

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: 15995

Luminaire Tested: **201IP-S-P-3-T5**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: 15995
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: 201IP-S-P-3-T5
Description: NEORAY DIRECT/INDIRECT SUSPENDED LUMINAIRE SHELL II PERF
Light Source: THREE SYLVANIA 54 WATT T5 LAMPS

Ballast/Driver: ONE SYL. QT1 AND ONE QT2X54/120PHO BALLAST OPERATING AT 120 VAC AND 181 WATTS

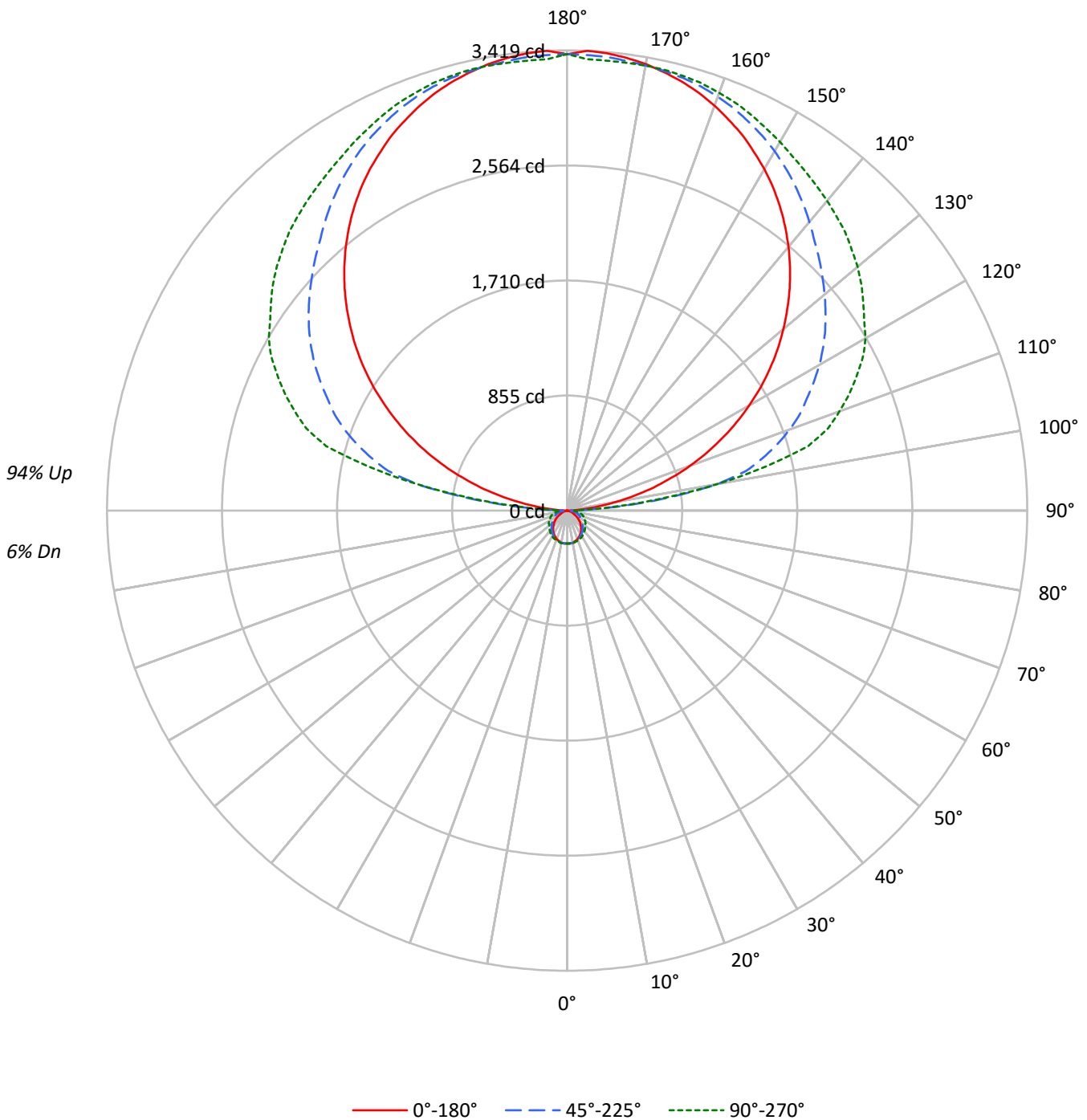
Summary

Lumens per Lamp: 4500 (3 lamps)
Luminaire Lumens: 13217.0 lumens
Efficiency: 97.9%
Efficacy: 73.0 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.34 / 1.38
Luminous Opening: Rectangular w/ Sides (W: 0.88' x L: 4' x H: 0.22')
CIE Type: Indirect

