

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: P309620

Luminaire Tested: **24FCZ2-55HE-UNV-L82765-HRP-CP187-W2A-U-4000K**

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: P309620
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-4000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.187"
POLYCARB SHEET
Light Source: (336) 4000K 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: 3595.0 lumens
Efficiency: N/A
Efficacy: 82.5 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

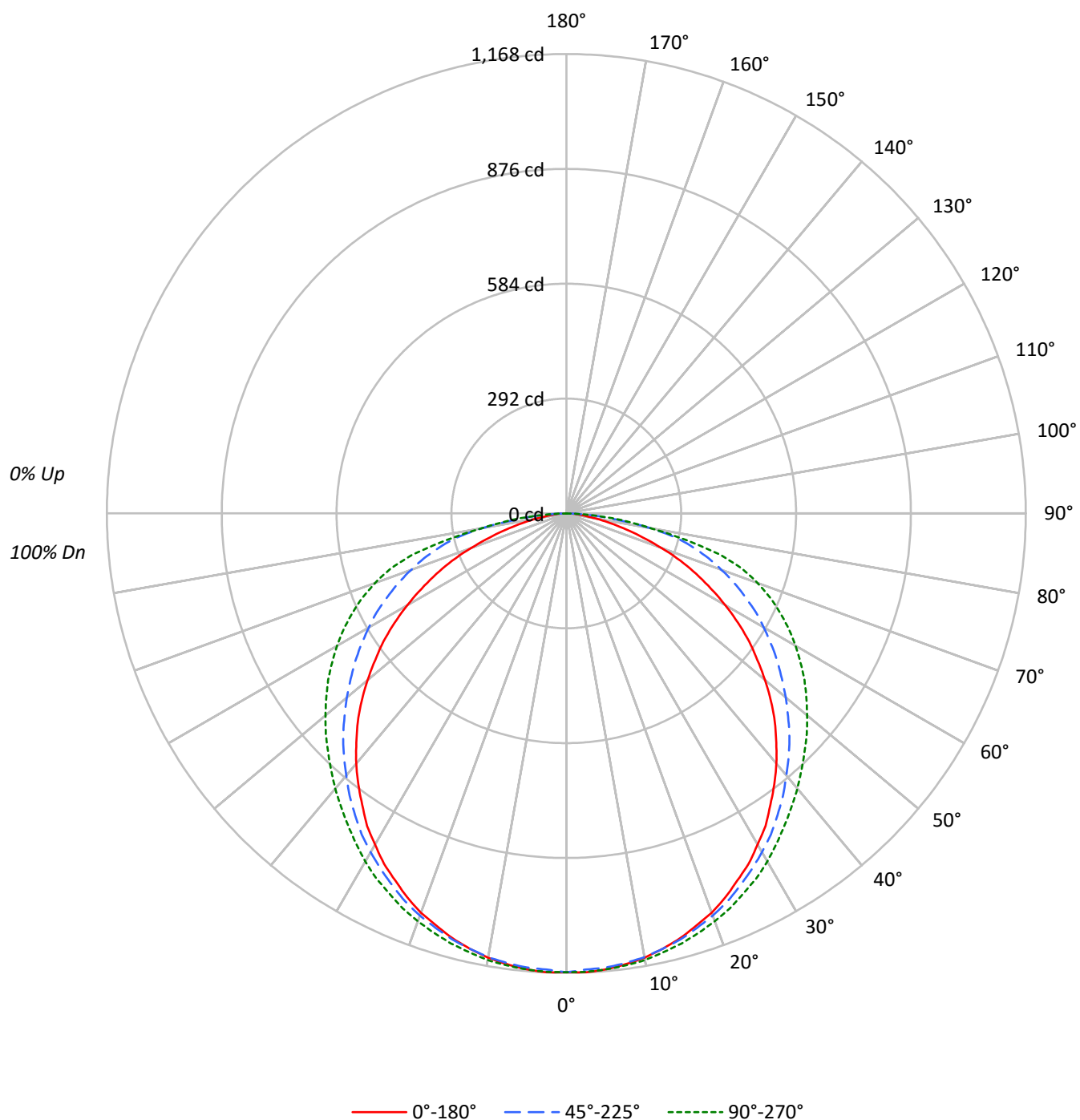
Input Watts (W): 43.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				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°	1569	1569	1569
5°	1571	1565	1571
10°	1567	1565	1575
15°	1558	1562	1577
20°	1547	1558	1580
25°	1528	1551	1582
30°	1511	1546	1588
35°	1486	1538	1589
40°	1459	1528	1605
45°	1426	1526	1630
50°	1380	1525	1673
55°	1331	1536	1734
60°	1256	1559	1810
65°	1160	1596	1912
70°	1013	1652	2037
75°	821	1737	2105
80°	607	1702	1702
85°	465	1255	1417



