

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: P313761

Luminaire Tested: **24FCZ2-70HE-UNV-L83050-RDP-CP250-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: P313761
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: 24FCZ2-70HE-UNV-L83050-RDP-CP250-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" 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: 4024.0 lumens
Efficiency: N/A
Efficacy: 69.7 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

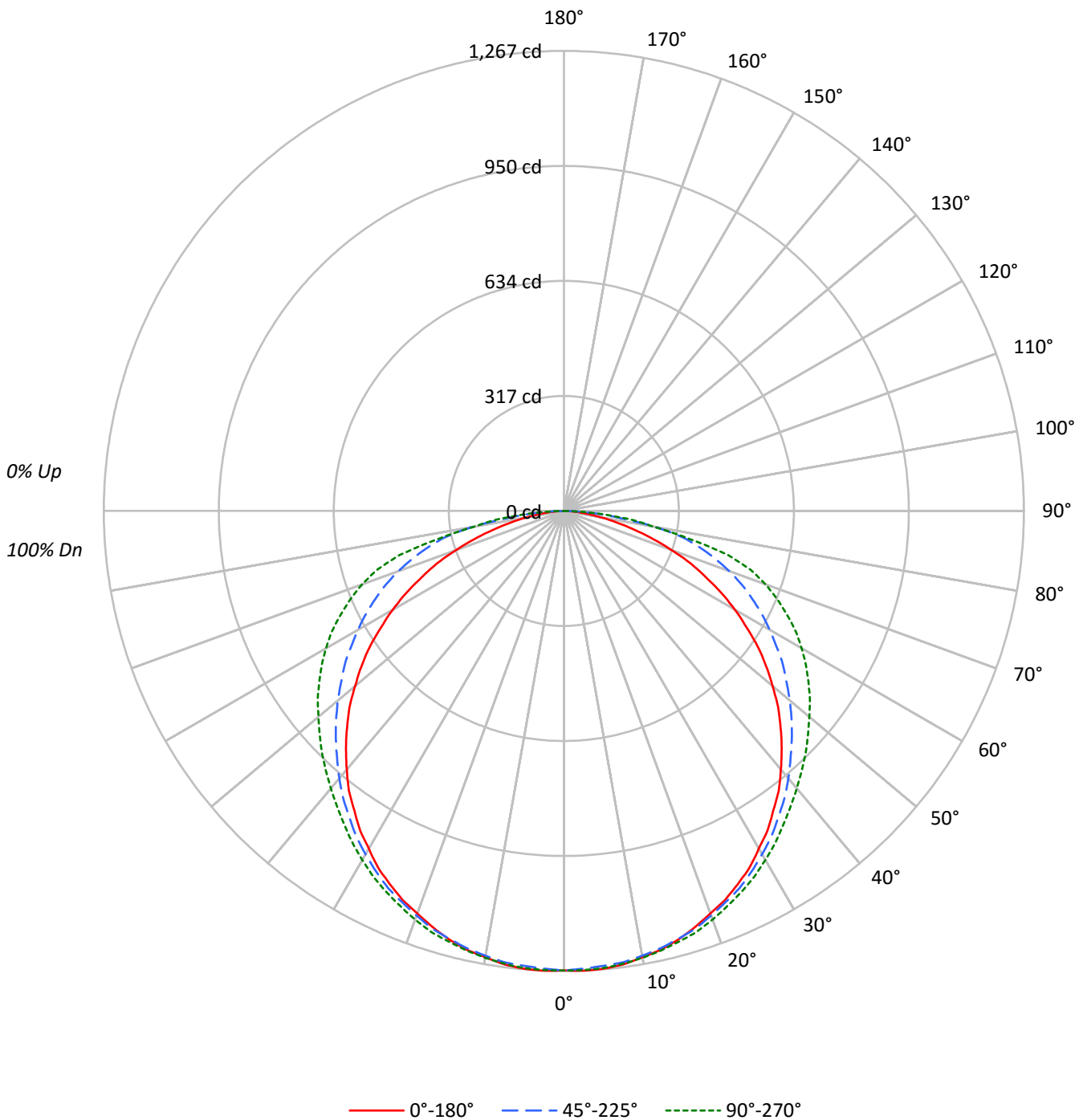
Input Watts (W): 57.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1703	1703	1703
5°	1709	1698	1706
10°	1704	1699	1707
15°	1701	1699	1710
20°	1689	1698	1715
25°	1683	1701	1719
30°	1668	1696	1724
35°	1652	1692	1731
40°	1634	1690	1753
45°	1607	1690	1793
50°	1571	1701	1847
55°	1531	1728	1929
60°	1466	1762	2036
65°	1372	1824	2160
70°	1249	1908	2324
75°	1058	2013	2428
80°	835	2026	1964
85°	616	1541	1726



