

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



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1058301

Luminaire Tested: S122RDR-H290D840-X4F0-XX-UDD-WVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1058301
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-55)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122RDR-H290D840-X4F0-XX-UDD-WVL-W
Description: DEFINE 2 WHITE REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE
LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

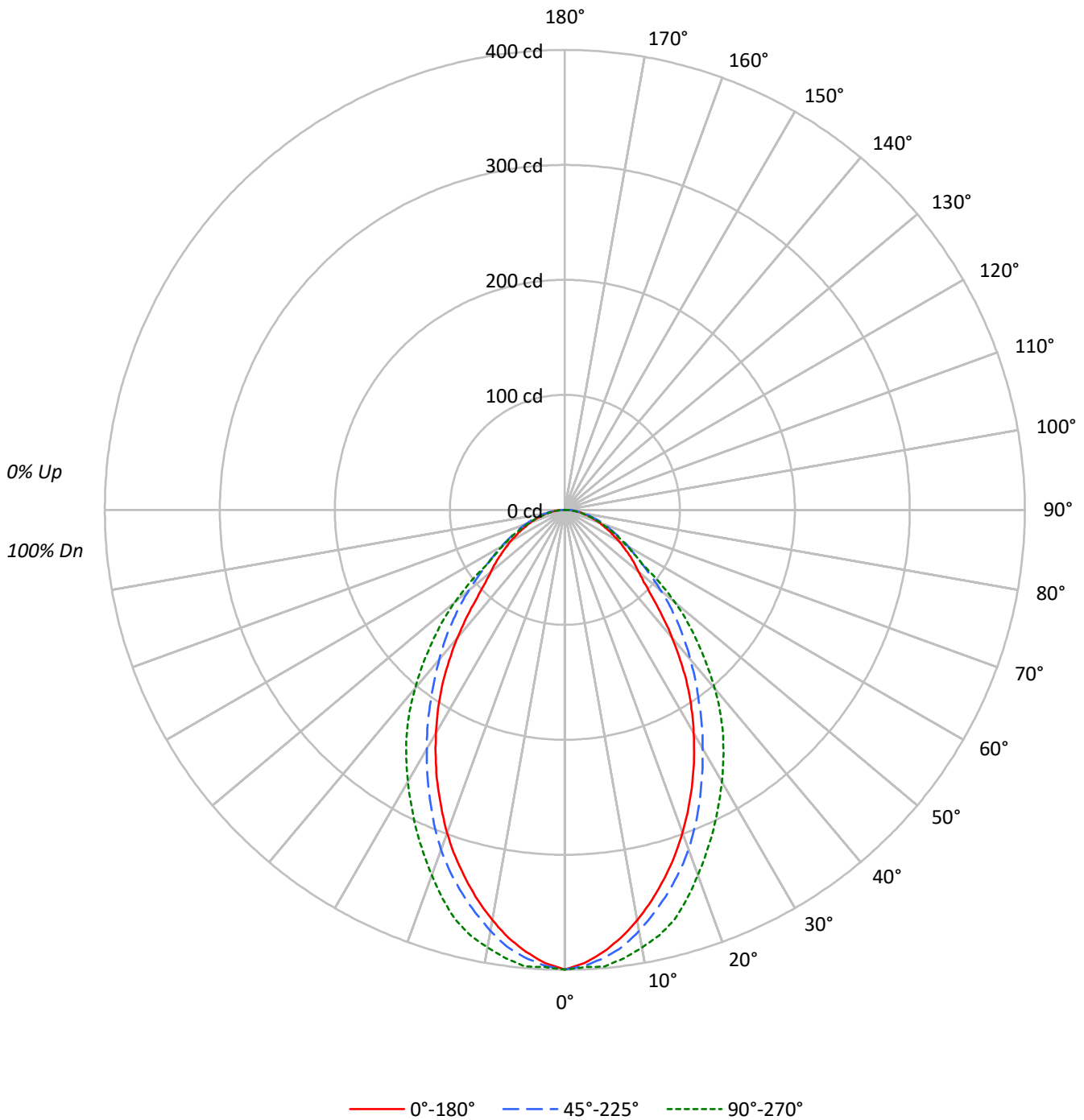
Lumens per Lamp: N/A
Luminaire Lumens: 651.7 lumens
Efficiency: N/A
Efficacy: 55.7 lumens/watt
Spacing Criteria (0/90/45): 0.91 / 1.05 / 1.05
Luminous Opening: Rectangular (W 0.15' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 11.7
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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	106	103	100	108	104	101	98	100	97	95	96	94	92	93	91	89	87
2	102	95	89	84	100	93	88	83	90	85	81	87	83	80	84	81	78	76
3	94	85	78	73	92	84	77	72	81	75	71	78	74	70	76	72	68	67
4	88	77	69	64	85	76	69	63	73	67	62	71	66	62	69	65	61	59
5	81	70	62	56	80	69	62	56	67	60	55	65	59	55	63	58	54	52
6	76	64	56	50	74	63	56	50	61	55	50	60	54	49	58	53	49	47
7	71	59	51	46	69	58	51	45	57	50	45	55	49	45	54	49	44	43
8	67	54	47	41	65	54	46	41	52	46	41	51	45	41	50	45	41	39
9	63	50	43	38	61	50	43	38	49	42	38	48	42	37	47	41	37	36
10	59	47	40	35	58	46	40	35	46	39	35	45	39	35	44	38	34	33

