

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: P1058309

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

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1058309
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-H290D850-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: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

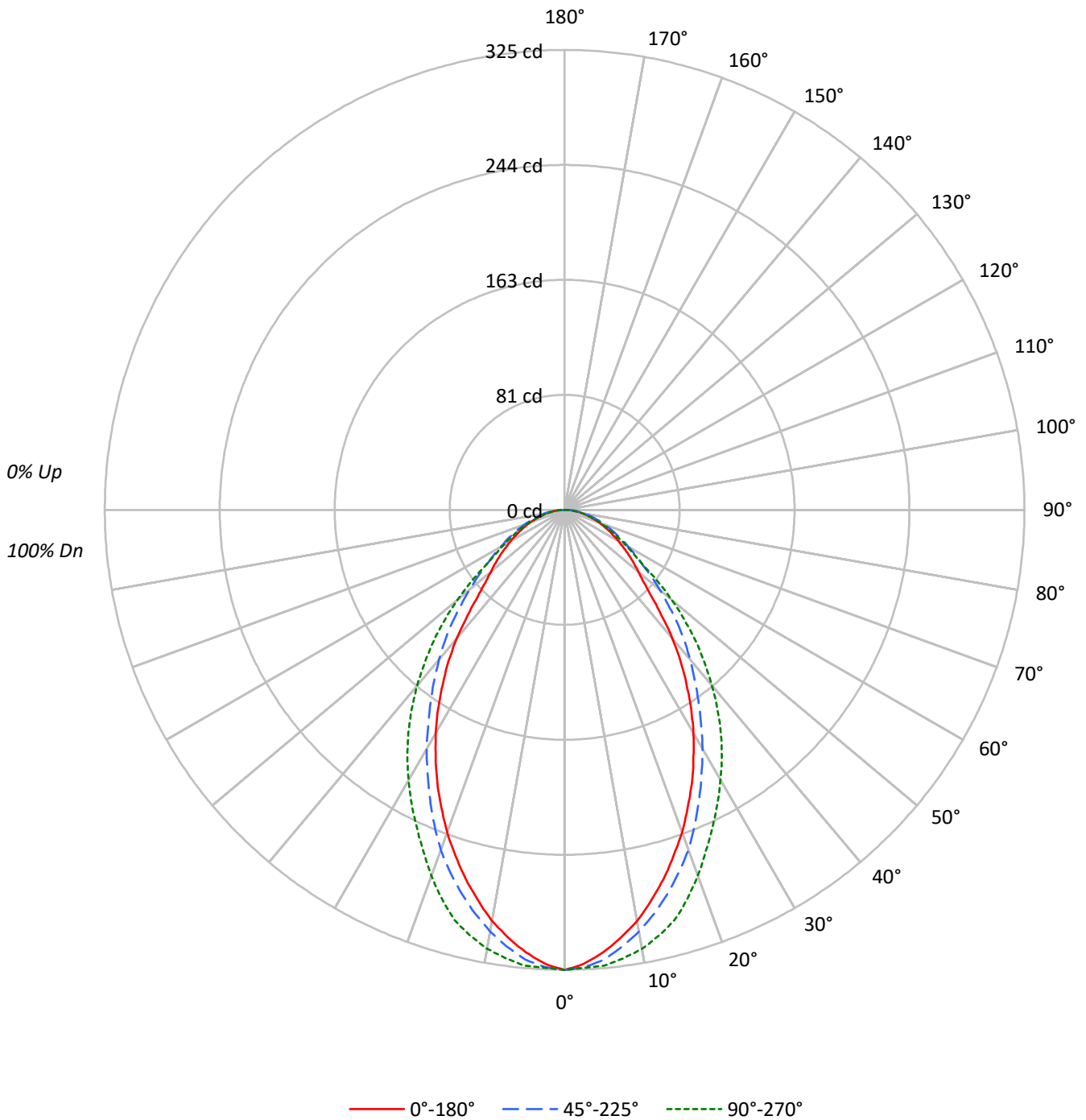
Lumens per Lamp: N/A
Luminaire Lumens: 529.6 lumens
Efficiency: N/A
Efficacy: 45.3 lumens/watt
Spacing Criteria (0/90/45): 0.91 / 1.05 / 1.05
Luminous Opening: Rectangular (W 0.15' x L: 4' x H: 0')
CIE Type: Direct

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	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°	6001	6001	6001
5°	5814	5911	5990
10°	5527	5670	5900
15°	5158	5366	5735
20°	4764	5023	5404
25°	4335	4585	5037
30°	3882	4155	4696
35°	3381	3710	4339
40°	2854	3319	3900
45°	2268	2931	3413
50°	1952	2520	2833
55°	1776	2155	2172
60°	1620	1915	1845
65°	1485	1733	1629
70°	1376	1602	1451
75°	1276	1511	1276
80°	1201	1456	1158
85°	1207	1503	995

