

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: P309622

Luminaire Tested: **24FCZ2-55HE-UNV-L82765-HRP-CP187-W2A-U-5000K**

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: P309622
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-5000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.187"
POLYCARB SHEET
Light Source: (336) 5000K 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: 3709.0 lumens
Efficiency: N/A
Efficacy: 84.1 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

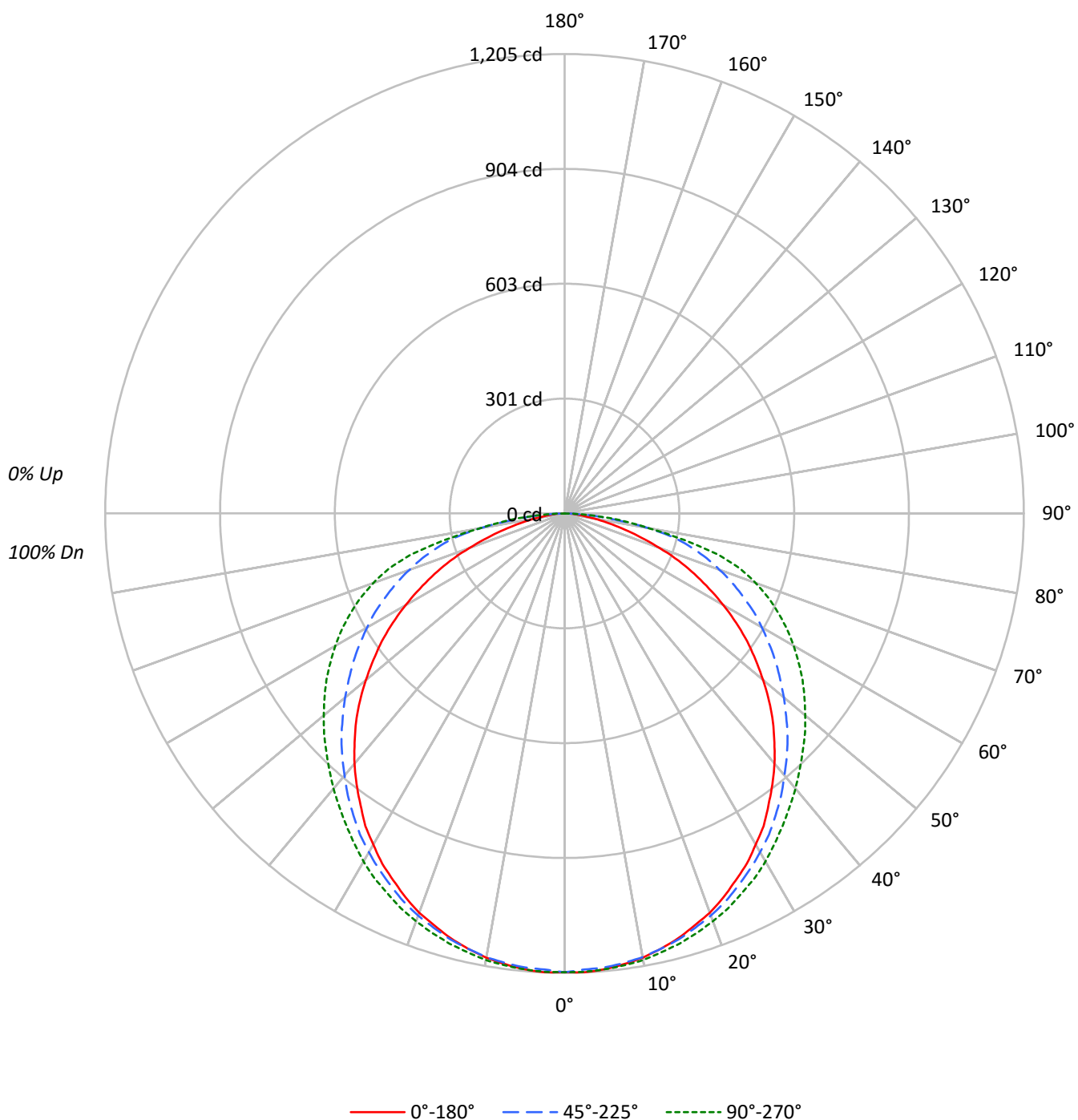
Input Watts (W): 44.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				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°	1619	1619	1619
5°	1621	1615	1621
10°	1617	1614	1625
15°	1607	1611	1627
20°	1596	1607	1630
25°	1577	1600	1632
30°	1558	1595	1638
35°	1533	1586	1640
40°	1505	1576	1655
45°	1471	1575	1681
50°	1424	1573	1726
55°	1373	1585	1788
60°	1295	1609	1868
65°	1196	1646	1973
70°	1044	1704	2101
75°	847	1792	2171
80°	625	1757	1757
85°	480	1294	1462



