	1751
30°	1699	1728	1756
35°	1683	1723	1763
40°	1664	1721	1786
45°	1636	1722	1826
50°	1600	1732	1881
55°	1559	1760	1965
60°	1494	1795	2074
65°	1398	1858	2201
70°	1272	1944	2367
75°	1078	2050	2473
80°	851	2063	2001
85°	628	1570	1758



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	122.3	3.0
10°-20°	351.9	8.6
20°-30°	538.1	13.1
30°-40°	657.9	16.0
40°-50°	701.2	17.1
50°-60°	670.4	16.4
60°-70°	567.9	13.9
70°-80°	381.7	9.3
80°-90°	107.7	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°	1012.3	24.7
0°-40°	1670.2	40.7
0°-60°	3041.7	74.2
0°-90°	4099.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4099.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1289	1289	1289	1289	1289	
5°	1289	1287	1281	1287	1287	122
15°	1244	1244	1242	1252	1250	351
25°	1155	1159	1167	1177	1179	532
35°	1025	1033	1049	1069	1074	642
45°	860	874	905	943	960	663
55°	665	689	750	809	838	592
65°	439	484	584	661	691	436
75°	207	283	394	462	476	222
85°	41	83	102	110	114	50
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1289.0	1289.0	1289.0	1289.0	1289.0
2.5°	1291.1	1291.1	1285.0	1289.0	1289.0
5°	1289.0	1287.0	1280.9	1287.0	1287.0
7.5°	1282.9	1280.9	1276.8	1282.9	1280.9
10°	1270.7	1270.7	1266.7	1272.8	1272.8
12.5°	1260.6	1258.5	1256.5	1264.6	1262.6
15°	1244.3	1244.3	1242.3	1252.4	1250.4
17.5°	1224.0	1226.0	1228.0	1236.2	1238.2
20°	1201.6	1205.7	1207.7	1219.9	1219.9
22.5°	1181.3	1183.3	1187.4	1199.6	1199.6
25°	1154.8	1158.9	1167.0	1177.2	1179.2
27.5°	1128.4	1130.4	1140.6	1154.8	1156.9
30°	1093.8	1099.9	1112.1	1128.4	1130.4
32.5°	1063.3	1069.4	1083.7	1099.9	1104.0
35°	1024.7	1032.8	1049.1	1069.4	1073.5
37.5°	990.1	996.2	1016.6	1038.9	1045.0
40°	947.4	959.6	980.0	1006.4	1016.6
42.5°	904.8	917.0	941.3	975.9	988.1
45°	860.0	874.3	904.8	943.4	959.6
47.5°	815.3	831.6	866.1	910.9	929.2
50°	764.5	784.8	827.5	878.3	898.7
52.5°	715.7	740.1	786.8	843.8	870.2
55°	664.8	689.2	750.2	809.2	837.7
57.5°	607.9	640.4	707.5	774.6	805.1
60°	555.1	585.5	666.9	740.1	770.6
62.5°	498.1	538.8	626.2	703.5	734.0
65°	439.2	483.9	583.5	660.8	691.3
67.5°	386.3	435.1	540.8	618.1	648.6
70°	323.3	384.3	494.1	571.3	601.8
72.5°	264.3	331.4	445.3	520.5	549.0
75°	207.4	282.6	394.4	461.5	475.8
77.5°	154.5	233.8	341.6	370.0	359.9
80°	109.8	187.0	266.3	252.1	258.2
82.5°	71.2	142.3	164.7	187.0	193.1
85°	40.7	83.4	101.7	109.8	113.9
87.5°	18.3	30.5	40.7	40.7	38.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)