

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: P1058308

Luminaire Tested: S122RDR-H290D850-X4F0-XX-UDD-WVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1058308
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-19)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122RDR-H290D850-X4F0-XX-UDD-WVL-B
Description: DEFINE 2 BLACK REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

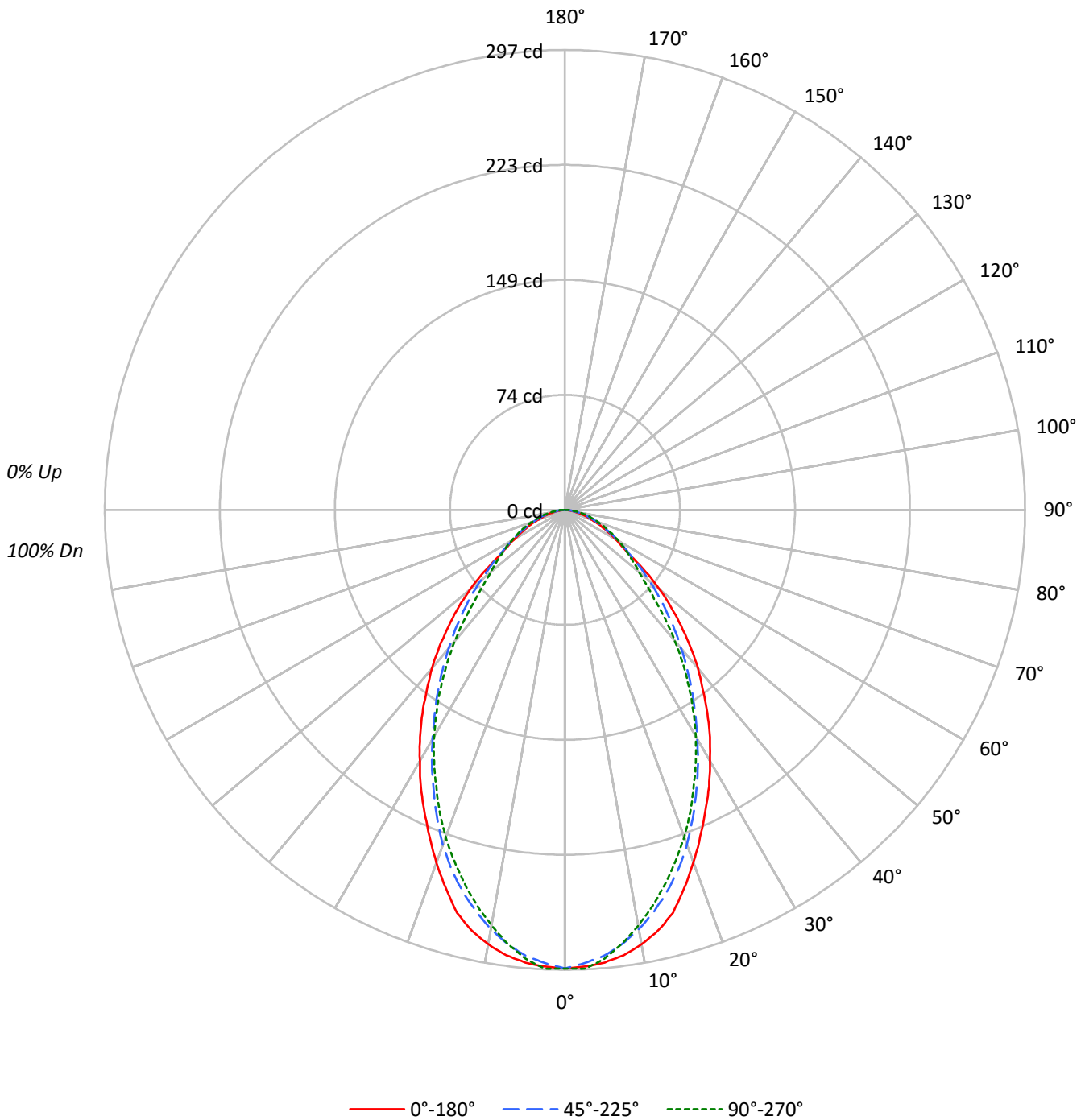
Lumens per Lamp: N/A
Luminaire Lumens: 449.9 lumens
Efficiency: N/A
Efficacy: 38.5 lumens/watt
Spacing Criteria (0/90/45): 1 / 0.92 / 1.02
Luminous Opening: Rectangular (W 0.15' x L: 4' x H: 0')
CIE Type: Direct

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	50	30	10	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100
1	111	107	104	101	108	105	102	99	101	98	96	97	95	93	93	92	90	88				88
2	103	96	91	86	100	94	89	85	91	87	83	88	84	81	85	82	79	77				77
3	95	87	80	74	93	85	79	74	82	77	73	80	75	71	77	73	70	68				68
4	89	79	71	65	87	77	70	65	75	69	64	73	68	63	71	66	63	61				61
5	83	72	64	58	81	71	63	58	69	62	57	67	61	57	65	60	56	54				54
6	77	66	58	52	75	65	57	52	63	56	52	61	56	51	60	55	51	49				49
7	72	60	53	47	71	60	52	47	58	52	47	57	51	47	56	50	46	44				44
8	68	56	48	43	66	55	48	43	54	47	43	53	47	43	52	46	42	41				41
9	64	52	45	40	63	51	44	39	50	44	39	49	43	39	48	43	39	37				37
10	60	48	41	36	59	48	41	36	47	41	36	46	40	36	45	40	36	34				34