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	114.0	3.1
10°-20°	327.4	8.8
20°-30°	498.4	13.4
30°-40°	605.1	16.3
40°-50°	639.3	17.2
50°-60°	603.3	16.3
60°-70°	501.6	13.5
70°-80°	330.0	8.9
80°-90°	90.0	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°	939.7	25.3
0°-40°	1544.9	41.7
0°-60°	2787.4	75.2
0°-90°	3709.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3709.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1203	1203	1203	1203	1203	
5°	1200	1200	1196	1200	1200	114
15°	1154	1155	1157	1168	1168	325
25°	1062	1068	1078	1096	1099	490
35°	933	944	966	991	998	584
45°	773	789	828	868	884	595
55°	585	610	676	739	762	521
65°	376	419	517	593	620	371
75°	163	238	345	408	418	176
85°	31	68	84	93	95	38
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1203.4	1203.4	1203.4	1203.4	1203.4
2.5°	1204.9	1203.4	1197.2	1203.4	1203.4
5°	1200.3	1200.3	1195.6	1200.3	1200.3
7.5°	1192.5	1192.5	1189.4	1195.6	1195.6
10°	1183.2	1183.2	1181.6	1189.4	1189.4
12.5°	1169.2	1170.8	1169.2	1178.5	1178.5
15°	1153.7	1155.3	1156.8	1167.7	1167.7
17.5°	1133.5	1136.6	1139.7	1152.1	1153.7
20°	1114.9	1116.4	1122.6	1136.6	1138.2
22.5°	1090.0	1094.7	1102.5	1116.4	1121.1
25°	1062.1	1068.3	1077.6	1096.2	1099.4
27.5°	1035.7	1040.3	1052.8	1073.0	1079.2
30°	1003.1	1010.8	1026.4	1046.6	1054.3
32.5°	972.0	979.8	998.4	1020.2	1026.4
35°	933.2	944.1	965.8	990.7	998.4
37.5°	895.9	906.8	933.2	961.2	970.5
40°	857.1	869.5	897.5	930.1	942.5
42.5°	815.2	832.3	863.3	899.0	913.0
45°	773.3	788.8	827.6	868.0	883.5
47.5°	728.2	746.9	788.8	836.9	855.6
50°	680.1	703.4	751.5	804.3	824.5
52.5°	632.0	658.4	712.7	771.7	793.5
55°	585.4	610.2	675.5	739.1	762.4
57.5°	534.1	565.2	636.6	705.0	728.2
60°	481.4	515.5	597.8	669.2	694.1
62.5°	428.6	467.4	560.5	632.0	658.4
65°	375.8	419.2	517.1	593.2	619.6
67.5°	324.5	372.7	476.7	552.8	579.2
70°	265.5	326.1	433.2	507.8	534.1
72.5°	211.2	281.0	391.3	461.2	484.5
75°	163.0	237.6	344.7	408.4	417.7
77.5°	119.6	194.1	296.6	318.3	319.9
80°	80.7	155.3	226.7	223.6	226.7
82.5°	52.8	116.5	142.9	159.9	161.5
85°	31.1	68.3	83.8	93.2	94.7
87.5°	15.5	23.3	29.5	31.1	34.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)