

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P243237

Luminaire Tested: S122RDRP-H290D935-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243237
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-63)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122RDRP-H290D935-X4F0-XX-UDD-F-W
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

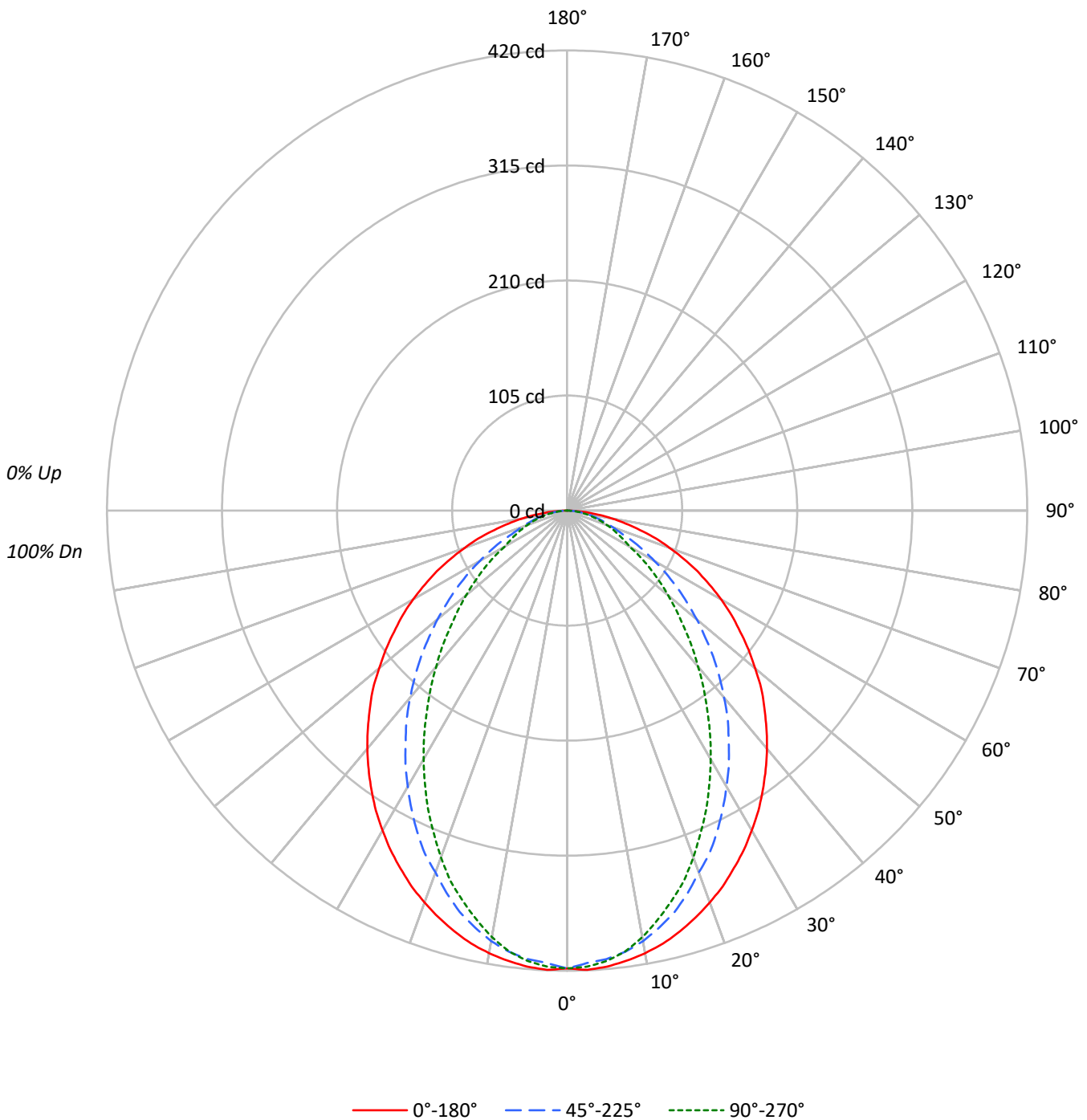
Lumens per Lamp: N/A
Luminaire Lumens: 856.8 lumens
Efficiency: N/A
Efficacy: 76.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 0.15' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 11.2
Input Voltage (V): 120
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: 24 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	50	30	10	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	102	102	102	100																												
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86																												
2	101	94	87	82	98	92	86	81	88	83	79	85	81	77	82	79	76	74																												
3	93	83	76	70	90	82	75	69	79	73	68	76	71	67	74	69	66	64																												
4	86	75	66	60	83	73	66	60	71	64	59	69	63	58	66	62	57	55																												
5	79	67	59	53	77	66	58	52	64	57	52	62	56	51	60	55	51	49																												
6	74	61	53	47	72	60	52	46	58	51	46	57	50	46	55	50	45	43																												
7	68	56	47	42	67	55	47	42	53	46	41	52	46	41	51	45	41	39																												
8	64	51	43	38	62	51	43	37	49	42	37	48	42	37	47	41	37	35																												
9	60	47	39	34	59	47	39	34	46	39	34	44	38	34	44	38	34	32																												
10	56	44	36	31	55	43	36	31	42	36	31	41	35	31	41	35	31	29																												

