

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: P1058310

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

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1058310
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-H290D850-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: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

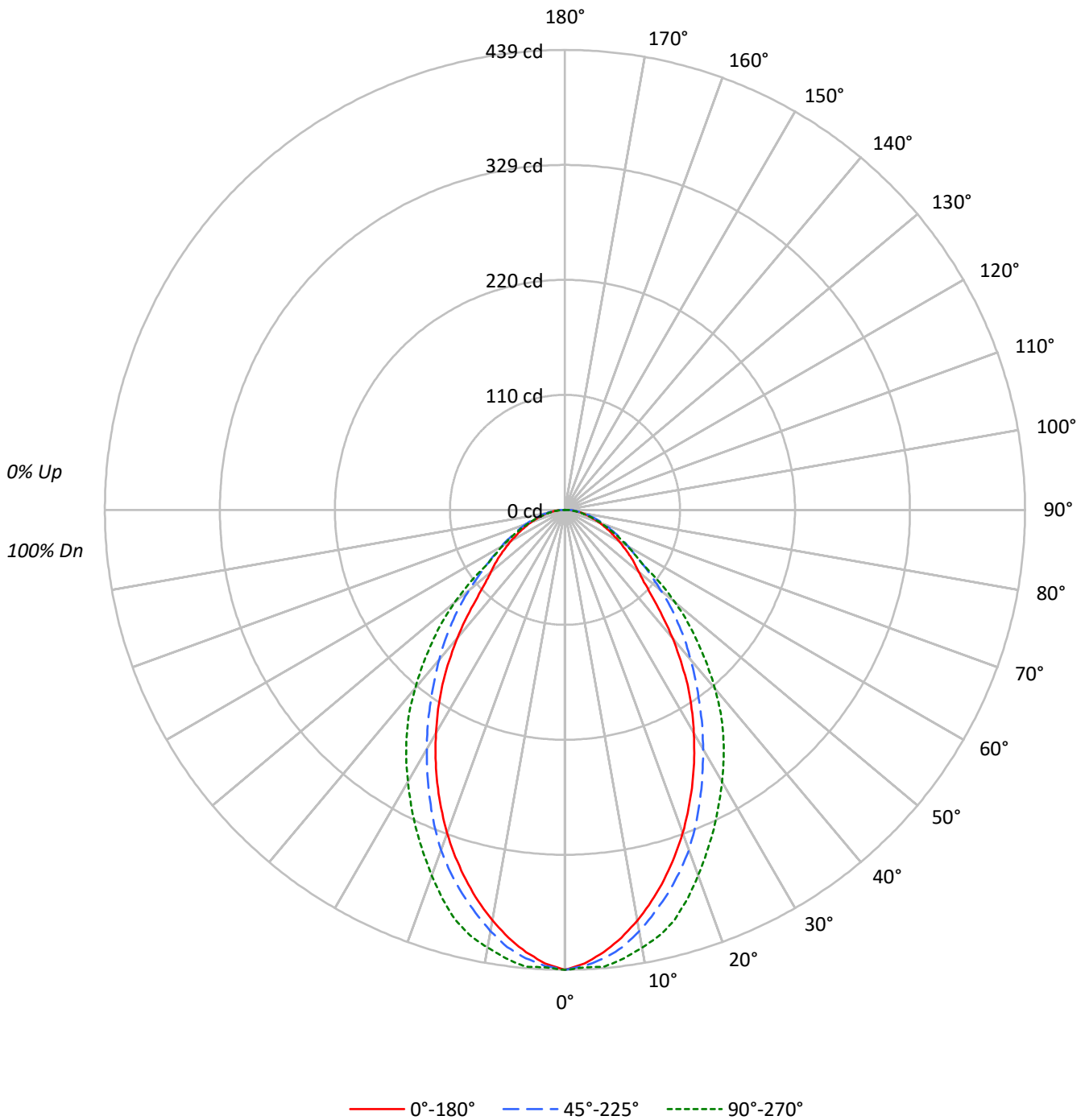
Lumens per Lamp: N/A
Luminaire Lumens: 715.8 lumens
Efficiency: N/A
Efficacy: 61.2 lumens/watt
Spacing Criteria (0/90/45): 0.91 / 1.05 / 1.05
Luminous Opening: Rectangular (W 0.15' x L: 4' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P1058310

CATALOG NUMBER: S122RDR-H290D850-X4F0-XX-UDD-WVL-W

Luminous Intensity Polar Plot



TEST NUMBER: P1058310

CATALOG NUMBER: S122RDR-H290D850-X4F0-XX-UDD-WVL-W

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	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	39	35	46	39	35	45	39	35	44	38	34	33				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8101	8101	8101
5°	7852	7957	8106
10°	7457	7650	7952
15°	6980	7242	7737
20°	6453	6786	7295
25°	5864	6210	6843
30°	5239	5612	6388
35°	4593	5030	5933
40°	3844	4492	5355
45°	3079	3980	4682
50°	2644	3428	3930
55°	2416	2915	2902
60°	2196	2580	2528
65°	2000	2310	2205
70°	1834	2115	1958
75°	1718	1953	1718
80°	1605	1806	1509
85°	1609	1905	1291