Input Watts (W): 181
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

TEST NUMBER: 15995
CATALOG NUMBER: 201IP-S-P-3-T5

Luminous Intensity Polar Plot





TEST NUMBER: 15995
 CATALOG NUMBER: 2011P-S-P-3-T5

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	95	95	95	95	82	82	82	82	58	58	58	35	35	35	15	15	15	6
1	86	82	78	75	74	71	68	65	50	48	47	31	30	29	13	13	13	5
2	78	71	66	61	67	62	57	53	44	41	38	27	25	24	12	11	10	4
3	71	63	56	51	61	54	49	44	38	35	32	24	22	20	10	9	9	3
4	65	55	48	43	56	48	42	37	34	30	27	21	19	17	9	8	7	3
5	59	49	41	36	51	42	36	32	30	26	23	19	16	15	8	7	6	2
6	54	43	36	31	47	38	32	27	27	23	20	17	14	13	7	6	6	2
7	50	39	32	27	43	34	28	23	24	20	17	15	13	11	7	6	5	2
8	46	35	28	23	40	31	25	20	22	18	15	14	11	10	6	5	4	2
9	43	32	25	20	37	28	22	18	20	16	13	12	10	8	5	4	4	1
10	40	29	22	18	34	25	20	16	18	14	12	11	9	7	5	4	3	1

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	749	749	749
5°	756	733	735
10°	749	728	732
15°	728	710	712
20°	720	697	707
25°	701	676	690
30°	682	653	682
35°	648	634	673
40°	626	605	650
45°	568	574	650
50°	529	553	637
55°	478	538	654
60°	385	515	667
65°	324	516	670
70°	278	500	688
75°	188	499	693
80°	39	464	677
85°	11	387	671



TEST NUMBER: 15995
 CATALOG NUMBER: 2011P-S-P-3-T5

ZONAL LUMENS:

Zone	Lumens	% Fixture	% Lamp
0°-10°	23.3	0.2	0.2
10°-20°	66.9	0.5	0.5
20°-30°	101.4	0.8	0.8
30°-40°	121.7	0.9	0.9
40°-50°	126.1	1.0	0.9
50°-60°	117.4	0.9	0.9
60°-70°	99.0	0.7	0.7
70°-80°	73.3	0.6	0.5
80°-90°	41.7	0.3	0.3
90°-100°	447.7	3.4	3.3
100°-110°	1432.7	10.8	10.6
110°-120°	1881.9	14.2	13.9
120°-130°	2066.2	15.6	15.3
130°-140°	2048.6	15.5	15.2
140°-150°	1842.7	13.9	13.6
150°-160°	1464.8	11.1	10.9
160°-170°	939.5	7.1	7.0
170°-180°	322.2	2.4	2.4
0°-30°	191.6	1.4	1.4
0°-40°	313.3	2.4	2.3
0°-60°	556.8	4.2	4.1
0°-90°	770.7	5.8	5.7
90°-120°	3762.2	28.5	27.9
90°-150°	9719.7	73.5	72.0
90°-180°	12446.0	94.2	92.2
0°-180°	13217.0	100.0	97.9

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	245	245	245	245	245	
5°	248	245	243	243	245	23
15°	233	235	237	241	240	66
25°	213	213	220	226	228	98
35°	180	184	196	204	212	113
45°	138	145	161	179	188	108
55°	97	106	132	156	166	85
65°	50	69	104	132	142	50
75°	19	37	76	100	113	21
85°	0	13	38	65	74	1
90°	0	7	29	46	53	5
95°	113	421	433	386	392	147
105°	667	1039	1503	1787	1854	701
115°	1271	1540	1964	2282	2375	1257
125°	1840	1998	2341	2585	2687	1643
135°	2338	2478	2648	2856	2922	1803
145°	2758	2865	2951	3062	3081	1725
155°	3080	3116	3188	3231	3241	1419
165°	3299	3301	3328	3346	3343	931
175°	3410	3399	3383	3368	3356	324
180°	3390	3390	3390	3390	3390	



