

Scaled data based on original data using

LM-41-14 Approved Method for Photometric Testing Of Indoor Fluorescent Luminaires

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: NEO-RAY

Report Number: 17896

Luminaire Tested: **MB-SB-1T5**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: 17896
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: MB-SB-1T5
Description: DIRECT/INDIRECT SUSPENDED LUMINAIRE - MINIGATOR WHITE INTERIOR WITH
SPECULAR REFLECTORS AND 19 CELL SEMI-SPECULAR LOUVER BLADE
Light Source: ONE PHILIPS 54 WATT T5 LAMP

F54T5.841HO. LUMEN RATING = 4500 LMS.

Ballast/Driver: -

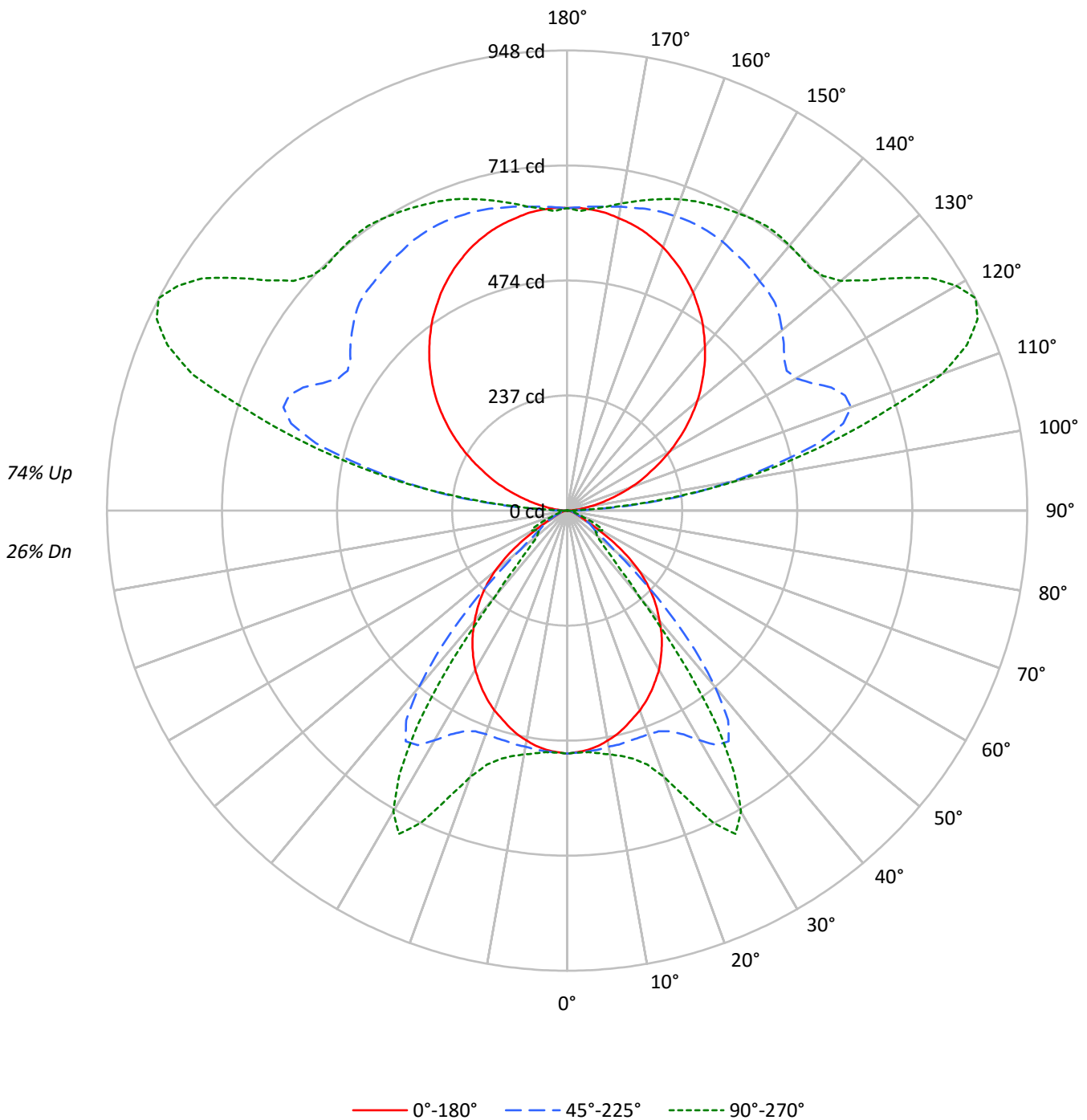
Summary

Lumens per Lamp: 4500 (1 lamp)
Luminaire Lumens: 4100.5 lumens
Efficiency: 91.1%
Efficacy: 66.1 lumens/watt
Spacing Criteria (0/90/45): 1.14 / 1.45 / 1.34
Luminous Opening: Rectangular (W 0.22' x L: 3.59' x H: 0')
CIE Type: Semi-Indirect

