

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: P1058300

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

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1058300
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-58)
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-S
Description: DEFINE 2 SILVER 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

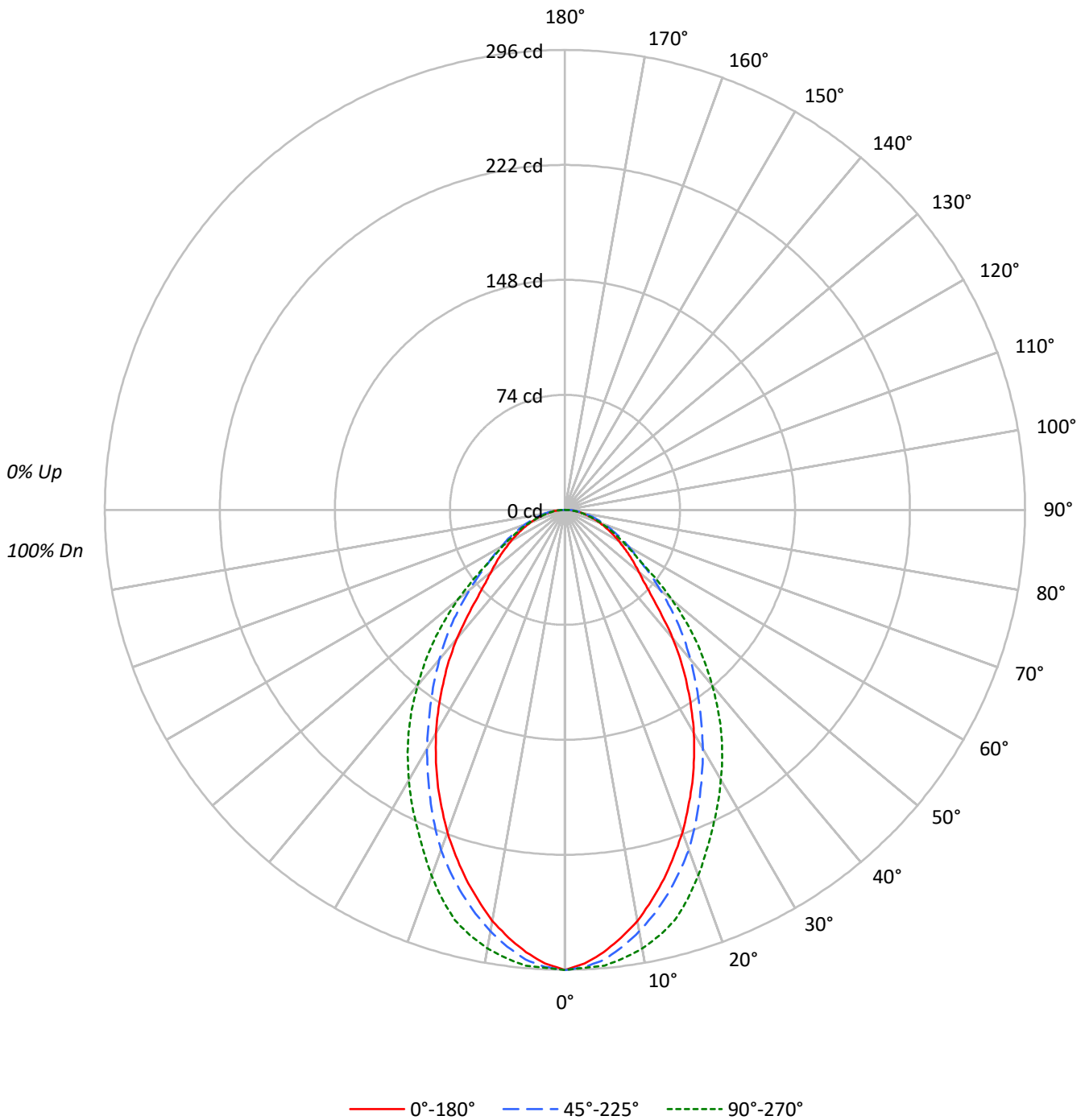
Lumens per Lamp: N/A
Luminaire Lumens: 482.3 lumens
Efficiency: N/A
Efficacy: 41.2 lumens/watt
Spacing Criteria (0/90/45): 0.91 / 1.05 / 1.05
Luminous Opening: Rectangular (W 0.15' x L: 4' x H: 0')
CIE Type: Direct

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	99	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	79	84	80	78	76
3	94	85	78	73	92	84	77	72	81	75	71	78	73	69	76	72	68	66
4	88	77	69	63	85	76	69	63	73	67	62	71	66	61	69	64	61	59
5	81	70	62	56	79	69	61	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	45	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	39	35	45	39	35	45	39	34	44	38	34	33

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5466	5466	5466
5°	5294	5383	5453
10°	5035	5162	5372
15°	4698	4887	5223
20°	4338	4575	4921
25°	3948	4174	4585
30°	3535	3782	4276
35°	3079	3379	3951
40°	2599	3023	3551
45°	2064	2670	3108
50°	1777	2297	2578
55°	1618	1962	1979
60°	1476	1746	1683
65°	1349	1576	1485
70°	1252	1462	1322
75°	1162	1376	1162
80°	1095	1328	1052
85°	1101	1355	910

