

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: P1058390

Luminaire Tested: S122RDR-H485D850-X4F0-XX-UDD-WVL-S

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1058390
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-H485D850-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

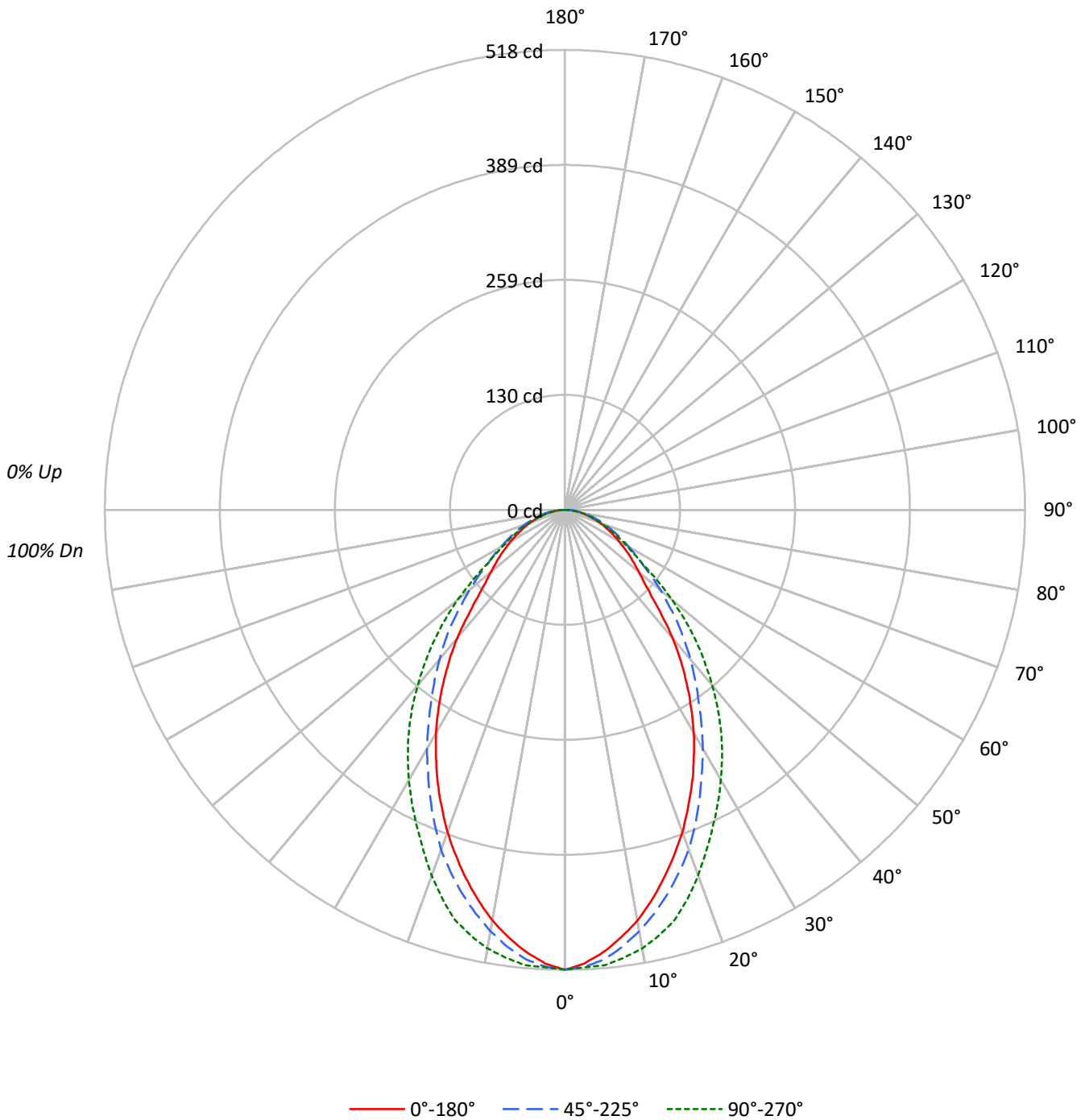
Lumens per Lamp: N/A
Luminaire Lumens: 843.4 lumens
Efficiency: N/A
Efficacy: 48.5 lumens/watt
Spacing Criteria (0/90/45): 0.91 / 1.05 / 1.05
Luminous Opening: Rectangular (W 0.15' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 17.4
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: P1058390

