

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: P1058380

Luminaire Tested: S122RDR-H485D840-X4F0-XX-UDD-WVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1058380
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-H485D840-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: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

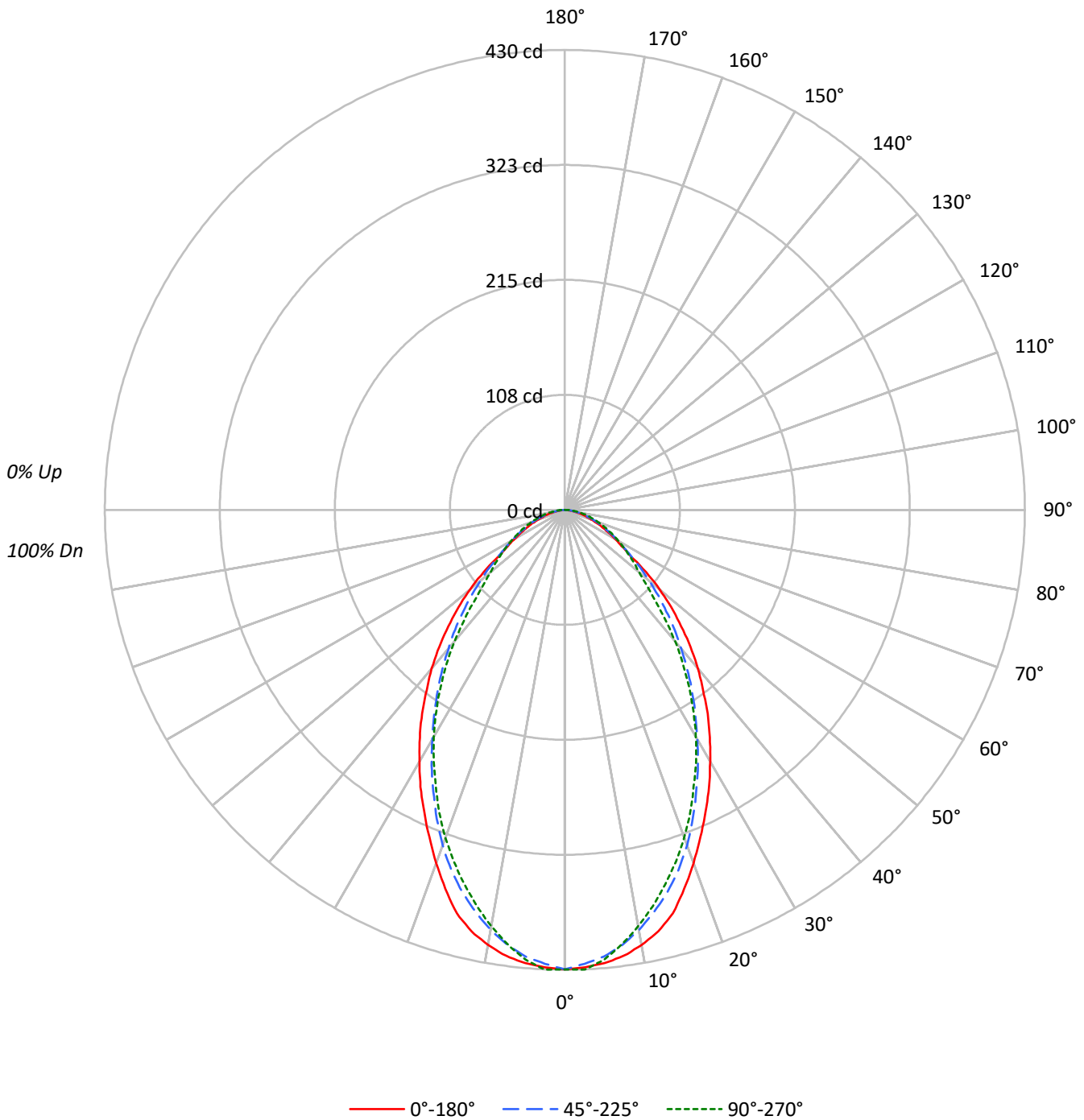
Lumens per Lamp: N/A
Luminaire Lumens: 652.4 lumens
Efficiency: N/A
Efficacy: 37.5 lumens/watt
Spacing Criteria (0/90/45): 1 / 0.92 / 1.02
Luminous Opening: Rectangular (W 0.15' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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: P1058380

CATALOG NUMBER: S122RDR-H485D840-X4F0-XX-UDD-WVL-B

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7927	7927	7927
5°	7882	7767	7819
10°	7742	7472	7409
15°	7462	7070	6925
20°	6904	6555	6407
25°	6336	5919	5807
30°	5787	5276	5218
35°	5240	4670	4562
40°	4663	4071	3856
45°	4016	3499	3087
50°	3319	2945	2592
55°	2400	2442	2332
60°	1993	2096	2122
65°	1703	1821	1943
70°	1403	1624	1770
75°	1169	1369	1611
80°	871	1095	1456
85°	296	572	1313

