

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: P309676

Luminaire Tested: **24FCZ2-60HE-UNV-L82765-HRP-CP250-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: P309676
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: 24FCZ2-60HE-UNV-L82765-HRP-CP250-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
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: 3998.0 lumens
Efficiency: N/A
Efficacy: 82.1 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

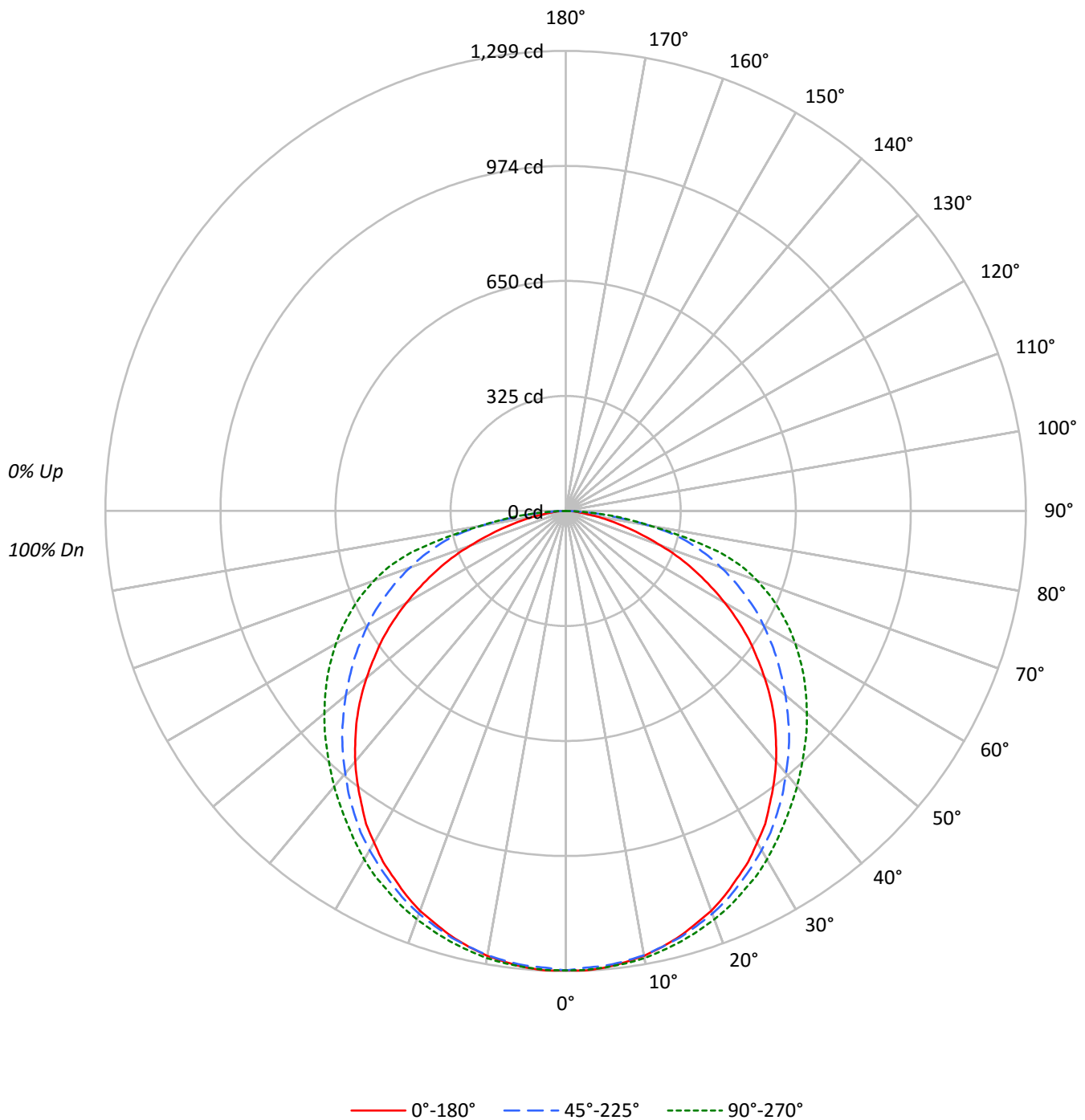
Input Watts (W): 48.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				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°	1745	1745	1745
5°	1747	1741	1747
10°	1743	1740	1752
15°	1732	1737	1753
20°	1721	1733	1757
25°	1700	1724	1759
30°	1680	1719	1766
35°	1652	1710	1768
40°	1623	1699	1785
45°	1586	1697	1812
50°	1535	1696	1860
55°	1480	1708	1928
60°	1396	1734	2013
65°	1289	1775	2126
70°	1126	1837	2265
75°	913	1932	2340
80°	674	1894	1894
85°	517	1396	1576