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 3108 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	27.3	5.7
10°-20°	72.3	15.0
20°-30°	95.1	19.7
30°-40°	95.6	19.8
40°-50°	77.5	16.1
50°-60°	53.4	11.1
60°-70°	34.9	7.2
70°-80°	19.5	4.0
80°-90°	6.6	1.4
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°	194.7	40.4
0°-40°	290.4	60.2
0°-60°	421.3	87.3
0°-90°	482.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	482.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	296	296	296	296	296	
5°	286	291	291	292	294	27
15°	246	252	256	265	273	69
25°	194	199	205	214	225	89
35°	137	143	150	163	175	85
45°	79	88	102	111	119	63
55°	50	56	61	62	62	45
65°	31	37	36	34	34	31
75°	16	20	19	17	16	17
85°	5	7	6	6	4	6
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	296.2	296.2	296.2	296.2	296.2
2.5°	292.3	297.5	294.4	294.4	294.9
5°	285.8	291.4	290.6	291.9	294.4
7.5°	277.7	283.7	283.7	287.6	291.0
10°	268.7	274.7	275.5	281.6	286.7
12.5°	257.5	263.5	266.1	273.8	280.7
15°	245.9	251.9	255.8	265.2	273.4
17.5°	233.4	239.4	244.6	254.5	262.6
20°	220.9	226.5	233.0	241.6	250.6
22.5°	207.2	213.2	219.2	227.4	237.7
25°	193.9	199.0	205.0	214.1	225.2
27.5°	179.7	185.3	190.9	201.6	213.2
30°	165.9	171.5	177.5	188.7	200.7
32.5°	151.3	157.3	163.3	175.8	188.3
35°	136.7	143.1	150.0	163.3	175.4
37.5°	122.5	129.4	137.6	151.3	161.6
40°	107.9	115.2	125.5	137.6	147.4
42.5°	92.4	101.4	113.9	124.2	133.3
45°	79.1	88.1	102.3	111.3	119.1
47.5°	69.2	76.5	90.3	98.0	104.5
50°	61.9	67.5	80.0	85.5	89.8
52.5°	55.9	61.5	70.1	73.9	75.2
55°	50.3	55.9	61.0	62.3	61.5
57.5°	44.7	50.7	53.7	52.4	52.4
60°	40.0	46.4	47.3	45.6	45.6
62.5°	35.2	41.7	41.7	39.5	39.5
65°	30.9	37.0	36.1	34.4	34.0
67.5°	27.1	32.7	31.4	29.7	29.2
70°	23.2	28.4	27.1	24.9	24.5
72.5°	19.8	24.5	22.8	21.1	20.2
75°	16.3	20.2	19.3	17.2	16.3
77.5°	13.3	16.3	15.5	13.8	12.9
80°	10.3	12.9	12.5	10.7	9.9
82.5°	7.7	9.9	9.5	8.2	6.9
85°	5.2	6.9	6.4	5.6	4.3
87.5°	2.6	4.7	4.3	3.9	2.1
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	12.63	14.07	12.99	14.38	14.70	12.98	14.43	13.35	14.74	15.05
	3H	14.17	15.46	14.55	15.79	16.16	14.33	15.62	14.71	15.95	16.31
	4H	14.74	15.95	15.15	16.30	16.68	14.81	16.02	15.22	16.37	16.75
	6H	15.17	16.29	15.59	16.66	17.05	15.17	16.29	15.58	16.65	17.05
	8H	15.33	16.39	15.75	16.78	17.18	15.29	16.35	15.71	16.74	17.14
	12H	15.44	16.46	15.87	16.84	17.27	15.36	16.38	15.79	16.76	17.19
4H	2H	13.21	14.42	13.61	14.77	15.15	13.50	14.71	13.90	15.06	15.44
	3H	15.04	16.04	15.45	16.44	16.84	15.07	16.08	15.49	16.48	16.88
	4H	15.79	16.69	16.22	17.10	17.54	15.68	16.58	16.11	17.00	17.44
	6H	16.37	17.15	16.83	17.60	18.06	16.16	16.94	16.62	17.39	17.85
	8H	16.58	17.31	17.04	17.76	18.22	16.33	17.06	16.79	17.50	17.97
	12H	16.75	17.40	17.23	17.88	18.35	16.45	17.10	16.93	17.58	18.05
8H	4H	16.07	16.80	16.53	17.25	17.71	15.98	16.71	16.45	17.16	17.63
	6H	16.83	17.43	17.32	17.92	18.40	16.60	17.20	17.10	17.70	18.17
	8H	17.15	17.69	17.66	18.20	18.69	16.85	17.39	17.37	17.90	18.39
	12H	17.44	17.92	17.95	18.41	18.97	17.06	17.54	17.57	18.03	18.60
12H	4H	16.09	16.74	16.57	17.22	17.69	16.02	16.67	16.50	17.15	17.62
	6H	16.89	17.43	17.40	17.94	18.43	16.68	17.22	17.19	17.73	18.22
	8H	17.28	17.76	17.80	18.26	18.82	17.00	17.48	17.51	17.97	18.54