

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: P309624

Luminaire Tested: **24FCZ2-55HE-UNV-L82765-HRP-CP187-W2A-U-5700K**

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: P309624
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-L82765-HRP-CP187-W2A-U-5700K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.187" POLYCARB SHEET
Light Source: (336) 5700K 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: 3755.0 lumens
Efficiency: N/A
Efficacy: 84.8 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

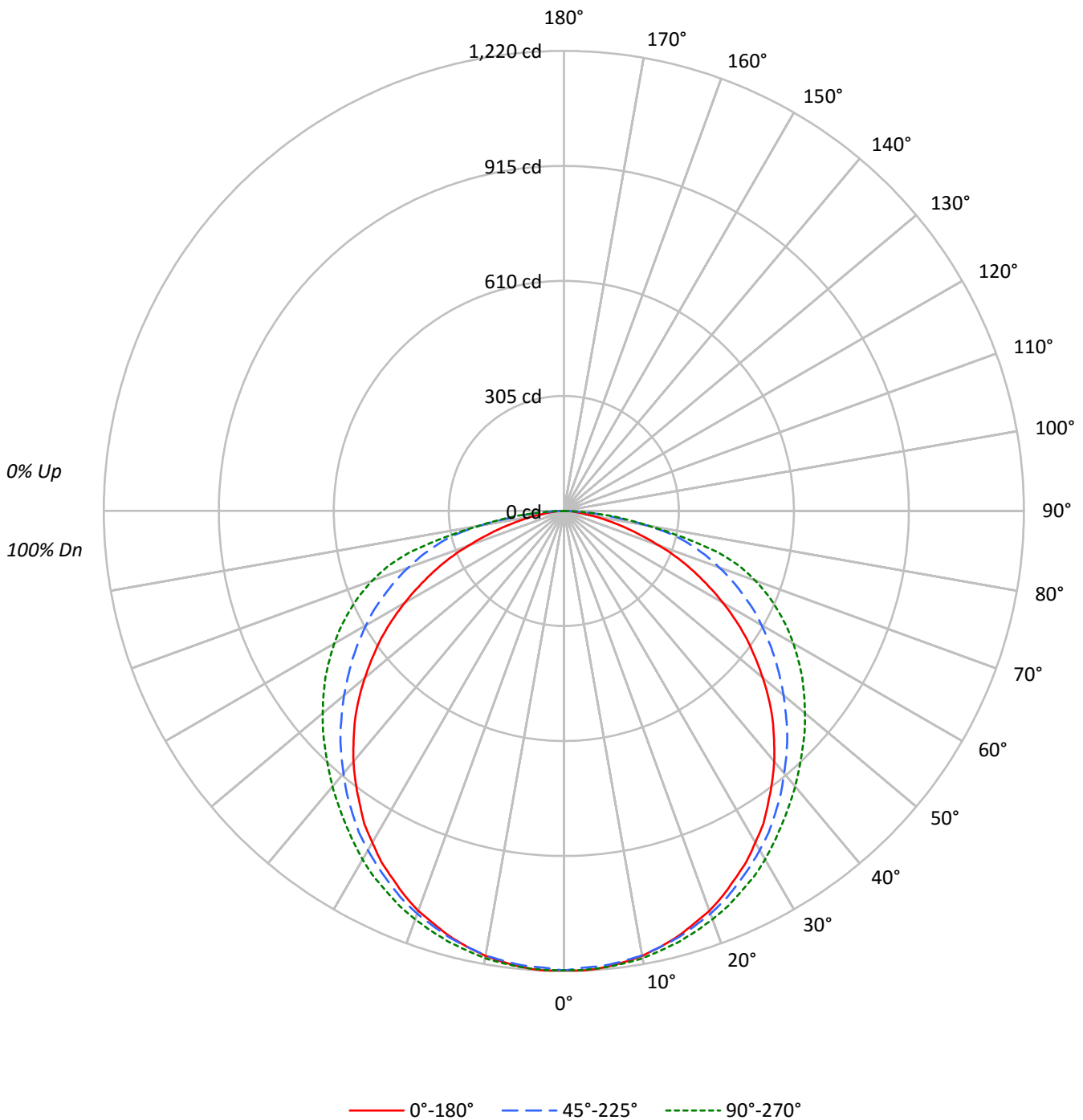
Input Watts (W): 44.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1639	1639	1639
5°	1641	1635	1641
10°	1637	1634	1645
15°	1627	1631	1647
20°	1616	1627	1650
25°	1596	1620	1652
30°	1578	1614	1658
35°	1552	1606	1660
40°	1524	1596	1676
45°	1490	1594	1702
50°	1441	1593	1747
55°	1390	1604	1811
60°	1311	1629	1891
65°	1211	1667	1997
70°	1057	1725	2127
75°	858	1814	2198
80°	633	1778	1778
85°	485	1311	1480