Input Watts (W): 62
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				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	92	92	92	92	82	82	82	82	64	64	64	47	47	47	31	31	31	24
1	85	81	78	75	76	73	70	68	57	55	53	42	41	40	28	28	27	21
2	78	72	67	62	69	64	60	57	50	48	45	38	36	34	26	25	24	19
3	71	63	57	53	64	57	52	48	45	42	39	34	32	30	23	22	21	17
4	65	56	50	45	58	51	45	41	40	36	33	30	28	26	21	20	19	15
5	60	50	44	39	54	46	40	35	36	32	29	27	25	23	19	18	17	13
6	55	45	39	34	49	41	35	31	33	29	25	25	22	20	18	16	15	12
7	51	41	34	29	46	37	31	27	30	25	22	23	20	18	16	15	13	11
8	48	37	31	26	42	34	28	24	27	23	20	21	18	16	15	13	12	10
9	44	34	27	23	40	31	25	21	25	21	18	19	16	14	14	12	11	9
10	41	31	25	21	37	28	23	19	23	19	16	18	15	13	13	11	10	8

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6823	6823	6823
5°	6766	6809	6836
10°	6658	6832	7061
15°	6512	6929	7468
20°	6354	7110	8464
25°	6171	7541	10648
30°	5958	8602	11265
35°	5657	9650	8886
40°	5271	8452	4113
45°	4815	5682	2213
50°	4118	2674	1707
55°	2977	1635	1685
60°	1567	1439	2265
65°	890	1071	1922
70°	717	733	1128
75°	579	695	900
80°	494	761	863
85°	579	844	1251



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ZONAL LUMENS:

Zone	Lumens	% Fixture	% Lamp
0°-10°	47.5	1.2	1.1
10°-20°	140.3	3.4	3.1
20°-30°	246.6	6.0	5.5
30°-40°	297.4	7.3	6.6
40°-50°	186.5	4.5	4.1
50°-60°	90.9	2.2	2.0
60°-70°	39.0	1.0	0.9
70°-80°	15.1	0.4	0.3
80°-90°	6.0	0.1	0.1
90°-100°	137.6	3.4	3.1
100°-110°	445.8	10.9	9.9
110°-120°	569.1	13.9	12.6
120°-130°	507.1	12.4	11.3
130°-140°	449.5	11.0	10.0
140°-150°	387.1	9.4	8.6
150°-160°	294.2	7.2	6.5
160°-170°	180.9	4.4	4.0
170°-180°	60.1	1.5	1.3
0°-30°	434.4	10.6	9.7
0°-40°	731.8	17.8	16.3
0°-60°	1009.2	24.6	22.4
0°-90°	1069.2	26.1	23.8
90°-120°	1152.5	28.1	25.6
90°-150°	2496.2	60.9	55.5
90°-180°	3031.0	73.9	67.4
0°-180°	4100.5	100.0	91.1

