

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: P1059410

Luminaire Tested: S123RDR-H1000D830-X4F0-XX-UDD-BVL-S

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059410
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-69)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDR-H1000D830-X4F0-XX-UDD-BVL-S
Description: DEFINE 3 SILVER REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE
LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

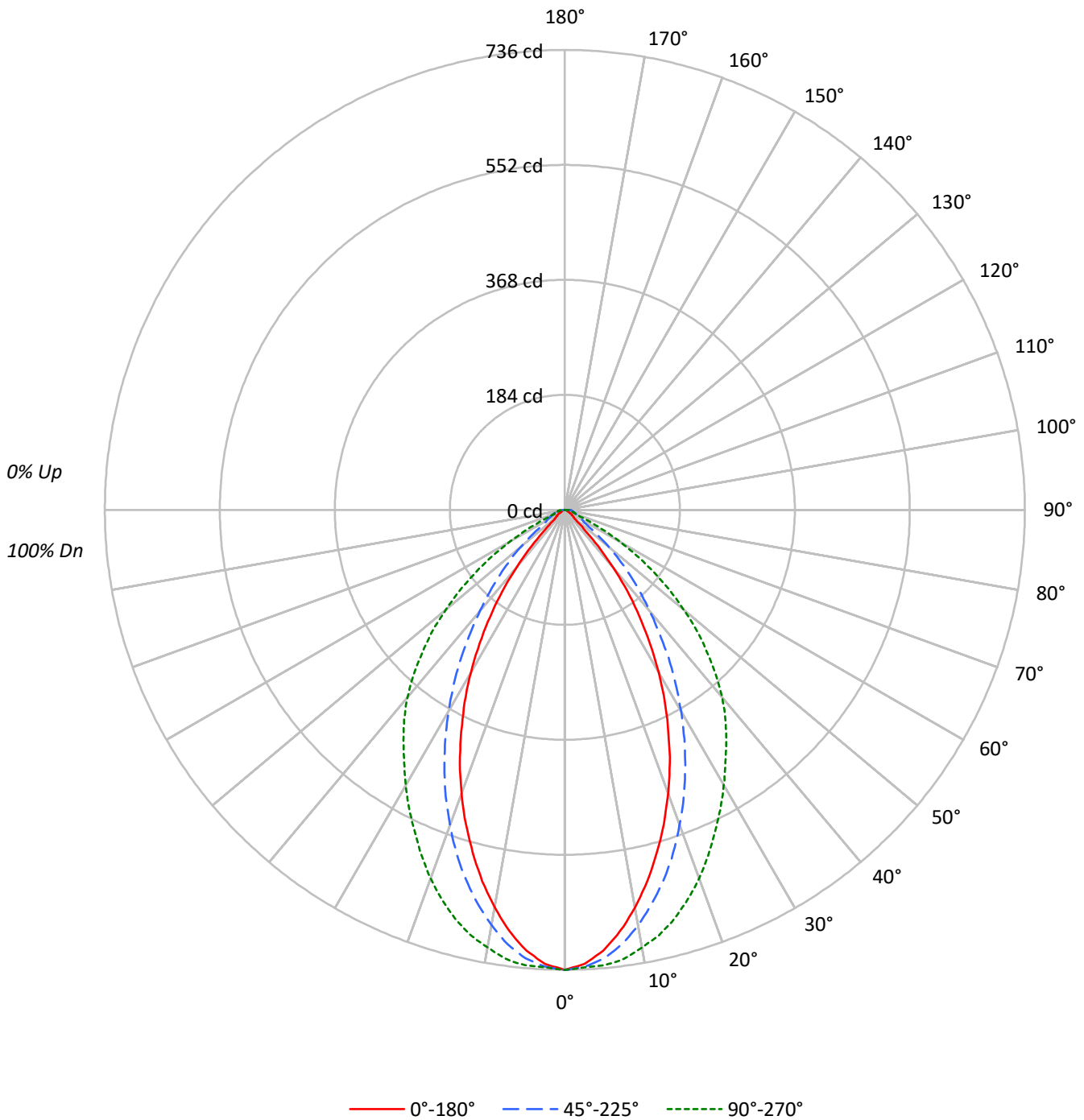
Lumens per Lamp: N/A
Luminaire Lumens: 884.3 lumens
Efficiency: N/A
Efficacy: 28.3 lumens/watt
Spacing Criteria (0/90/45): 0.79 / 1.06 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 31.2
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	0
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102	102	102	100
1	112	108	105	102	109	106	103	101	102	100	98		98	96	95		95	93	92	90
2	105	99	94	89	102	97	92	88	94	90	86		90	87	85		88	85	83	81
3	98	90	84	79	96	89	83	78	86	81	77		83	79	76		81	78	75	73
4	92	83	76	71	90	81	75	70	79	74	69		77	72	69		75	71	68	66
5	86	76	69	64	84	75	68	64	73	67	63		71	66	62		70	65	62	60
6	81	70	63	58	79	69	63	58	68	62	57		66	61	57		65	60	57	55
7	76	65	58	53	75	64	58	53	63	57	53		62	56	52		61	56	52	50
8	72	61	54	49	70	60	53	49	59	53	48		58	52	48		57	52	48	46
9	68	57	50	45	67	56	50	45	55	49	45		54	49	45		53	48	45	43
10	64	53	46	42	63	53	46	42	52	46	42		51	45	42		50	45	41	40