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	115.4	3.1
10°-20°	331.4	8.8
20°-30°	504.5	13.4
30°-40°	612.6	16.3
40°-50°	647.3	17.2
50°-60°	610.8	16.3
60°-70°	507.8	13.5
70°-80°	334.1	8.9
80°-90°	91.1	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°	951.4	25.3
0°-40°	1564.0	41.7
0°-60°	2822.0	75.2
0°-90°	3755.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3755.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1218	1218	1218	1218	1218	
5°	1215	1215	1210	1215	1215	115
15°	1168	1170	1171	1182	1182	329
25°	1075	1082	1091	1110	1113	496
35°	945	956	978	1003	1011	591
45°	783	799	838	879	894	603
55°	593	618	684	748	772	528
65°	380	424	524	600	627	376
75°	165	240	349	413	423	178
85°	31	69	85	94	96	38
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1218.3	1218.3	1218.3	1218.3	1218.3
2.5°	1219.9	1218.3	1212.0	1218.3	1218.3
5°	1215.2	1215.2	1210.5	1215.2	1215.2
7.5°	1207.3	1207.3	1204.2	1210.5	1210.5
10°	1197.9	1197.9	1196.3	1204.2	1204.2
12.5°	1183.7	1185.3	1183.7	1193.2	1193.2
15°	1168.0	1169.6	1171.2	1182.2	1182.2
17.5°	1147.6	1150.7	1153.9	1166.4	1168.0
20°	1128.7	1130.3	1136.6	1150.7	1152.3
22.5°	1103.6	1108.3	1116.1	1130.3	1135.0
25°	1075.3	1081.5	1091.0	1109.8	1113.0
27.5°	1048.5	1053.3	1065.8	1086.3	1092.6
30°	1015.5	1023.4	1039.1	1059.5	1067.4
32.5°	984.1	991.9	1010.8	1032.8	1039.1
35°	944.8	955.8	977.8	1002.9	1010.8
37.5°	907.1	918.1	944.8	973.1	982.5
40°	867.8	880.3	908.6	941.6	954.2
42.5°	825.3	842.6	874.0	910.2	924.3
45°	782.9	798.6	837.9	878.8	894.5
47.5°	737.3	756.1	798.6	847.3	866.2
50°	688.5	712.1	760.9	814.3	834.7
52.5°	639.8	666.5	721.6	781.3	803.3
55°	592.7	617.8	683.8	748.3	771.9
57.5°	540.8	572.2	644.5	713.7	737.3
60°	487.3	521.9	605.2	677.5	702.7
62.5°	433.9	473.2	567.5	639.8	666.5
65°	380.4	424.4	523.5	600.5	627.2
67.5°	328.6	377.3	482.6	559.6	586.4
70°	268.8	330.1	438.6	514.0	540.8
72.5°	213.8	284.5	396.1	466.9	490.5
75°	165.1	240.5	349.0	413.4	422.9
77.5°	121.0	196.5	300.3	322.3	323.8
80°	81.7	157.2	229.5	226.4	229.5
82.5°	53.4	117.9	144.6	161.9	163.5
85°	31.4	69.2	84.9	94.3	95.9
87.5°	15.7	23.6	29.9	31.4	34.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)