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7958	7958	7958
5°	7989	7857	7891
10°	7934	7717	7648
15°	7841	7478	7271
20°	7715	7123	6825
25°	7568	6803	6318
30°	7412	6398	5763
35°	7241	5976	5188
40°	7054	5540	4625
45°	6856	5078	4068
50°	6632	4572	3568
55°	6403	4071	3075
60°	6194	3501	2514
65°	5913	2957	2321
70°	5558	2450	2166
75°	5063	2230	1987
80°	4552	1974	1777
85°	3781	1661	1574

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6856 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	39.1	4.6
10°-20°	107.2	12.5
20°-30°	150.4	17.6
30°-40°	163.9	19.1
40°-50°	150.6	17.6
50°-60°	118.2	13.8
60°-70°	77.1	9.0
70°-80°	39.9	4.7
80°-90°	10.3	1.2
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°	296.8	34.6
0°-40°	460.7	53.8
0°-60°	729.5	85.1
0°-90°	856.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	856.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	418	418	418	418	418	
5°	418	416	411	414	413	40
15°	398	393	379	372	369	112
25°	360	348	324	308	301	166
35°	311	291	257	233	223	195
45°	254	228	188	161	151	196
55°	193	164	123	100	93	173
65°	131	100	66	53	52	130
75°	69	43	30	28	27	74
85°	17	8	8	7	7	20
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	417.8	417.8	417.8	417.8	417.8
2.5°	419.6	417.8	413.4	417.4	416.7
5°	417.8	415.6	410.9	413.8	412.7
7.5°	414.5	412.3	406.2	407.7	405.9
10°	410.2	407.3	399.0	397.6	395.4
12.5°	404.8	400.8	389.6	385.3	382.4
15°	397.6	392.9	379.2	371.6	368.7
17.5°	389.6	382.8	365.8	357.2	354.3
20°	380.6	372.7	351.4	342.4	336.7
22.5°	371.3	361.2	339.2	325.1	318.3
25°	360.1	347.5	323.7	307.8	300.6
27.5°	349.3	334.5	307.5	289.1	281.1
30°	337.0	320.8	290.9	269.6	262.0
32.5°	324.8	306.0	274.7	251.6	242.9
35°	311.4	290.9	257.0	233.2	223.1
37.5°	297.7	276.5	240.8	214.5	204.7
40°	283.7	259.9	222.8	195.4	186.0
42.5°	269.2	245.1	205.8	177.7	168.7
45°	254.5	228.5	188.5	161.1	151.0
47.5°	240.4	212.3	170.8	144.9	135.2
50°	223.8	196.1	154.3	128.0	120.4
52.5°	208.7	179.9	138.0	112.8	106.3
55°	192.8	164.0	122.6	99.5	92.6
57.5°	178.1	147.4	107.1	86.1	79.7
60°	162.6	131.6	91.9	72.8	66.0
62.5°	146.3	115.3	78.6	60.6	58.4
65°	131.2	99.5	65.6	53.3	51.5
67.5°	115.0	84.7	52.3	46.9	45.1
70°	99.8	70.3	44.0	40.0	38.9
72.5°	85.1	56.6	37.1	33.9	32.8
75°	68.8	42.9	30.3	27.8	27.0
77.5°	54.8	30.3	24.1	22.3	21.6
80°	41.5	22.0	18.0	16.9	16.2
82.5°	28.5	14.8	12.6	11.9	11.5
85°	17.3	8.3	7.6	7.2	7.2
87.5°	6.8	3.2	3.2	2.9	2.9
90°	0.0	0.0	0.0	0.0	0.0



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CIE UGR TABLE:

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	18.45	19.97	18.82	20.29	20.60	14.34	15.86	14.70	16.17	16.49
	3H	20.22	21.58	20.60	21.91	22.27	15.63	17.00	16.01	17.33	17.69
	4H	20.88	22.16	21.28	22.51	22.89	16.14	17.42	16.54	17.77	18.15
	6H	21.37	22.55	21.78	22.92	23.31	16.52	17.70	16.93	18.07	18.46
	8H	21.54	22.66	21.96	23.05	23.45	16.64	17.77	17.07	18.16	18.56
	12H	21.65	22.72	22.08	23.11	23.54	16.72	17.80	17.15	18.18	18.61
4H	2H	18.55	19.83	18.95	20.18	20.56	15.04	16.32	15.44	16.67	17.05
	3H	20.49	21.56	20.90	21.96	22.36	16.52	17.58	16.93	17.98	18.38
	4H	21.24	22.19	21.67	22.61	23.05	17.12	18.08	17.56	18.50	18.93
	6H	21.83	22.66	22.29	23.10	23.56	17.61	18.45	18.07	18.89	19.35
	8H	22.04	22.82	22.51	23.26	23.73	17.77	18.55	18.24	19.00	19.46
	12H	22.20	22.90	22.69	23.38	23.85	17.89	18.59	18.37	19.06	19.54
8H	4H	21.26	22.04	21.72	22.48	22.95	17.48	18.26	17.95	18.71	19.17
	6H	21.90	22.54	22.40	23.03	23.51	18.08	18.72	18.57	19.21	19.69
	8H	22.15	22.73	22.66	23.24	23.72	18.30	18.87	18.81	19.38	19.87
	12H	22.36	22.87	22.87	23.37	23.93	18.48	18.99	18.99	19.48	20.04
12H	4H	21.25	21.94	21.73	22.42	22.89	17.53	18.22	18.01	18.70	19.17
	6H	21.88	22.46	22.39	22.97	23.46	18.14	18.72	18.65	19.23	19.71
	8H	22.16	22.67	22.67	23.17	23.73	18.41	18.93	18.92	19.42	19.98