

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: P1059591

Luminaire Tested: S123RDR-H340D840-X4F0-XX-UDD-BVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059591
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-66)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDR-H340D840-X4F0-XX-UDD-BVL-W
Description: DEFINE 3 WHITE 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

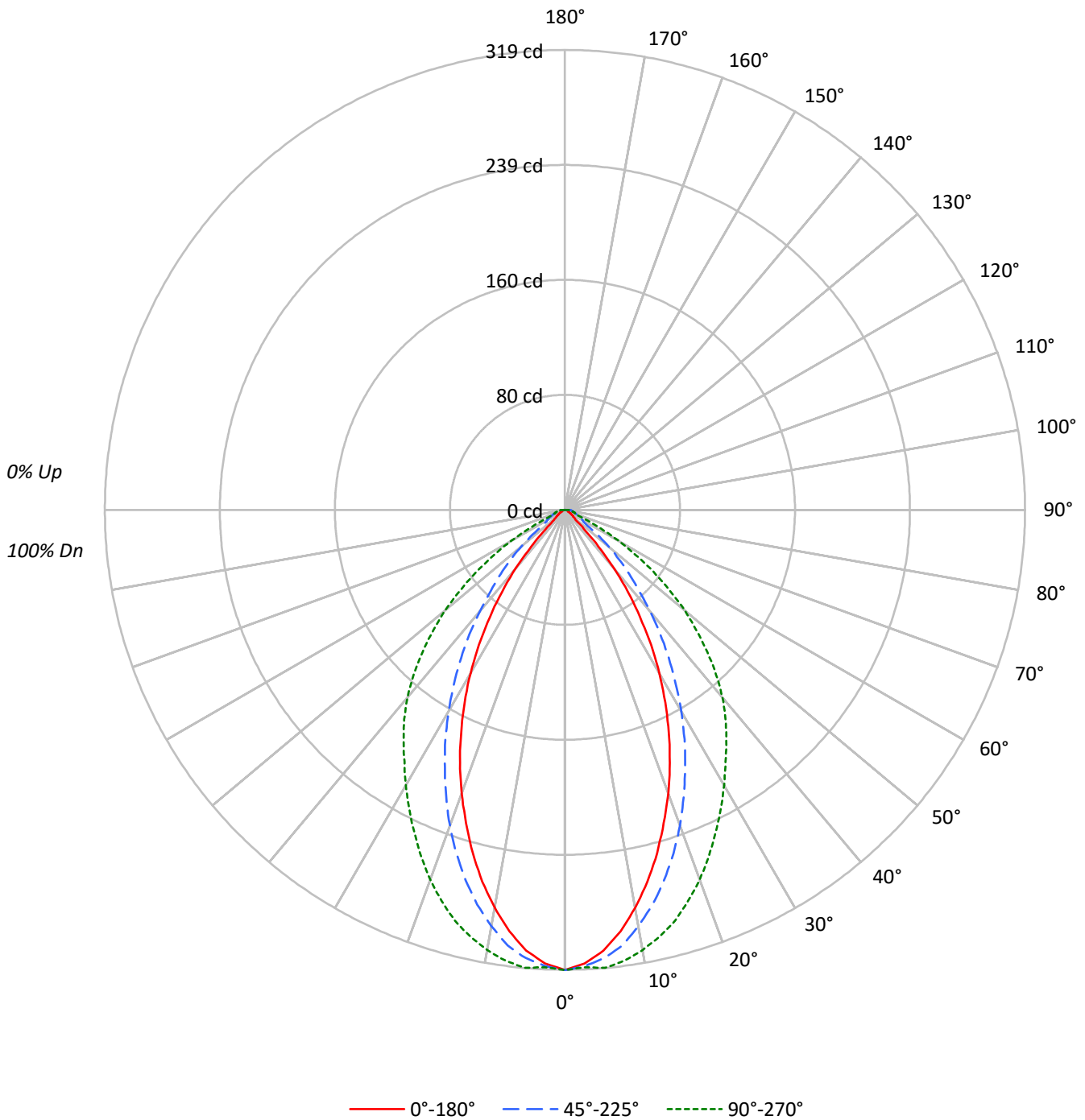
Lumens per Lamp: N/A
Luminaire Lumens: 383.2 lumens
Efficiency: N/A
Efficacy: 32.8 lumens/watt
Spacing Criteria (0/90/45): 0.79 / 1.06 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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

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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	90	102	97	92	88	94	90	86	91	87	85	88	85	83	81
3	98	90	84	79	96	89	83	79	86	81	77	83	79	76	81	78	75	73
4	92	83	76	71	90	81	75	70	79	74	70	77	72	69	75	71	68	66
5	86	76	69	64	84	75	69	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	65	58	53	63	57	53	62	56	52	61	56	52	50
8	72	61	54	49	70	60	53	49	59	53	49	58	52	48	57	52	48	47
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	42	40

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3748	3748	3748
5°	3619	3679	3758
10°	3341	3496	3696
15°	2998	3232	3585
20°	2615	2914	3411
25°	2206	2554	3200
30°	1775	2184	2991
35°	1299	1798	2795
40°	809	1401	2604
45°	307	1045	2320
50°	146	720	1977
55°	113	395	1529
60°	80	336	1005
65°	58	292	420
70°	58	275	275
75°	77	286	286
80°	115	338	311
85°	229	566	458