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5466	5466	5466
5°	5435	5357	5390
10°	5338	5153	5108
15°	5145	4875	4776
20°	4762	4520	4418
25°	4369	4082	4005
30°	3991	3639	3599
35°	3613	3219	3145
40°	3216	2806	2659
45°	2769	2414	2129
50°	2288	2032	1788
55°	1654	1686	1609
60°	1377	1447	1461
65°	1175	1257	1340
70°	966	1122	1219
75°	806	941	1112
80°	606	754	999
85°	191	402	889

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2769 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	27.4	6.1
10°-20°	72.1	16.0
20°-30°	93.3	20.7
30°-40°	91.5	20.3
40°-50°	72.1	16.0
50°-60°	47.2	10.5
60°-70°	28.8	6.4
70°-80°	14.4	3.2
80°-90°	3.1	0.7
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°	192.8	42.9
0°-40°	284.3	63.2
0°-60°	403.7	89.7
0°-90°	449.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	449.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	296	296	296	296	296	
5°	293	293	289	291	291	28
15°	269	266	255	252	250	75
25°	215	208	200	200	197	99
35°	160	151	143	142	140	100
45°	106	100	92	86	82	82
55°	51	54	52	50	50	49
65°	27	27	29	30	31	27
75°	11	12	13	15	16	12
85°	1	1	2	3	4	2
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°	295.3	295.8	292.9	295.8	296.7
5°	293.4	293.4	289.2	291.0	291.0
7.5°	290.1	289.6	283.0	283.0	282.6
10°	284.9	283.0	275.0	273.6	272.6
12.5°	278.3	275.0	265.6	263.2	261.8
15°	269.3	265.6	255.2	251.9	250.0
17.5°	256.1	252.4	243.4	239.6	237.7
20°	242.5	236.8	230.2	226.9	225.0
22.5°	228.3	221.7	215.6	213.2	211.3
25°	214.6	207.6	200.5	199.5	196.7
27.5°	201.4	192.9	185.9	185.4	183.0
30°	187.3	178.3	170.8	171.2	168.9
32.5°	174.1	165.6	156.6	157.1	154.2
35°	160.4	151.4	142.9	142.5	139.6
37.5°	146.2	137.7	129.7	127.8	125.0
40°	133.5	125.0	116.5	113.2	110.4
42.5°	119.8	112.3	104.7	99.5	95.8
45°	106.1	99.5	92.5	85.9	81.6
47.5°	92.9	87.7	81.6	73.6	70.8
50°	79.7	75.9	70.8	63.7	62.3
52.5°	66.0	64.6	61.3	56.6	56.1
55°	51.4	54.2	52.4	50.5	50.0
57.5°	43.4	43.9	45.3	44.8	44.8
60°	37.3	37.3	39.2	39.6	39.6
62.5°	31.6	32.1	34.0	34.9	34.9
65°	26.9	27.4	28.8	30.2	30.7
67.5°	22.2	23.1	24.5	25.9	26.4
70°	17.9	18.9	20.8	22.2	22.6
72.5°	14.6	15.1	17.0	18.4	18.9
75°	11.3	11.8	13.2	15.1	15.6
77.5°	8.0	9.0	10.4	11.8	12.7
80°	5.7	6.1	7.1	9.0	9.4
82.5°	3.3	3.8	4.7	6.1	6.6
85°	0.9	1.4	1.9	3.3	4.2
87.5°	0.0	0.0	0.0	0.9	1.9
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	12.03	13.42	12.39	13.74	14.05	12.20	13.60	12.57	13.91	14.23
	3H	13.16	14.40	13.54	14.73	15.10	13.66	14.90	14.04	15.23	15.60
	4H	13.51	14.67	13.91	15.02	15.40	14.20	15.37	14.61	15.72	16.10
	6H	13.69	14.77	14.11	15.13	15.53	14.61	15.69	15.03	16.05	16.45
	8H	13.72	14.74	14.15	15.13	15.53	14.74	15.76	15.17	16.15	16.55
	12H	13.71	14.68	14.14	15.06	15.49	14.82	15.80	15.26	16.18	16.61
4H	2H	12.49	13.65	12.89	14.00	14.38	12.63	13.79	13.03	14.14	14.52
	3H	13.83	14.78	14.24	15.19	15.59	14.30	15.26	14.71	15.66	16.06
	4H	14.27	15.13	14.70	15.55	15.99	14.97	15.83	15.40	16.24	16.69
	6H	14.54	15.28	15.00	15.73	16.19	15.50	16.24	15.96	16.69	17.15
	8H	14.59	15.28	15.05	15.73	16.20	15.67	16.36	16.14	16.81	17.28
	12H	14.58	15.20	15.06	15.68	16.15	15.79	16.40	16.27	16.89	17.36
8H	4H	14.48	15.18	14.95	15.62	16.09	15.12	15.81	15.58	16.26	16.73
	6H	14.83	15.40	15.33	15.89	16.37	15.75	16.32	16.25	16.81	17.29
	8H	14.91	15.42	15.43	15.93	16.42	15.98	16.49	16.50	17.00	17.49
	12H	14.92	15.37	15.44	15.87	16.44	16.16	16.61	16.68	17.11	17.68
12H	4H	14.49	15.11	14.98	15.59	16.06	15.10	15.72	15.59	16.20	16.67
	6H	14.85	15.37	15.37	15.88	16.37	15.74	16.25	16.26	16.77	17.26
	8H	14.97	15.42	15.48	15.92	16.48	16.02	16.47	16.53	16.96	17.53