CATALOG NUMBER: S122RDR-H485D850-X4F0-XX-UDD-WVL-S

Luminous Intensity Polar Plot





TEST NUMBER: P1058390

CATALOG NUMBER: S122RDR-H485D850-X4F0-XX-UDD-WVL-S

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	110	106	103	99	108	104	101	98	100	97	95	96	94	92	93	91	89	87			87	
2	102	95	89	84	100	93	88	83	90	85	81	87	83	79	84	80	78	76			76	
3	94	85	78	73	92	84	77	72	81	75	71	78	73	69	76	72	68	66			66	
4	88	77	69	63	85	76	69	63	73	67	62	71	66	61	69	64	61	59			59	
5	81	70	62	56	79	69	61	56	67	60	55	65	59	55	63	58	54	52			52	
6	76	64	56	50	74	63	56	50	61	55	50	60	54	49	58	53	49	47			47	
7	71	59	51	45	69	58	51	45	57	50	45	55	49	45	54	49	44	43			43	
8	67	54	47	41	65	54	46	41	52	46	41	51	45	41	50	45	41	39			39	
9	63	50	43	38	61	50	43	38	49	42	38	48	42	37	47	41	37	36			36	
10	59	47	40	35	58	46	39	35	45	39	35	45	39	34	44	38	34	33			33	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9557	9557	9557
5°	9260	9413	9537
10°	8803	9029	9395
15°	8214	8545	9133
20°	7588	8000	8607
25°	6902	7301	8020
30°	6183	6616	7481
35°	5386	5911	6909
40°	4545	5287	6210
45°	3609	4669	5433
50°	3106	4013	4510
55°	2831	3433	3458
60°	2580	3052	2941
65°	2362	2755	2594
70°	2190	2557	2309
75°	2039	2410	2039
80°	1913	2317	1838
85°	1905	2392	1588

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 5433 cd/sqm



TEST NUMBER: P1058390

CATALOG NUMBER: S122RDR-H485D850-X4F0-XX-UDD-WVL-S

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	47.8	5.7
10°-20°	126.4	15.0
20°-30°	166.3	19.7
30°-40°	167.3	19.8
40°-50°	135.6	16.1
50°-60°	93.4	11.1
60°-70°	61.1	7.2
70°-80°	34.1	4.0
80°-90°	11.5	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°	340.5	40.4
0°-40°	507.8	60.2
0°-60°	736.7	87.4
0°-90°	843.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	843.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	518	518	518	518	518	
5°	500	510	508	510	515	47
15°	430	440	447	464	478	120
25°	339	348	359	374	394	155
35°	239	250	262	286	307	149
45°	138	154	179	195	208	109
55°	88	98	107	109	108	79
65°	54	65	63	60	59	54
75°	29	35	34	30	29	31
85°	9	12	11	10	8	10
90°	0	0	0	0	0	