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 2320 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	29.3	7.6
10°-20°	75.1	19.6
20°-30°	93.0	24.3
30°-40°	83.4	21.8
40°-50°	54.7	14.3
50°-60°	27.4	7.1
60°-70°	10.7	2.8
70°-80°	6.0	1.6
80°-90°	3.7	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°	197.4	51.5
0°-40°	280.8	73.3
0°-60°	362.8	94.7
0°-90°	383.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	383.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	319	319	319	319	319	
5°	307	312	312	315	319	28
15°	247	257	266	284	295	69
25°	170	181	197	225	247	78
35°	91	103	125	163	195	56
45°	18	30	63	108	140	18
55°	6	7	19	53	75	5
65°	2	6	10	14	15	2
75°	2	6	6	6	6	2
85°	2	4	4	4	3	2
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	319.2	319.2	319.2	319.2	319.2
2.5°	315.0	319.6	316.7	317.1	317.5
5°	307.0	312.1	312.1	315.4	318.8
7.5°	294.9	300.7	304.9	310.8	315.4
10°	280.2	287.3	293.2	303.7	310.0
12.5°	264.2	273.0	280.6	294.4	303.2
15°	246.6	256.7	265.9	283.5	294.9
17.5°	227.7	237.8	250.0	270.5	284.4
20°	209.3	219.4	233.2	256.3	273.0
22.5°	190.0	200.5	215.2	240.7	260.5
25°	170.3	180.8	197.1	225.2	247.0
27.5°	150.6	161.1	179.5	210.1	234.0
30°	130.9	141.3	161.1	193.8	220.6
32.5°	111.1	122.5	143.0	178.7	207.2
35°	90.6	102.8	125.4	163.2	195.0
37.5°	71.7	83.0	108.6	149.7	182.9
40°	52.8	65.0	91.4	136.7	169.9
42.5°	34.4	47.4	75.9	122.5	155.2
45°	18.5	29.8	62.9	107.8	139.7
47.5°	10.1	16.4	50.8	92.3	123.7
50°	8.0	9.2	39.4	78.9	108.2
52.5°	6.7	7.5	28.1	66.3	91.0
55°	5.5	6.7	19.3	52.8	74.7
57.5°	4.6	5.9	15.1	41.1	58.3
60°	3.4	5.0	14.3	30.2	42.8
62.5°	2.5	5.5	12.6	21.0	28.1
65°	2.1	6.3	10.5	13.8	15.1
67.5°	1.7	6.7	9.2	8.8	8.8
70°	1.7	6.3	8.0	7.5	8.0
72.5°	1.7	6.7	7.1	6.7	7.1
75°	1.7	6.3	6.3	6.3	6.3
77.5°	1.7	5.9	5.9	5.5	5.5
80°	1.7	5.0	5.0	5.0	4.6
82.5°	1.7	4.6	4.6	4.6	3.8
85°	1.7	4.2	4.2	4.2	3.4
87.5°	1.3	3.8	4.2	3.8	2.5
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	0.00	0.00	0.00	0.00	11.19	12.45	11.56	12.76	13.08
	3H	0.00	0.41	0.00	0.74	1.10	11.27	12.39	11.65	12.72	13.08
	4H	0.41	1.44	0.81	1.79	2.17	11.35	12.39	11.76	12.74	13.12
	6H	1.40	2.35	1.82	2.72	3.12	11.46	12.41	11.87	12.78	13.17
	8H	1.89	2.78	2.32	3.17	3.58	11.52	12.41	11.95	12.80	13.21
	12H	2.45	3.31	2.88	3.69	4.12	11.60	12.46	12.03	12.84	13.27
4H	2H	0.21	1.24	0.61	1.60	1.98	11.05	12.08	11.45	12.43	12.82
	3H	2.53	3.37	2.94	3.78	4.18	11.22	12.07	11.64	12.47	12.88
	4H	3.90	4.65	4.33	5.07	5.52	11.38	12.13	11.81	12.55	13.00
	6H	4.99	5.64	5.45	6.08	6.55	11.60	12.25	12.07	12.70	13.17
	8H	5.44	6.05	5.91	6.50	6.97	11.73	12.34	12.20	12.78	13.26
	12H	5.94	6.48	6.43	6.96	7.44	11.90	12.44	12.39	12.93	13.40
8H	4H	4.87	5.48	5.34	5.93	6.40	11.37	11.98	11.84	12.43	12.90
	6H	6.39	6.88	6.89	7.38	7.86	11.71	12.21	12.21	12.71	13.19
	8H	7.16	7.61	7.68	8.12	8.62	11.94	12.39	12.47	12.91	13.40
	12H	7.97	8.36	8.48	8.86	9.43	12.28	12.68	12.80	13.18	13.75
12H	4H	5.05	5.58	5.53	6.07	6.54	11.36	11.90	11.84	12.38	12.85
	6H	6.70	7.15	7.22	7.66	8.16	11.73	12.18	12.25	12.70	13.19
	8H	7.65	8.05	8.17	8.54	9.12	12.04	12.44	12.56	12.93	13.51