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4016 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	39.7	6.1
10°-20°	104.6	16.0
20°-30°	135.3	20.7
30°-40°	132.7	20.3
40°-50°	104.5	16.0
50°-60°	68.5	10.5
60°-70°	41.7	6.4
70°-80°	20.9	3.2
80°-90°	4.5	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°	279.6	42.9
0°-40°	412.4	63.2
0°-60°	585.4	89.7
0°-90°	652.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	652.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	430	430	430	430	430	
5°	426	426	419	422	422	40
15°	391	385	370	365	362	109
25°	311	301	291	289	285	143
35°	233	220	207	207	202	145
45°	154	144	134	124	118	119
55°	75	79	76	73	72	71
65°	39	40	42	44	44	39
75°	16	17	19	22	23	17
85°	1	2	3	5	6	3
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	429.6	429.6	429.6	429.6	429.6
2.5°	428.2	428.9	424.8	428.9	430.3
5°	425.5	425.5	419.3	422.1	422.1
7.5°	420.7	420.0	410.4	410.4	409.7
10°	413.2	410.4	398.8	396.7	395.4
12.5°	403.6	398.8	385.1	381.7	379.6
15°	390.6	385.1	370.1	365.3	362.5
17.5°	371.4	366.0	353.0	347.5	344.8
20°	351.6	343.4	333.8	329.0	326.3
22.5°	331.1	321.5	312.6	309.2	306.5
25°	311.2	301.0	290.7	289.4	285.2
27.5°	292.1	279.8	269.5	268.8	265.4
30°	271.6	258.6	247.6	248.3	244.9
32.5°	252.4	240.1	227.1	227.8	223.7
35°	232.6	219.6	207.3	206.6	202.5
37.5°	212.1	199.7	188.1	185.4	181.3
40°	193.6	181.3	169.0	164.2	160.1
42.5°	173.7	162.8	151.9	144.3	138.9
45°	153.9	144.3	134.1	124.5	118.3
47.5°	134.8	127.2	118.3	106.7	102.6
50°	115.6	110.1	102.6	92.3	90.3
52.5°	95.8	93.7	88.9	82.1	81.4
55°	74.6	78.7	75.9	73.2	72.5
57.5°	62.9	63.6	65.7	65.0	65.0
60°	54.0	54.0	56.8	57.5	57.5
62.5°	45.8	46.5	49.3	50.6	50.6
65°	39.0	39.7	41.7	43.8	44.5
67.5°	32.2	33.5	35.6	37.6	38.3
70°	26.0	27.4	30.1	32.2	32.8
72.5°	21.2	21.9	24.6	26.7	27.4
75°	16.4	17.1	19.2	21.9	22.6
77.5°	11.6	13.0	15.0	17.1	18.5
80°	8.2	8.9	10.3	13.0	13.7
82.5°	4.8	5.5	6.8	8.9	9.6
85°	1.4	2.1	2.7	4.8	6.2
87.5°	0.0	0.0	0.0	1.4	2.7
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	13.31	14.71	13.68	15.02	15.34	13.50	14.89	13.86	15.21	15.52
	3H	14.45	15.69	14.83	16.02	16.38	14.96	16.20	15.33	16.53	16.89
	4H	14.80	15.96	15.20	16.31	16.69	15.50	16.66	15.90	17.01	17.39
	6H	14.98	16.05	15.40	16.42	16.82	15.91	16.98	16.33	17.35	17.74
	8H	15.01	16.03	15.44	16.42	16.82	16.04	17.06	16.47	17.45	17.85
	12H	14.99	15.97	15.43	16.35	16.78	16.12	17.10	16.56	17.48	17.91
4H	2H	13.77	14.93	14.17	15.28	15.67	13.92	15.09	14.32	15.44	15.82
	3H	15.11	16.07	15.52	16.47	16.88	15.59	16.55	16.01	16.95	17.36
	4H	15.56	16.41	15.99	16.83	17.27	16.26	17.12	16.69	17.54	17.98
	6H	15.83	16.57	16.29	17.02	17.48	16.80	17.54	17.26	17.98	18.45
	8H	15.87	16.57	16.34	17.01	17.48	16.96	17.66	17.43	18.10	18.57
	12H	15.87	16.48	16.35	16.96	17.44	17.09	17.70	17.57	18.18	18.66
8H	4H	15.77	16.46	16.24	16.91	17.38	16.41	17.10	16.88	17.55	18.02
	6H	16.12	16.69	16.62	17.18	17.66	17.04	17.61	17.54	18.10	18.58
	8H	16.20	16.71	16.71	17.22	17.71	17.28	17.79	17.79	18.30	18.79
	12H	16.21	16.66	16.73	17.16	17.73	17.46	17.91	17.97	18.41	18.97
12H	4H	15.78	16.40	16.27	16.88	17.35	16.40	17.01	16.88	17.49	17.97
	6H	16.14	16.65	16.66	17.17	17.66	17.03	17.55	17.55	18.06	18.55
	8H	16.26	16.71	16.77	17.20	17.77	17.31	17.76	17.82	18.25	18.82