TEST NUMBER: P1058390

CATALOG NUMBER: S122RDR-H485D850-X4F0-XX-UDD-WVL-S

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	517.9	517.9	517.9	517.9	517.9
2.5°	511.2	520.2	514.9	514.9	515.7
5°	499.9	509.7	508.2	510.4	514.9
7.5°	485.6	496.1	496.1	502.9	508.9
10°	469.8	480.4	481.9	492.4	501.4
12.5°	450.3	460.8	465.3	478.9	490.9
15°	430.0	440.5	447.3	463.8	478.1
17.5°	408.2	418.7	427.7	445.0	459.3
20°	386.4	396.2	407.4	422.5	438.3
22.5°	362.3	372.9	383.4	397.7	415.7
25°	339.0	348.1	358.6	374.4	393.9
27.5°	314.2	324.0	333.8	352.6	372.9
30°	290.2	299.9	310.5	330.0	351.1
32.5°	264.6	275.1	285.7	307.5	329.3
35°	239.1	250.3	262.4	285.7	306.7
37.5°	214.2	226.3	240.6	264.6	282.7
40°	188.7	201.5	219.5	240.6	257.8
42.5°	161.6	177.4	199.2	217.2	233.0
45°	138.3	154.1	178.9	194.7	208.2
47.5°	121.0	133.8	157.9	171.4	182.7
50°	108.2	118.0	139.8	149.6	157.1
52.5°	97.7	107.5	122.5	129.3	131.6
55°	88.0	97.7	106.7	109.0	107.5
57.5°	78.2	88.7	94.0	91.7	91.7
60°	69.9	81.2	82.7	79.7	79.7
62.5°	61.6	72.9	72.9	69.2	69.2
65°	54.1	64.6	63.1	60.1	59.4
67.5°	47.4	57.1	54.9	51.9	51.1
70°	40.6	49.6	47.4	43.6	42.8
72.5°	34.6	42.8	39.8	36.8	35.3
75°	28.6	35.3	33.8	30.1	28.6
77.5°	23.3	28.6	27.1	24.1	22.6
80°	18.0	22.6	21.8	18.8	17.3
82.5°	13.5	17.3	16.5	14.3	12.0
85°	9.0	12.0	11.3	9.8	7.5
87.5°	4.5	8.3	7.5	6.8	3.8
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P1058390
 CATALOG NUMBER: S122RDR-H485D850-X4F0-XX-UDD-WVL-S

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	14.57	16.01	14.94	16.33	16.64	14.93	16.37	15.30	16.68	17.00
	3H	16.12	17.41	16.50	17.73	18.10	16.28	17.57	16.66	17.90	18.26
	4H	16.69	17.90	17.09	18.25	18.63	16.76	17.97	17.16	18.32	18.70
	6H	17.12	18.23	17.53	18.60	18.99	17.12	18.23	17.53	18.60	18.99
	8H	17.27	18.33	17.70	18.72	19.12	17.23	18.29	17.66	18.68	19.08
	12H	17.39	18.40	17.82	18.78	19.21	17.31	18.32	17.74	18.70	19.13
4H	2H	15.16	16.37	15.56	16.71	17.09	15.44	16.65	15.85	17.00	17.38
	3H	16.98	17.98	17.39	18.38	18.78	17.02	18.02	17.43	18.42	18.82
	4H	17.73	18.63	18.16	19.04	19.48	17.62	18.52	18.06	18.94	19.38
	6H	18.31	19.10	18.77	19.54	20.00	18.11	18.89	18.57	19.33	19.79
	8H	18.52	19.25	18.99	19.70	20.17	18.27	19.00	18.74	19.45	19.92
	12H	18.69	19.34	19.17	19.82	20.29	18.39	19.04	18.87	19.52	20.00
8H	4H	18.01	18.74	18.48	19.19	19.66	17.92	18.66	18.39	19.10	19.57
	6H	18.77	19.37	19.27	19.87	20.34	18.54	19.15	19.04	19.64	20.12
	8H	19.09	19.63	19.61	20.15	20.64	18.79	19.33	19.31	19.85	20.34
	12H	19.38	19.86	19.89	20.35	20.92	19.00	19.48	19.51	19.98	20.54
12H	4H	18.03	18.68	18.51	19.16	19.63	17.96	18.61	18.44	19.09	19.56
	6H	18.83	19.37	19.34	19.88	20.37	18.62	19.16	19.14	19.67	20.16
	8H	19.23	19.71	19.74	20.20	20.77	18.94	19.42	19.45	19.91	20.48