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	120.0	3.0
10°-20°	345.5	8.6
20°-30°	528.3	13.1
30°-40°	645.8	16.0
40°-50°	688.3	17.1
50°-60°	658.1	16.4
60°-70°	557.5	13.9
70°-80°	374.7	9.3
80°-90°	105.7	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°	993.8	24.7
0°-40°	1639.6	40.7
0°-60°	2986.1	74.2
0°-90°	4024.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4024.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1265	1265	1265	1265	1265	
5°	1265	1263	1257	1263	1263	120
15°	1222	1222	1220	1230	1228	344
25°	1134	1138	1146	1156	1158	523
35°	1006	1014	1030	1050	1054	630
45°	844	858	888	926	942	651
55°	653	677	736	794	822	581
65°	431	475	573	649	679	428
75°	204	277	387	453	467	218
85°	40	82	100	108	112	49
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1265.4	1265.4	1265.4	1265.4	1265.4
2.5°	1267.4	1267.4	1261.4	1265.4	1265.4
5°	1265.4	1263.4	1257.4	1263.4	1263.4
7.5°	1259.4	1257.4	1253.5	1259.4	1257.4
10°	1247.5	1247.5	1243.5	1249.5	1249.5
12.5°	1237.5	1235.5	1233.5	1241.5	1239.5
15°	1221.5	1221.5	1219.5	1229.5	1227.5
17.5°	1201.6	1203.6	1205.6	1213.5	1215.5
20°	1179.6	1183.6	1185.6	1197.6	1197.6
22.5°	1159.6	1161.6	1165.6	1177.6	1177.6
25°	1133.7	1137.7	1145.7	1155.7	1157.7
27.5°	1107.8	1109.7	1119.7	1133.7	1135.7
30°	1073.8	1079.8	1091.8	1107.8	1109.7
32.5°	1043.9	1049.9	1063.8	1079.8	1083.8
35°	1006.0	1013.9	1029.9	1049.9	1053.9
37.5°	972.0	978.0	998.0	1019.9	1025.9
40°	930.1	942.1	962.0	988.0	998.0
42.5°	888.2	900.2	924.1	958.1	970.0
45°	844.3	858.3	888.2	926.1	942.1
47.5°	800.4	816.3	850.3	894.2	912.1
50°	750.5	770.4	812.4	862.3	882.2
52.5°	702.6	726.5	772.4	828.3	854.3
55°	652.7	676.6	736.5	794.4	822.3
57.5°	596.8	628.7	694.6	760.5	790.4
60°	544.9	574.8	654.7	726.5	756.5
62.5°	489.0	528.9	614.8	690.6	720.5
65°	431.1	475.0	572.8	648.7	678.6
67.5°	379.2	427.1	530.9	606.8	636.7
70°	317.4	377.2	485.0	560.9	590.8
72.5°	259.5	325.3	437.1	511.0	538.9
75°	203.6	277.4	387.2	453.1	467.1
77.5°	151.7	229.5	335.3	363.3	353.3
80°	107.8	183.6	261.5	247.5	253.5
82.5°	69.9	139.7	161.7	183.6	189.6
85°	39.9	81.8	99.8	107.8	111.8
87.5°	18.0	29.9	39.9	39.9	37.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)