

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: P1058456

Luminaire Tested: S122RDR-H675D840-X4F0-XX-UDD-BVL-S

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1058456
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-60)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122RDR-H675D840-X4F0-XX-UDD-BVL-S
Description: DEFINE 2 SILVER REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

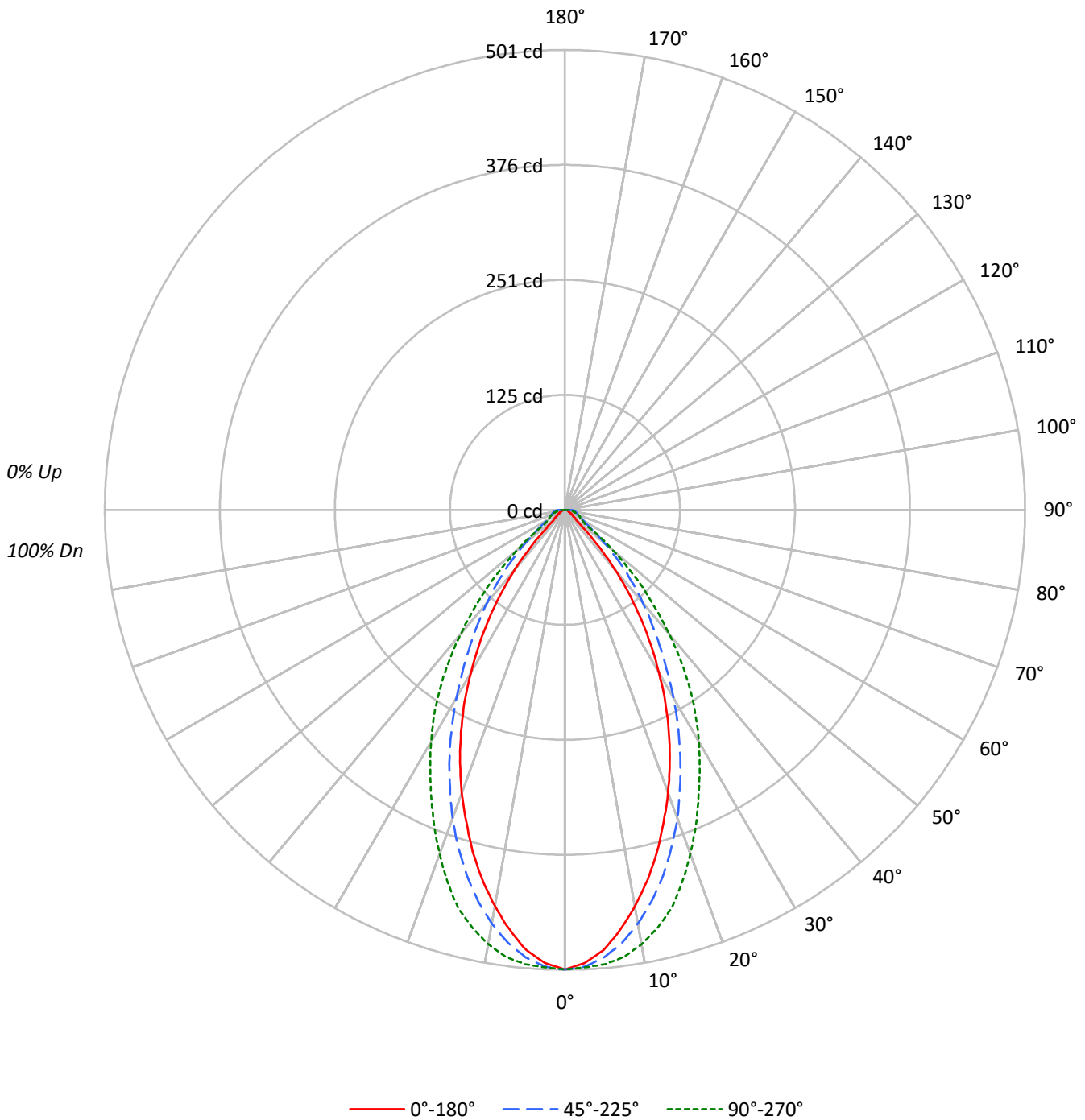
Lumens per Lamp: N/A
Luminaire Lumens: 539.8 lumens
Efficiency: N/A
Efficacy: 23.0 lumens/watt
Spacing Criteria (0/90/45): 0.79 / 0.95 / 0.9
Luminous Opening: Rectangular (W 0.15' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 23.5
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	112	108	105	102	109	106	103	101	102	100	97	98	96	95	95	93	92	90				90
2	105	99	94	90	102	97	92	89	94	90	87	91	87	85	88	85	83	81				81
3	98	91	85	80	96	89	84	79	86	82	78	84	80	77	82	78	75	74				74
4	92	83	77	72	90	82	76	71	80	75	70	78	73	70	76	72	69	67				67
5	87	77	70	65	85	76	70	65	74	69	64	72	68	64	71	67	63	61				61
6	82	72	65	60	80	71	64	59	69	63	59	68	63	59	66	62	58	57				57
7	77	67	60	55	76	66	59	55	65	59	54	63	58	54	62	57	54	52				52
8	73	62	55	51	72	62	55	51	61	55	50	59	54	50	58	54	50	48				48
9	69	58	52	47	68	58	51	47	57	51	47	56	51	47	55	50	47	45				45
10	66	55	48	44	65	54	48	44	54	48	44	53	47	44	52	47	44	42				42