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 4682 cd/sqm



TEST NUMBER: P1058310

CATALOG NUMBER: S122RDR-H290D850-X4F0-XX-UDD-WVL-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	40.5	5.7
10°-20°	107.3	15.0
20°-30°	141.5	19.8
30°-40°	142.5	19.9
40°-50°	116.0	16.2
50°-60°	79.1	11.0
60°-70°	51.3	7.2
70°-80°	28.3	3.9
80°-90°	9.2	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°	289.3	40.4
0°-40°	431.9	60.3
0°-60°	626.9	87.6
0°-90°	715.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	715.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	439	439	439	439	439	
5°	424	432	430	433	438	40
15°	365	375	379	395	405	102
25°	288	297	305	319	336	132
35°	204	214	223	243	263	127
45°	118	133	152	166	179	93
55°	75	83	91	91	90	67
65°	46	54	53	50	50	46
75°	24	30	27	24	24	26
85°	8	10	9	7	6	8
90°	0	0	0	0	0	

TEST NUMBER: P1058310

CATALOG NUMBER: S122RDR-H290D850-X4F0-XX-UDD-WVL-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	439.0	439.0	439.0	439.0	439.0
2.5°	433.4	440.4	435.7	436.2	437.1
5°	423.9	431.9	429.6	433.4	437.6
7.5°	412.1	420.1	421.1	426.8	431.9
10°	398.0	406.9	408.3	416.8	424.4
12.5°	382.4	392.3	394.2	406.5	416.4
15°	365.4	374.8	379.1	394.7	405.0
17.5°	347.4	356.4	363.0	377.2	389.0
20°	328.6	337.1	345.6	358.3	371.5
22.5°	308.3	317.7	325.7	338.5	353.6
25°	288.0	297.4	305.0	318.6	336.1
27.5°	267.2	276.6	284.2	298.8	317.7
30°	245.9	255.9	263.4	279.9	299.8
32.5°	225.2	235.1	243.6	261.1	281.8
35°	203.9	214.3	223.3	242.6	263.4
37.5°	181.3	193.1	204.4	223.8	244.1
40°	159.6	172.8	186.5	204.4	222.3
42.5°	137.8	152.5	169.5	184.6	201.1
45°	118.0	132.7	152.5	165.7	179.4
47.5°	102.4	114.7	136.0	146.8	159.1
50°	92.1	100.6	119.4	127.9	136.9
52.5°	83.6	90.6	103.9	109.5	114.2
55°	75.1	82.6	90.6	91.1	90.2
57.5°	66.6	75.1	79.3	76.0	77.9
60°	59.5	68.0	69.9	66.6	68.5
62.5°	51.9	61.4	61.4	58.1	59.0
65°	45.8	54.3	52.9	50.0	50.5
67.5°	39.7	48.2	45.8	43.0	43.0
70°	34.0	42.0	39.2	36.3	36.3
72.5°	28.8	35.4	33.5	30.2	29.7
75°	24.1	29.7	27.4	24.5	24.1
77.5°	19.4	24.1	22.2	19.8	18.9
80°	15.1	19.4	17.0	15.1	14.2
82.5°	11.3	14.6	12.7	10.9	9.9
85°	7.6	9.9	9.0	7.1	6.1
87.5°	3.8	6.6	5.7	4.7	3.8
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P1058310
 CATALOG NUMBER: S122RDR-H290D850-X4F0-XX-UDD-WVL-W

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	13.99	15.43	14.36	15.74	16.06	14.23	15.67	14.60	15.99	16.30
	3H	15.52	16.81	15.90	17.13	17.50	15.59	16.88	15.97	17.21	17.57
	4H	16.08	17.29	16.48	17.64	18.02	16.07	17.28	16.47	17.63	18.01
	6H	16.51	17.62	16.92	17.99	18.38	16.42	17.53	16.84	17.90	18.29
	8H	16.66	17.71	17.09	18.10	18.51	16.53	17.59	16.96	17.98	18.38
	12H	16.77	17.78	17.20	18.16	18.59	16.60	17.61	17.03	17.99	18.42
4H	2H	14.56	15.77	14.96	16.12	16.50	14.76	15.96	15.16	16.31	16.69
	3H	16.37	17.36	16.78	17.77	18.17	16.33	17.33	16.74	17.73	18.13
	4H	17.11	18.00	17.54	18.42	18.86	16.93	17.82	17.36	18.24	18.68
	6H	17.69	18.47	18.15	18.92	19.38	17.40	18.17	17.85	18.62	19.08
	8H	17.90	18.63	18.37	19.08	19.55	17.55	18.27	18.01	18.72	19.19
	12H	18.07	18.72	18.55	19.20	19.67	17.65	18.30	18.14	18.78	19.26
8H	4H	17.37	18.10	17.84	18.55	19.01	17.22	17.95	17.68	18.39	18.86
	6H	18.13	18.73	18.63	19.22	19.70	17.81	18.41	18.31	18.90	19.38
	8H	18.45	18.99	18.97	19.50	19.99	18.03	18.57	18.55	19.08	19.57
	12H	18.73	19.21	19.25	19.70	20.27	18.21	18.69	18.72	19.18	19.75
12H	4H	17.39	18.04	17.87	18.52	18.99	17.25	17.90	17.73	18.38	18.85
	6H	18.17	18.71	18.69	19.23	19.72	17.87	18.42	18.39	18.93	19.42
	8H	18.57	19.05	19.08	19.54	20.11	18.16	18.64	18.67	19.13	19.70