

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: P313296

Luminaire Tested: **24FCZ2-55HE-UNV-L83050-HRP-CA125-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: P313296
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: 24FCZ2-55HE-UNV-L83050-HRP-CA125-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" ACRYLIC 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: 3928.0 lumens
Efficiency: N/A
Efficacy: 91.1 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

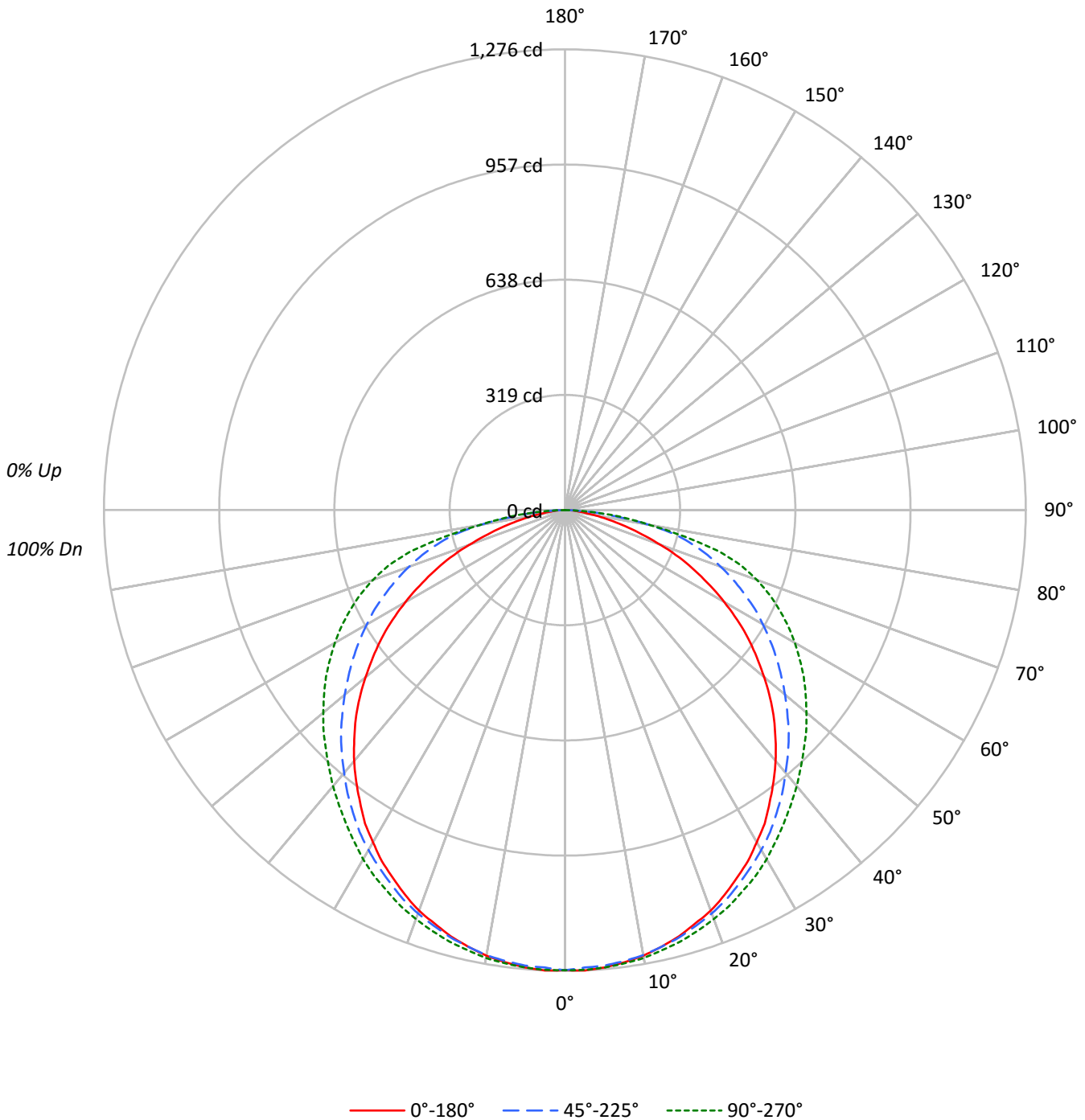
Input Watts (W): 43.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	101	96	93	96	93	90	92	90	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	24	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1715	1715	1715
5°	1717	1710	1717
10°	1712	1710	1721
15°	1702	1707	1723
20°	1691	1702	1726
25°	1670	1694	1729
30°	1650	1689	1735
35°	1623	1680	1737
40°	1594	1669	1753
45°	1558	1668	1780
50°	1508	1666	1828
55°	1454	1678	1894
60°	1372	1704	1978
65°	1267	1743	2089
70°	1106	1805	2225
75°	898	1898	2300
80°	662	1860	1860
85°	508	1371	1548