TEST NUMBER: 15995
 CATALOG NUMBER: 2011P-S-P-3-T5

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	245.0	245.0	245.0	245.0	245.0
2.5°	244.7	246.1	243.3	247.5	246.1
5°	247.5	244.7	243.3	243.3	244.7
7.5°	242.3	242.3	243.3	244.7	243.3
10°	243.7	241.3	243.3	243.7	246.1
12.5°	238.5	239.9	238.5	244.7	243.7
15°	233.3	234.7	237.1	240.9	239.9
17.5°	230.9	229.5	229.5	234.7	237.5
20°	225.7	226.0	230.9	234.7	237.1
22.5°	218.1	218.4	224.7	228.5	231.9
25°	213.2	212.9	220.5	225.7	228.5
27.5°	204.2	205.3	214.3	224.7	227.1
30°	199.4	198.4	208.1	216.7	220.9
32.5°	190.4	190.8	201.8	209.1	216.7
35°	180.4	184.2	195.6	204.2	211.9
37.5°	169.0	175.2	186.6	198.0	205.6
40°	164.1	166.5	179.0	191.8	197.0
42.5°	149.9	157.5	172.8	185.6	193.2
45°	138.5	144.7	161.4	179.0	188.0
47.5°	130.9	135.8	154.8	176.6	181.8
50°	118.5	126.1	146.1	169.0	173.8
52.5°	106.7	117.1	138.5	164.1	167.6
55°	96.7	105.7	131.9	156.5	166.5
57.5°	82.8	95.6	125.7	151.3	160.0
60°	69.0	85.3	115.7	144.7	156.2
62.5°	59.7	79.0	110.5	137.1	144.7
65°	50.0	69.0	104.3	131.9	142.3
67.5°	41.0	60.0	96.7	125.7	133.3
70°	35.8	49.6	89.1	117.1	129.9
72.5°	25.8	43.4	84.2	108.1	122.3
75°	19.2	37.2	76.3	100.5	113.3
77.5°	14.3	32.0	62.4	91.5	101.5
80°	2.9	25.4	58.6	81.4	92.9
82.5°	0.5	19.2	49.6	71.4	81.4
85°	0.5	13.0	38.2	64.8	73.8
87.5°	0.5	4.0	28.2	53.8	61.4
90°	0.5	7.1	29.2	45.8	53.4
92.5°	33.4	136.1	142.3	91.5	110.8
95°	113.3	421.1	432.6	385.5	391.7
97.5°	231.2	626.3	788.5	735.2	742.8
100°	361.3	814.1	1134.4	1224.4	1130.6
102.5°	510.7	879.8	1363.8	1401.8	1514.6
105°	666.7	1039.3	1503.2	1787.2	1853.9
107.5°	816.5	1172.5	1636.4	1929.0	2032.8
110°	970.8	1302.9	1760.2	2054.2	2153.2



TEST NUMBER: 15995
 CATALOG NUMBER: 2011P-S-P-3-T5

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1123.0	1417.0	1871.9	2170.8	2269.7
115°	1271.4	1540.2	1964.3	2282.5	2374.9
117.5°	1418.1	1654.0	2064.6	2381.1	2479.0
120°	1561.3	1775.8	2164.6	2449.6	2560.0
122.5°	1704.8	1941.5	2254.5	2548.5	2617.0
125°	1840.1	1998.5	2340.6	2585.2	2686.9
127.5°	1971.9	2146.6	2420.6	2675.2	2756.4
130°	2097.5	2262.1	2497.7	2741.2	2817.0
132.5°	2218.9	2371.1	2572.4	2800.4	2868.9
135°	2338.2	2477.6	2647.5	2856.4	2922.5
137.5°	2451.0	2580.0	2719.4	2904.8	2964.0
140°	2558.6	2667.5	2800.4	2952.6	3004.5
142.5°	2660.3	2758.9	2878.2	2998.2	3042.5
145°	2757.5	2865.1	2951.2	3061.9	3080.9
147.5°	2847.4	2901.0	3019.7	3089.6	3118.6
150°	2931.1	2994.4	3083.3	3145.3	3163.2
152.5°	3004.5	3059.1	3139.0	3189.9	3200.9
155°	3079.5	3116.2	3188.5	3231.4	3241.4
157.5°	3141.5	3172.2	3234.2	3267.0	3277.1
160°	3200.9	3218.6	3272.2	3300.9	3302.3
162.5°	3254.2	3263.2	3303.7	3325.5	3327.6
165°	3298.8	3301.3	3327.6	3345.5	3342.8
167.5°	3335.2	3342.8	3345.5	3361.8	3353.2
170°	3368.4	3355.6	3357.0	3364.6	3357.0
172.5°	3392.6	3383.6	3369.8	3363.2	3355.6
175°	3410.2	3398.8	3382.6	3368.4	3355.6
177.5°	3419.2	3409.2	3387.4	3369.8	3358.0
180°	3390.1	3390.1	3390.1	3390.1	3390.1

(END OF REPORT)