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9241	9241	9241
5°	8921	9063	9204
10°	8214	8574	9005
15°	7385	7880	8577
20°	6443	7026	7837
25°	5450	6055	7012
30°	4353	5028	6213
35°	3219	4041	5339
40°	2033	3165	4252
45°	801	2377	3129
50°	413	1596	1929
55°	341	1049	865
60°	247	849	779
65°	210	795	795
70°	205	825	777
75°	271	955	820
80°	404	1222	914
85°	614	2032	1228

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 87.5°
 Luminance: 4061 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	45.8	8.5
10°-20°	115.7	21.4
20°-30°	137.5	25.5
30°-40°	114.4	21.2
40°-50°	63.9	11.8
50°-60°	25.8	4.8
60°-70°	16.5	3.1
70°-80°	12.4	2.3
80°-90°	7.9	1.5
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°	299.0	55.4
0°-40°	413.4	76.6
0°-60°	503.0	93.2
0°-90°	539.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	539.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	501	501	501	501	501	
5°	482	490	489	493	497	45
15°	387	398	412	434	449	108
25°	268	278	297	320	344	122
35°	143	156	179	209	237	89
45°	31	52	91	106	120	29
55°	11	22	33	32	27	9
65°	5	19	18	17	18	5
75°	4	13	13	12	12	4
85°	3	9	10	9	6	3
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	500.8	500.8	500.8	500.8	500.8
2.5°	494.1	501.7	497.9	497.9	498.9
5°	481.6	490.2	489.3	493.1	496.9
7.5°	461.4	471.0	475.8	484.5	491.2
10°	438.4	449.0	457.6	471.0	480.6
12.5°	413.5	424.0	436.5	453.8	466.2
15°	386.6	398.1	412.5	433.6	449.0
17.5°	356.9	369.3	385.7	408.7	425.0
20°	328.1	340.6	357.8	380.9	399.1
22.5°	298.4	308.9	327.1	350.2	372.2
25°	267.7	278.2	297.4	320.4	344.4
27.5°	237.0	247.5	266.7	290.7	317.5
30°	204.3	215.9	236.0	262.9	291.6
32.5°	173.6	185.2	206.3	236.0	264.8
35°	142.9	156.4	179.4	209.1	237.0
37.5°	113.2	128.6	154.5	182.3	207.2
40°	84.4	100.7	131.4	155.4	176.5
42.5°	55.6	74.8	110.3	130.5	146.8
45°	30.7	51.8	91.1	106.5	119.9
47.5°	17.3	33.6	72.0	84.4	92.1
50°	14.4	24.9	55.6	64.3	67.2
52.5°	11.5	23.0	42.2	47.0	45.1
55°	10.6	22.1	32.6	31.7	26.9
57.5°	8.6	22.1	25.9	23.0	23.0
60°	6.7	21.1	23.0	20.1	21.1
62.5°	5.8	20.1	21.1	19.2	19.2
65°	4.8	19.2	18.2	17.3	18.2
67.5°	3.8	17.3	17.3	16.3	16.3
70°	3.8	16.3	15.3	14.4	14.4
72.5°	3.8	14.4	14.4	13.4	13.4
75°	3.8	13.4	13.4	12.5	11.5
77.5°	3.8	11.5	12.5	11.5	10.6
80°	3.8	10.6	11.5	10.6	8.6
82.5°	3.8	9.6	10.6	9.6	7.7
85°	2.9	8.6	9.6	8.6	5.8
87.5°	2.9	8.6	9.6	7.7	4.8
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	6.10	7.32	6.46	7.63	7.95	7.16	8.38	7.52	8.69	9.00
	3H	7.43	8.51	7.81	8.84	9.21	9.19	10.28	9.57	10.61	10.97
	4H	7.99	9.00	8.40	9.36	9.74	10.15	11.16	10.55	11.51	11.89
	6H	8.56	9.49	8.97	9.86	10.25	11.10	12.03	11.51	12.40	12.79
	8H	8.88	9.76	9.31	10.15	10.56	11.55	12.43	11.98	12.82	13.22
	12H	9.19	10.03	9.62	10.41	10.84	11.97	12.81	12.41	13.20	13.63
4H	2H	7.06	8.07	7.46	8.42	8.80	7.83	8.85	8.24	9.20	9.58
	3H	9.08	9.91	9.49	10.32	10.72	10.12	10.95	10.53	11.36	11.76
	4H	10.16	10.90	10.59	11.32	11.77	11.27	12.02	11.71	12.44	12.88
	6H	11.03	11.67	11.49	12.12	12.59	12.45	13.09	12.91	13.54	14.01
	8H	11.44	12.04	11.91	12.49	12.96	13.01	13.61	13.48	14.06	14.53
	12H	11.82	12.35	12.30	12.84	13.31	13.56	14.09	14.04	14.57	15.05
8H	4H	10.93	11.53	11.40	11.98	12.45	11.82	12.43	12.29	12.88	13.35
	6H	12.27	12.77	12.78	13.27	13.75	13.28	13.78	13.79	14.28	14.76
	8H	12.99	13.43	13.51	13.95	14.44	14.05	14.49	14.57	15.01	15.50
	12H	13.68	14.07	14.19	14.57	15.14	14.84	15.23	15.35	15.72	16.30
12H	4H	11.09	11.62	11.57	12.10	12.58	11.93	12.46	12.42	12.95	13.42
	6H	12.60	13.04	13.12	13.56	14.05	13.51	13.96	14.03	14.47	14.97
	8H	13.50	13.89	14.01	14.39	14.96	14.42	14.81	14.93	15.31	15.88