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	501	501	501	501	501	
5°	495	498	498	503	500	47
15°	462	468	491	518	529	130
25°	410	432	502	643	708	189
35°	340	390	580	565	534	212
45°	250	341	295	127	115	191
55°	125	157	69	68	71	111
65°	28	27	33	49	60	31
75°	11	11	13	16	17	12
85°	4	4	5	7	8	3
90°	0	0	0	0	0	1
95°	17	112	143	140	123	20
105°	88	268	536	603	580	95
115°	190	330	600	842	933	189
125°	298	405	545	736	835	266
135°	397	481	605	683	707	306
145°	483	549	630	697	716	302
155°	550	590	646	688	695	253
165°	598	616	643	664	663	169
175°	622	626	629	631	625	59
180°	623	623	623	623	623	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	500.6	500.6	500.6	500.6	500.6
2.5°	498.0	500.2	498.9	501.0	498.9
5°	494.6	497.6	497.7	502.8	499.7
7.5°	488.9	492.4	496.7	504.1	504.2
10°	481.1	486.3	493.7	506.7	510.2
12.5°	472.4	479.8	493.7	510.7	517.6
15°	461.5	468.5	491.1	518.1	529.3
17.5°	449.0	460.8	490.7	527.1	548.4
20°	438.1	451.2	490.2	546.6	583.6
22.5°	424.7	441.3	492.4	585.4	640.0
25°	410.4	431.6	501.5	643.0	708.1
27.5°	394.4	420.8	519.8	693.9	751.0
30°	378.6	411.2	546.6	696.4	715.8
32.5°	359.6	400.4	572.7	647.3	641.3
35°	340.0	390.5	580.0	564.9	534.1
37.5°	319.2	378.7	544.5	449.8	386.9
40°	296.3	367.3	475.1	324.9	231.2
42.5°	273.6	356.6	388.7	193.8	153.8
45°	249.8	340.9	294.8	127.4	114.8
47.5°	223.3	317.5	202.1	95.6	90.9
50°	194.2	277.1	126.1	79.2	80.5
52.5°	161.2	224.2	89.1	71.4	74.9
55°	125.3	156.9	68.8	68.4	70.9
57.5°	87.5	100.0	59.7	66.6	74.4
60°	57.5	58.0	52.8	66.3	83.1
62.5°	40.1	38.9	42.7	62.8	82.3
65°	27.6	26.7	33.2	48.8	59.6
67.5°	21.5	21.1	24.4	34.0	38.4
70°	18.0	16.6	18.4	25.4	28.3
72.5°	14.1	14.0	16.3	19.8	20.6
75°	11.0	11.4	13.2	15.8	17.1
77.5°	7.5	9.7	12.3	13.7	13.7
80°	6.3	8.4	9.7	10.1	11.0
82.5°	4.5	5.5	8.1	7.5	9.3
85°	3.7	4.1	5.4	6.8	8.0
87.5°	1.4	3.6	4.5	5.8	6.8
90°	0.5	0.5	0.5	0.5	0.5
92.5°	5.5	40.1	46.2	57.0	31.0
95°	17.2	112.2	142.9	139.6	123.0
97.5°	30.6	181.7	248.0	251.9	237.6
100°	47.5	230.7	342.2	387.4	354.8
102.5°	66.7	245.4	437.4	445.4	465.1
105°	88.3	268.4	535.8	602.7	580.5
107.5°	113.1	278.8	596.2	682.5	694.6
110°	139.1	291.0	622.2	765.5	821.8



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	165.6	305.9	619.6	820.6	891.3
115°	189.8	330.5	600.4	841.8	932.9
117.5°	216.9	354.0	568.0	830.5	948.5
120°	244.5	375.3	544.5	801.4	925.9
122.5°	271.1	396.5	536.3	751.5	890.8
125°	298.4	405.1	545.3	736.3	835.4
127.5°	324.0	426.4	562.7	702.4	778.9
130°	349.6	443.8	577.9	689.4	736.3
132.5°	373.9	462.9	593.1	681.2	715.5
135°	396.9	481.1	605.3	683.4	707.3
137.5°	420.0	498.5	612.3	687.3	709.9
140°	441.6	515.5	616.9	693.3	713.0
142.5°	462.5	531.9	624.0	697.3	715.5
145°	483.2	548.8	630.0	696.8	715.8
147.5°	500.7	554.8	634.0	695.6	712.0
150°	518.9	569.3	640.0	692.5	706.8
152.5°	535.0	581.0	643.4	690.7	701.6
155°	550.5	589.6	646.0	688.2	695.4
157.5°	564.0	598.3	647.0	684.7	689.5
160°	577.1	605.3	646.0	679.1	682.5
162.5°	587.9	611.3	645.2	672.9	673.1
165°	597.8	616.2	643.0	664.3	663.0
167.5°	605.6	620.4	638.6	653.0	652.6
170°	611.8	622.2	635.6	649.9	642.6
172.5°	618.3	624.4	631.3	638.2	631.7
175°	621.7	626.1	628.6	630.8	624.8
177.5°	624.0	626.5	625.7	626.1	617.5
180°	623.1	623.1	623.1	623.1	623.1

(END OF REPORT)