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7377	7377	7377
5°	7150	7246	7381
10°	6790	6966	7242
15°	6356	6594	7045
20°	5875	6180	6643
25°	5338	5654	6232
30°	4773	5112	5817
35°	4183	4580	5404
40°	3500	4090	4878
45°	2805	3622	4264
50°	2406	3123	3580
55°	2197	2654	2641
60°	2000	2347	2299
65°	1821	2100	2008
70°	1672	1926	1786
75°	1561	1775	1561
80°	1466	1647	1371
85°	1461	1736	1186

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 4264 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	36.9	5.7
10°-20°	97.7	15.0
20°-30°	128.9	19.8
30°-40°	129.8	19.9
40°-50°	105.6	16.2
50°-60°	72.0	11.0
60°-70°	46.7	7.2
70°-80°	25.7	3.9
80°-90°	8.4	1.3
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°	263.5	40.4
0°-40°	393.3	60.3
0°-60°	570.9	87.6
0°-90°	651.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	651.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	400	400	400	400	400	
5°	386	393	391	395	398	36
15°	333	341	345	359	369	93
25°	262	271	278	290	306	120
35°	186	195	203	221	240	115
45°	108	121	139	151	163	85
55°	68	75	82	83	82	61
65°	42	49	48	46	46	41
75°	22	27	25	22	22	23
85°	7	9	8	6	6	7
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	399.8	399.8	399.8	399.8	399.8
2.5°	394.6	401.1	396.8	397.2	398.1
5°	386.0	393.3	391.2	394.6	398.5
7.5°	375.3	382.6	383.4	388.6	393.3
10°	362.4	370.6	371.8	379.6	386.5
12.5°	348.2	357.2	358.9	370.1	379.1
15°	332.7	341.3	345.2	359.4	368.8
17.5°	316.4	324.6	330.6	343.5	354.2
20°	299.2	306.9	314.7	326.3	338.3
22.5°	280.7	289.3	296.6	308.2	322.0
25°	262.2	270.8	277.7	290.2	306.1
27.5°	243.3	251.9	258.8	272.1	289.3
30°	224.0	233.0	239.9	254.9	273.0
32.5°	205.0	214.1	221.8	237.7	256.6
35°	185.7	195.2	203.3	221.0	239.9
37.5°	165.1	175.8	186.1	203.8	222.2
40°	145.3	157.3	169.8	186.1	202.5
42.5°	125.5	138.8	154.3	168.1	183.1
45°	107.5	120.8	138.8	150.9	163.4
47.5°	93.3	104.5	123.8	133.7	144.9
50°	83.8	91.6	108.8	116.5	124.7
52.5°	76.1	82.5	94.6	99.7	104.0
55°	68.3	75.2	82.5	83.0	82.1
57.5°	60.6	68.3	72.2	69.2	70.9
60°	54.2	61.9	63.6	60.6	62.3
62.5°	47.3	55.9	55.9	52.9	53.7
65°	41.7	49.4	48.1	45.6	46.0
67.5°	36.1	43.8	41.7	39.1	39.1
70°	31.0	38.3	35.7	33.1	33.1
72.5°	26.2	32.2	30.5	27.5	27.1
75°	21.9	27.1	24.9	22.4	21.9
77.5°	17.6	21.9	20.2	18.1	17.2
80°	13.8	17.6	15.5	13.8	12.9
82.5°	10.3	13.3	11.6	9.9	9.0
85°	6.9	9.0	8.2	6.4	5.6
87.5°	3.4	6.0	5.2	4.3	3.4
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	13.66	15.10	14.02	15.41	15.72	13.91	15.35	14.27	15.66	15.97
	3H	15.19	16.47	15.57	16.80	17.17	15.27	16.55	15.64	16.88	17.24
	4H	15.75	16.95	16.15	17.30	17.68	15.75	16.95	16.15	17.30	17.68
	6H	16.17	17.29	16.59	17.65	18.05	16.10	17.21	16.51	17.58	17.97
	8H	16.33	17.38	16.75	17.77	18.18	16.20	17.26	16.63	17.65	18.05
	12H	16.44	17.45	16.87	17.83	18.26	16.27	17.28	16.70	17.67	18.10
4H	2H	14.23	15.43	14.63	15.78	16.16	14.43	15.64	14.83	15.98	16.37
	3H	16.04	17.03	16.45	17.44	17.84	16.01	17.00	16.42	17.41	17.81
	4H	16.78	17.68	17.21	18.09	18.53	16.60	17.50	17.03	17.92	18.36
	6H	17.36	18.14	17.82	18.59	19.05	17.07	17.85	17.53	18.30	18.76
	8H	17.57	18.30	18.04	18.75	19.22	17.22	17.95	17.69	18.40	18.86
	12H	17.74	18.39	18.22	18.87	19.34	17.33	17.98	17.81	18.46	18.93
8H	4H	17.04	17.77	17.51	18.22	18.69	16.89	17.62	17.36	18.07	18.53
	6H	17.80	18.40	18.30	18.89	19.37	17.48	18.09	17.98	18.58	19.06
	8H	18.12	18.66	18.64	19.17	19.66	17.71	18.25	18.22	18.76	19.25
	12H	18.40	18.88	18.92	19.37	19.94	17.89	18.37	18.40	18.86	19.43
12H	4H	17.06	17.71	17.54	18.19	18.66	16.93	17.57	17.41	18.05	18.53
	6H	17.84	18.38	18.36	18.90	19.39	17.55	18.09	18.07	18.60	19.09
	8H	18.24	18.72	18.75	19.21	19.78	17.84	18.31	18.35	18.81	19.37