

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: P1059645

Luminaire Tested: S123RDR-H340D950-X4F0-XX-UDD-BVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059645
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-H340D950-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: 5000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

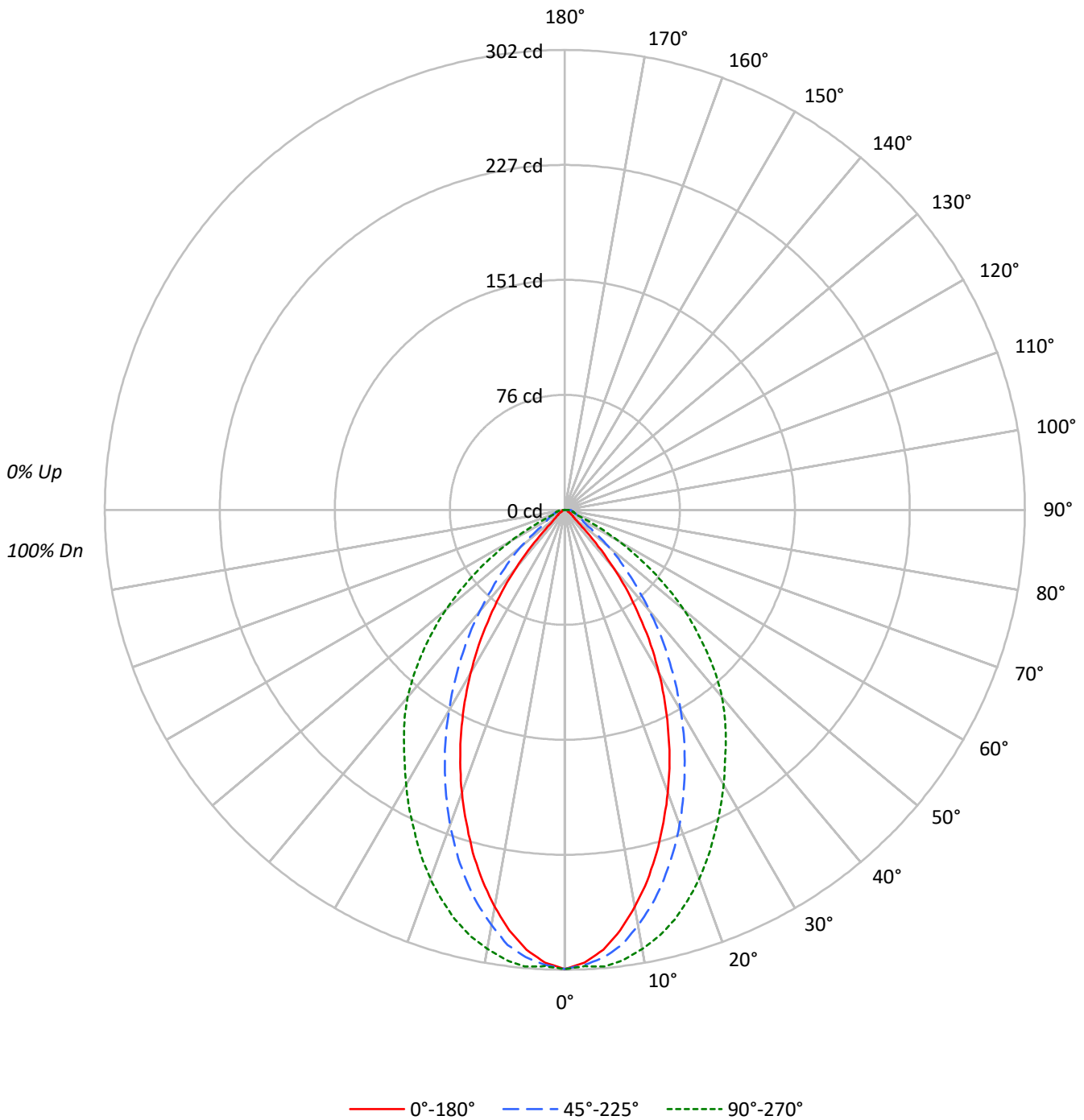
Lumens per Lamp: N/A
Luminaire Lumens: 362.0 lumens
Efficiency: N/A
Efficacy: 30.9 lumens/watt
Spacing Criteria (0/90/45): 0.79 / 1.06 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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	89	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°	3540	3540	3540
5°	3418	3475	3549
10°	3156	3303	3491
15°	2833	3054	3386
20°	2470	2753	3223
25°	2085	2412	3024
30°	1676	2062	2826
35°	1227	1699	2640
40°	765	1324	2460
45°	289	986	2190
50°	137	680	1867
55°	106	373	1443
60°	75	317	949
65°	56	275	397
70°	55	257	257
75°	73	268	268
80°	108	325	298
85°	216	539	431