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	120.7	3.1
10°-20°	346.7	8.8
20°-30°	527.8	13.4
30°-40°	640.9	16.3
40°-50°	677.1	17.2
50°-60°	638.9	16.3
60°-70°	531.2	13.5
70°-80°	349.5	8.9
80°-90°	95.3	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°	995.2	25.3
0°-40°	1636.1	41.7
0°-60°	2952.0	75.2
0°-90°	3928.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3928.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1274	1274	1274	1274	1274	
5°	1271	1271	1266	1271	1271	121
15°	1222	1224	1225	1237	1237	345
25°	1125	1131	1141	1161	1164	519
35°	988	1000	1023	1049	1057	619
45°	819	835	876	919	936	631
55°	620	646	715	783	807	552
65°	398	444	548	628	656	393
75°	173	252	365	432	442	186
85°	33	72	89	99	100	40
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1274.4	1274.4	1274.4	1274.4	1274.4
2.5°	1276.1	1274.4	1267.9	1274.4	1274.4
5°	1271.2	1271.2	1266.2	1271.2	1271.2
7.5°	1262.9	1262.9	1259.6	1266.2	1266.2
10°	1253.1	1253.1	1251.4	1259.6	1259.6
12.5°	1238.3	1239.9	1238.3	1248.1	1248.1
15°	1221.8	1223.5	1225.1	1236.6	1236.6
17.5°	1200.4	1203.7	1207.0	1220.2	1221.8
20°	1180.7	1182.4	1188.9	1203.7	1205.4
22.5°	1154.4	1159.3	1167.6	1182.4	1187.3
25°	1124.8	1131.4	1141.2	1161.0	1164.3
27.5°	1096.8	1101.8	1114.9	1136.3	1142.9
30°	1062.3	1070.5	1087.0	1108.4	1116.6
32.5°	1029.4	1037.6	1057.4	1080.4	1087.0
35°	988.3	999.8	1022.8	1049.2	1057.4
37.5°	948.8	960.4	988.3	1017.9	1027.8
40°	907.7	920.9	950.5	985.0	998.2
42.5°	863.3	881.4	914.3	952.1	966.9
45°	818.9	835.4	876.5	919.2	935.7
47.5°	771.2	791.0	835.4	886.4	906.1
50°	720.3	744.9	795.9	851.8	873.2
52.5°	669.3	697.2	754.8	817.3	840.3
55°	620.0	646.3	715.3	782.8	807.4
57.5°	565.7	598.6	674.2	746.6	771.2
60°	509.8	546.0	633.1	708.8	735.1
62.5°	453.9	495.0	593.6	669.3	697.2
65°	398.0	444.0	547.6	628.2	656.1
67.5°	343.7	394.7	504.8	585.4	613.4
70°	281.2	345.3	458.8	537.7	565.7
72.5°	223.6	297.6	414.4	488.4	513.1
75°	172.7	251.6	365.1	432.5	442.4
77.5°	126.6	205.6	314.1	337.1	338.8
80°	85.5	164.4	240.1	236.8	240.1
82.5°	55.9	123.3	151.3	169.4	171.0
85°	32.9	72.4	88.8	98.7	100.3
87.5°	16.4	24.7	31.2	32.9	36.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)