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8645	8645	8645
5°	8345	8492	8625
10°	7704	8053	8482
15°	6910	7444	8237
20°	6034	6709	7849
25°	5075	5907	7364
30°	4074	5037	6899
35°	2985	4147	6455
40°	1846	3227	6004
45°	711	2430	5346
50°	349	1666	4523
55°	276	921	3548
60°	186	766	2379
65°	156	689	1064
70°	154	618	618
75°	204	662	612
80°	304	839	683
85°	458	1361	916

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 5346 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	67.5	7.6
10°-20°	172.8	19.5
20°-30°	214.5	24.3
30°-40°	192.1	21.7
40°-50°	126.3	14.3
50°-60°	63.3	7.2
60°-70°	25.0	2.8
70°-80°	14.0	1.6
80°-90°	8.8	1.0
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°	454.8	51.4
0°-40°	646.9	73.2
0°-60°	836.5	94.6
0°-90°	884.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	884.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	736	736	736	736	736	
5°	708	719	720	725	732	66
15°	568	586	612	654	678	158
25°	392	416	456	520	568	179
35°	208	236	289	378	450	129
45°	43	71	146	246	322	41
55°	14	16	45	122	173	12
65°	6	16	25	32	38	6
75°	4	15	15	14	14	5
85°	3	10	10	10	7	4
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	736.2	736.2	736.2	736.2	736.2
2.5°	727.2	737.3	731.7	731.7	732.8
5°	708.0	719.3	720.4	724.9	731.7
7.5°	679.9	694.5	701.3	714.8	724.9
10°	646.1	661.9	675.4	699.0	711.4
12.5°	609.0	624.7	645.0	677.6	696.8
15°	568.4	586.5	612.3	654.0	677.6
17.5°	526.8	544.8	576.3	623.6	654.0
20°	482.9	503.2	536.9	591.0	628.1
22.5°	439.0	461.5	497.5	556.1	598.8
25°	391.7	416.5	455.9	520.0	568.4
27.5°	346.7	372.6	414.2	484.0	539.2
30°	300.5	326.4	371.5	446.9	508.8
32.5°	253.3	282.5	329.8	412.0	478.4
35°	208.2	236.4	289.3	378.2	450.3
37.5°	164.3	192.5	247.6	345.6	422.1
40°	120.4	149.7	210.5	314.1	391.7
42.5°	78.8	109.2	177.8	282.5	358.0
45°	42.8	70.9	146.3	246.5	321.9
47.5°	23.6	38.3	118.2	212.7	287.0
50°	19.1	21.4	91.2	181.2	247.6
52.5°	15.8	18.0	65.3	150.8	211.6
55°	13.5	15.8	45.0	121.6	173.3
57.5°	11.3	13.5	36.0	93.4	136.2
60°	7.9	13.5	32.6	68.7	101.3
62.5°	6.8	13.5	28.1	47.3	67.5
65°	5.6	15.8	24.8	31.5	38.3
67.5°	4.5	15.8	21.4	20.3	20.3
70°	4.5	15.8	18.0	16.9	18.0
72.5°	4.5	16.9	16.9	15.8	15.8
75°	4.5	14.6	14.6	13.5	13.5
77.5°	4.5	13.5	13.5	12.4	12.4
80°	4.5	12.4	12.4	11.3	10.1
82.5°	4.5	11.3	11.3	10.1	9.0
85°	3.4	10.1	10.1	10.1	6.8
87.5°	3.4	9.0	10.1	9.0	5.6
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	0.00	1.21	0.32	1.52	1.84	14.04	15.30	14.40	15.61	15.92
	3H	2.48	3.60	2.86	3.93	4.29	14.12	15.23	14.50	15.56	15.93
	4H	3.65	4.68	4.05	5.03	5.42	14.18	15.22	14.59	15.57	15.95
	6H	4.70	5.65	5.11	6.02	6.41	14.28	15.23	14.70	15.60	16.00
	8H	5.24	6.14	5.67	6.53	6.93	14.34	15.24	14.77	15.63	16.04
	12H	5.72	6.58	6.15	6.96	7.39	14.41	15.27	14.84	15.65	16.08
4H	2H	3.22	4.25	3.62	4.61	4.99	13.90	14.93	14.30	15.29	15.67
	3H	5.68	6.53	6.10	6.93	7.34	14.07	14.92	14.49	15.33	15.73
	4H	7.02	7.78	7.46	8.20	8.64	14.20	14.96	14.64	15.38	15.82
	6H	8.15	8.81	8.62	9.25	9.72	14.42	15.07	14.88	15.52	15.99
	8H	8.67	9.28	9.14	9.72	10.20	14.54	15.15	15.01	15.60	16.07
	12H	9.12	9.66	9.61	10.15	10.62	14.70	15.24	15.19	15.73	16.20
8H	4H	7.94	8.55	8.41	9.00	9.47	14.20	14.82	14.68	15.26	15.74
	6H	9.54	10.04	10.04	10.54	11.02	14.54	15.04	15.04	15.53	16.02
	8H	10.37	10.82	10.89	11.34	11.83	14.76	15.21	15.29	15.73	16.22
	12H	11.15	11.55	11.66	12.04	12.61	15.09	15.49	15.61	15.98	16.56
12H	4H	8.11	8.65	8.59	9.13	9.60	14.19	14.73	14.68	15.22	15.69
	6H	9.86	10.31	10.38	10.82	11.32	14.57	15.02	15.09	15.53	16.03
	8H	10.87	11.27	11.38	11.76	12.34	14.88	15.28	15.39	15.77	16.34