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 2190 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	27.7	7.6
10°-20°	71.0	19.6
20°-30°	87.9	24.3
30°-40°	78.8	21.8
40°-50°	51.6	14.3
50°-60°	25.8	7.1
60°-70°	10.1	2.8
70°-80°	5.7	1.6
80°-90°	3.5	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°	186.5	51.5
0°-40°	265.3	73.3
0°-60°	342.7	94.7
0°-90°	362.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	362.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	302	302	302	302	302	
5°	290	295	295	298	301	27
15°	233	242	251	268	278	65
25°	161	171	186	213	233	73
35°	86	97	118	154	184	53
45°	17	28	59	102	132	17
55°	5	6	18	50	70	5
65°	2	6	10	13	14	2
75°	2	6	6	6	6	2
85°	2	4	4	4	3	1
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	301.5	301.5	301.5	301.5	301.5
2.5°	297.6	301.9	299.1	299.5	299.9
5°	290.0	294.8	294.8	298.0	301.1
7.5°	278.5	284.1	288.1	293.6	298.0
10°	264.7	271.4	277.0	286.9	292.8
12.5°	249.6	257.9	265.1	278.1	286.5
15°	233.0	242.5	251.2	267.8	278.5
17.5°	215.1	224.7	236.1	255.6	268.6
20°	197.7	207.2	220.3	242.1	257.9
22.5°	179.5	189.4	203.3	227.4	246.1
25°	160.9	170.8	186.2	212.8	233.4
27.5°	142.2	152.1	169.6	198.5	221.1
30°	123.6	133.5	152.1	183.1	208.4
32.5°	105.0	115.7	135.1	168.8	195.7
35°	85.6	97.1	118.5	154.1	184.2
37.5°	67.8	78.5	102.6	141.5	172.8
40°	49.9	61.4	86.4	129.2	160.5
42.5°	32.5	44.8	71.7	115.7	146.6
45°	17.4	28.1	59.4	101.8	131.9
47.5°	9.5	15.5	47.9	87.2	116.9
50°	7.5	8.7	37.2	74.5	102.2
52.5°	6.3	7.1	26.5	62.6	86.0
55°	5.2	6.3	18.2	49.9	70.5
57.5°	4.4	5.5	14.3	38.8	55.1
60°	3.2	4.8	13.5	28.5	40.4
62.5°	2.4	5.2	11.9	19.8	26.5
65°	2.0	5.9	9.9	13.1	14.3
67.5°	1.6	6.3	8.7	8.3	8.3
70°	1.6	5.9	7.5	7.1	7.5
72.5°	1.6	6.3	6.7	6.3	6.7
75°	1.6	5.9	5.9	5.9	5.9
77.5°	1.6	5.5	5.5	5.2	5.2
80°	1.6	4.8	4.8	4.8	4.4
82.5°	1.6	4.4	4.4	4.4	3.6
85°	1.6	4.0	4.0	4.0	3.2
87.5°	1.2	3.6	4.0	3.6	2.4
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	10.99	12.25	11.36	12.56	12.88
	3H	0.00	0.16	0.00	0.49	0.86	11.07	12.18	11.45	12.51	12.88
	4H	0.16	1.19	0.56	1.55	1.93	11.15	12.18	11.55	12.53	12.92
	6H	1.16	2.11	1.58	2.48	2.88	11.26	12.21	11.67	12.58	12.97
	8H	1.66	2.55	2.09	2.95	3.35	11.32	12.21	11.75	12.61	13.01
	12H	2.23	3.08	2.66	3.47	3.90	11.40	12.26	11.83	12.64	13.07
4H	2H	0.00	1.02	0.39	1.37	1.75	10.85	11.88	11.25	12.23	12.62
	3H	2.29	3.14	2.71	3.54	3.95	11.02	11.87	11.44	12.27	12.68
	4H	3.66	4.41	4.09	4.83	5.28	11.17	11.93	11.61	12.35	12.79
	6H	4.76	5.41	5.22	5.86	6.32	11.40	12.05	11.87	12.50	12.97
	8H	5.23	5.84	5.70	6.28	6.76	11.53	12.14	12.00	12.59	13.06
	12H	5.73	6.27	6.22	6.75	7.23	11.71	12.25	12.20	12.73	13.21
8H	4H	4.63	5.24	5.10	5.69	6.16	11.17	11.78	11.64	12.22	12.70
	6H	6.17	6.67	6.68	7.17	7.65	11.51	12.01	12.02	12.51	12.99
	8H	6.96	7.41	7.49	7.93	8.42	11.75	12.20	12.27	12.72	13.21
	12H	7.78	8.18	8.30	8.68	9.25	12.09	12.49	12.61	12.99	13.56
12H	4H	4.81	5.35	5.30	5.83	6.31	11.15	11.69	11.64	12.17	12.65
	6H	6.50	6.95	7.02	7.46	7.96	11.53	11.98	12.06	12.50	12.99
	8H	7.47	7.87	7.99	8.36	8.94	11.85	12.25	12.37	12.74	13.32