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 3413 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	30.0	5.7
10°-20°	79.4	15.0
20°-30°	104.5	19.7
30°-40°	105.0	19.8
40°-50°	85.1	16.1
50°-60°	58.6	11.1
60°-70°	38.4	7.2
70°-80°	21.4	4.0
80°-90°	7.2	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°	213.8	40.4
0°-40°	318.9	60.2
0°-60°	462.6	87.3
0°-90°	529.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	529.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	325	325	325	325	325	
5°	314	320	319	320	323	29
15°	270	277	281	291	300	76
25°	213	219	225	235	247	98
35°	150	157	165	179	193	94
45°	87	97	112	122	131	69
55°	55	61	67	68	68	50
65°	34	41	40	38	37	34
75°	18	22	21	19	18	19
85°	6	8	7	6	5	6
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	325.2	325.2	325.2	325.2	325.2
2.5°	321.0	326.7	323.4	323.4	323.8
5°	313.9	320.0	319.1	320.5	323.4
7.5°	304.9	311.5	311.5	315.8	319.6
10°	295.0	301.6	302.6	309.2	314.9
12.5°	282.8	289.4	292.2	300.7	308.2
15°	270.0	276.6	280.9	291.3	300.2
17.5°	256.3	262.9	268.6	279.5	288.4
20°	242.6	248.8	255.8	265.3	275.2
22.5°	227.5	234.1	240.7	249.7	261.0
25°	212.9	218.6	225.2	235.1	247.4
27.5°	197.3	203.5	209.6	221.4	234.1
30°	182.2	188.3	195.0	207.2	220.4
32.5°	166.2	172.8	179.4	193.1	206.8
35°	150.1	157.2	164.7	179.4	192.6
37.5°	134.5	142.1	151.1	166.2	177.5
40°	118.5	126.5	137.8	151.1	161.9
42.5°	101.5	111.4	125.1	136.4	146.3
45°	86.9	96.8	112.3	122.3	130.8
47.5°	76.0	84.0	99.1	107.6	114.7
50°	68.0	74.1	87.8	93.9	98.7
52.5°	61.4	67.5	76.9	81.2	82.6
55°	55.2	61.4	67.0	68.4	67.5
57.5°	49.1	55.7	59.0	57.6	57.6
60°	43.9	51.0	51.9	50.0	50.0
62.5°	38.7	45.8	45.8	43.4	43.4
65°	34.0	40.6	39.7	37.8	37.3
67.5°	29.7	35.9	34.5	32.6	32.1
70°	25.5	31.2	29.7	27.4	26.9
72.5°	21.7	26.9	25.0	23.1	22.2
75°	17.9	22.2	21.2	18.9	17.9
77.5°	14.6	17.9	17.0	15.1	14.2
80°	11.3	14.2	13.7	11.8	10.9
82.5°	8.5	10.9	10.4	9.0	7.6
85°	5.7	7.6	7.1	6.1	4.7
87.5°	2.8	5.2	4.7	4.2	2.4
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	12.96	14.40	13.32	14.71	15.02	13.32	14.76	13.68	15.07	15.38
	3H	14.50	15.79	14.88	16.12	16.48	14.66	15.95	15.04	16.28	16.64
	4H	15.07	16.28	15.47	16.63	17.01	15.14	16.35	15.54	16.70	17.08
	6H	15.50	16.61	15.91	16.98	17.37	15.50	16.62	15.91	16.98	17.38
	8H	15.65	16.71	16.08	17.10	17.51	15.62	16.68	16.05	17.07	17.47
	12H	15.77	16.78	16.20	17.17	17.60	15.69	16.71	16.12	17.09	17.52
4H	2H	13.54	14.75	13.94	15.10	15.48	13.83	15.04	14.23	15.39	15.77
	3H	15.36	16.37	15.78	16.77	17.17	15.40	16.41	15.82	16.81	17.21
	4H	16.11	17.01	16.54	17.43	17.87	16.01	16.91	16.44	17.33	17.77
	6H	16.70	17.48	17.16	17.92	18.39	16.49	17.27	16.95	17.72	18.18
	8H	16.91	17.64	17.37	18.08	18.55	16.66	17.39	17.12	17.83	18.30
	12H	17.08	17.73	17.56	18.21	18.68	16.78	17.43	17.26	17.91	18.38
8H	4H	16.39	17.13	16.86	17.57	18.04	16.31	17.04	16.77	17.49	17.95
	6H	17.15	17.76	17.65	18.25	18.73	16.93	17.53	17.43	18.02	18.50
	8H	17.48	18.02	17.99	18.53	19.02	17.18	17.72	17.69	18.23	18.72
	12H	17.76	18.24	18.28	18.74	19.30	17.39	17.87	17.90	18.36	18.93
12H	4H	16.41	17.07	16.90	17.55	18.02	16.34	17.00	16.83	17.48	17.95
	6H	17.21	17.75	17.73	18.27	18.76	17.00	17.55	17.52	18.06	18.55
	8H	17.61	18.09	18.12	18.58	19.15	17.33	17.81	17.84	18.30	18.87