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	110.5	3.1
10°-20°	317.3	8.8
20°-30°	483.1	13.4
30°-40°	586.5	16.3
40°-50°	619.7	17.2
50°-60°	584.7	16.3
60°-70°	486.2	13.5
70°-80°	319.9	8.9
80°-90°	87.2	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°	910.8	25.3
0°-40°	1497.4	41.7
0°-60°	2701.8	75.2
0°-90°	3595.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3595.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1166	1166	1166	1166	1166	
5°	1163	1163	1159	1163	1163	111
15°	1118	1120	1121	1132	1132	315
25°	1029	1036	1044	1063	1066	475
35°	904	915	936	960	968	566
45°	750	765	802	841	856	577
55°	567	592	655	716	739	505
65°	364	406	501	575	600	360
75°	158	230	334	396	405	170
85°	30	66	81	90	92	37
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1166.4	1166.4	1166.4	1166.4	1166.4
2.5°	1167.9	1166.4	1160.4	1166.4	1166.4
5°	1163.4	1163.4	1158.9	1163.4	1163.4
7.5°	1155.9	1155.9	1152.9	1158.9	1158.9
10°	1146.8	1146.8	1145.3	1152.9	1152.9
12.5°	1133.3	1134.8	1133.3	1142.3	1142.3
15°	1118.2	1119.7	1121.2	1131.8	1131.8
17.5°	1098.7	1101.7	1104.7	1116.7	1118.2
20°	1080.6	1082.1	1088.1	1101.7	1103.2
22.5°	1056.5	1061.0	1068.6	1082.1	1086.6
25°	1029.4	1035.5	1044.5	1062.6	1065.6
27.5°	1003.9	1008.4	1020.4	1040.0	1046.0
30°	972.3	979.8	994.8	1014.4	1021.9
32.5°	942.2	949.7	967.7	988.8	994.8
35°	904.5	915.1	936.1	960.2	967.7
37.5°	868.4	878.9	904.5	931.6	940.6
40°	830.8	842.8	869.9	901.5	913.6
42.5°	790.1	806.7	836.8	871.4	885.0
45°	749.5	764.6	802.2	841.3	856.4
47.5°	705.9	723.9	764.6	811.2	829.3
50°	659.2	681.8	728.4	779.6	799.2
52.5°	612.5	638.1	690.8	748.0	769.1
55°	567.4	591.5	654.7	716.4	739.0
57.5°	517.7	547.8	617.1	683.3	705.9
60°	466.6	499.7	579.4	648.7	672.7
62.5°	415.4	453.0	543.3	612.5	638.1
65°	364.2	406.4	501.2	574.9	600.5
67.5°	314.6	361.2	462.0	535.8	561.4
70°	257.4	316.1	419.9	492.1	517.7
72.5°	204.7	272.4	379.3	447.0	469.6
75°	158.0	230.3	334.1	395.8	404.9
77.5°	115.9	188.1	287.5	308.5	310.0
80°	78.3	150.5	219.7	216.7	219.7
82.5°	51.2	112.9	138.5	155.0	156.5
85°	30.1	66.2	81.3	90.3	91.8
87.5°	15.1	22.6	28.6	30.1	33.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)