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	122.9	3.1
10°-20°	352.9	8.8
20°-30°	537.2	13.4
30°-40°	652.3	16.3
40°-50°	689.1	17.2
50°-60°	650.3	16.3
60°-70°	540.7	13.5
70°-80°	355.7	8.9
80°-90°	97.0	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°	1012.9	25.3
0°-40°	1665.2	41.7
0°-60°	3004.7	75.2
0°-90°	3998.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3998.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1297	1297	1297	1297	1297	
5°	1294	1294	1289	1294	1294	123
15°	1244	1245	1247	1259	1259	351
25°	1145	1152	1162	1182	1185	528
35°	1006	1018	1041	1068	1076	630
45°	834	850	892	936	952	642
55°	631	658	728	797	822	562
65°	405	452	557	639	668	400
75°	176	256	372	440	450	189
85°	34	74	90	100	102	41
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1297.2	1297.2	1297.2	1297.2	1297.2
2.5°	1298.8	1297.2	1290.5	1297.2	1297.2
5°	1293.8	1293.8	1288.8	1293.8	1293.8
7.5°	1285.4	1285.4	1282.1	1288.8	1288.8
10°	1275.4	1275.4	1273.7	1282.1	1282.1
12.5°	1260.3	1262.0	1260.3	1270.4	1270.4
15°	1243.6	1245.3	1246.9	1258.7	1258.7
17.5°	1221.8	1225.2	1228.5	1241.9	1243.6
20°	1201.8	1203.4	1210.1	1225.2	1226.9
22.5°	1175.0	1180.0	1188.4	1203.4	1208.4
25°	1144.8	1151.5	1161.6	1181.7	1185.0
27.5°	1116.4	1121.4	1134.8	1156.6	1163.3
30°	1081.2	1089.6	1106.3	1128.1	1136.5
32.5°	1047.8	1056.1	1076.2	1099.7	1106.3
35°	1005.9	1017.6	1041.1	1067.9	1076.2
37.5°	965.8	977.5	1005.9	1036.0	1046.1
40°	923.9	937.3	967.4	1002.6	1016.0
42.5°	878.7	897.1	930.6	969.1	984.2
45°	833.5	850.3	892.1	935.6	952.4
47.5°	785.0	805.1	850.3	902.1	922.2
50°	733.1	758.2	810.1	867.0	888.8
52.5°	681.2	709.7	768.3	831.9	855.3
55°	631.0	657.8	728.1	796.7	821.8
57.5°	575.8	609.2	686.2	759.9	785.0
60°	518.9	555.7	644.4	721.4	748.2
62.5°	462.0	503.8	604.2	681.2	709.7
65°	405.0	451.9	557.4	639.4	667.8
67.5°	349.8	401.7	513.8	595.9	624.3
70°	286.2	351.5	467.0	547.3	575.8
72.5°	227.6	302.9	421.8	497.1	522.2
75°	175.7	256.1	371.6	440.2	450.2
77.5°	128.9	209.2	319.7	343.1	344.8
80°	87.0	167.4	244.4	241.0	244.4
82.5°	56.9	125.5	154.0	172.4	174.1
85°	33.5	73.6	90.4	100.4	102.1
87.5°	16.7	25.1	31.8	33.5	36.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)