

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: P1059641

Luminaire Tested: S123RDR-H340D940-X4F0-XX-UDD-WVL-S

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059641
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-67)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDR-H340D940-X4F0-XX-UDD-WVL-S
Description: DEFINE 3 SILVER REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE
LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

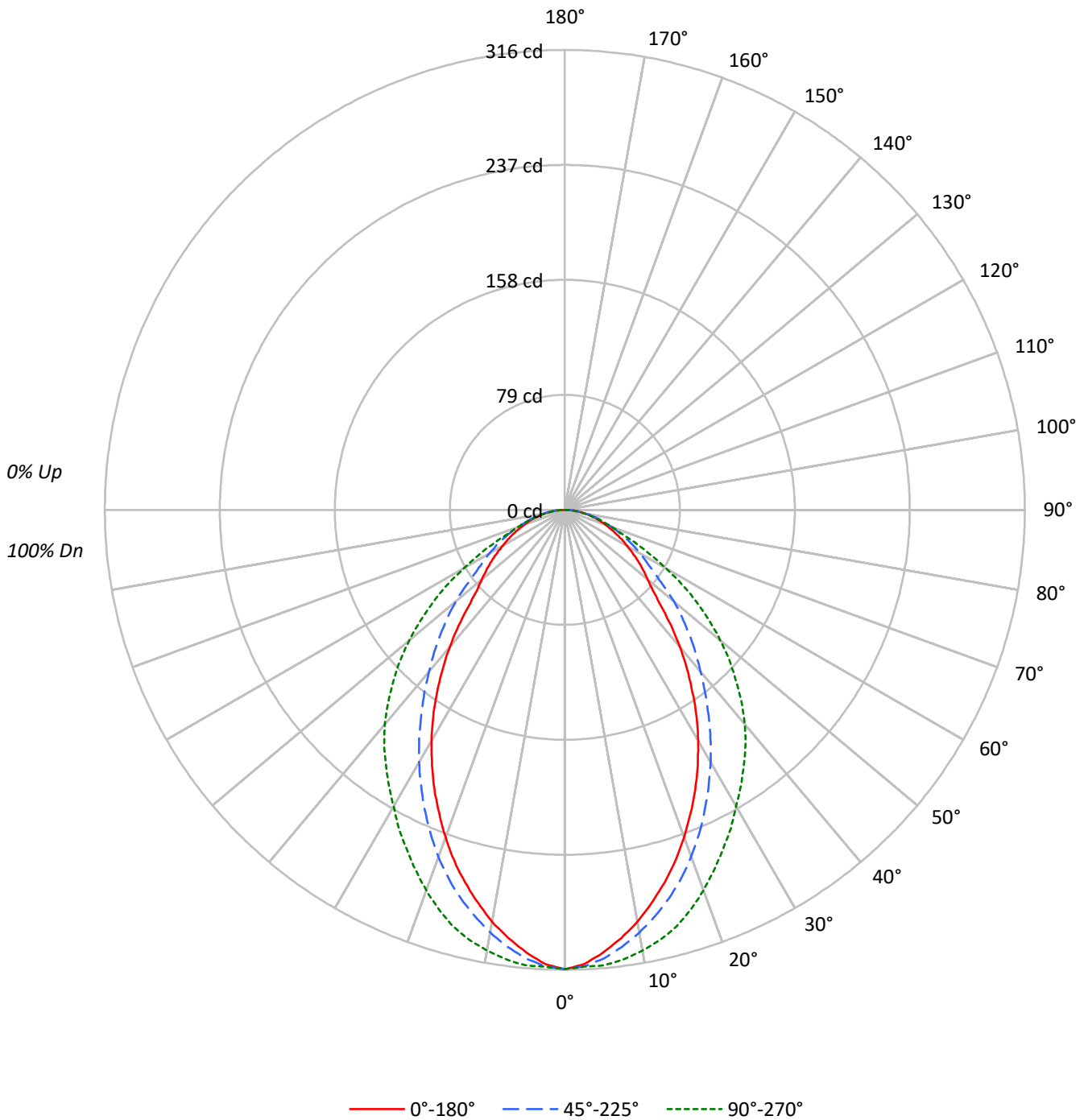
Lumens per Lamp: N/A
Luminaire Lumens: 570.1 lumens
Efficiency: N/A
Efficacy: 48.7 lumens/watt
Spacing Criteria (0/90/45): 0.93 / 1.12 / 1.1
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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	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	110	106	102	99	108	104	100	97	100	97	94	96	93	91	92	90	89	87				
2	102	94	88	83	99	92	87	82	89	84	80	86	82	78	83	80	77	75				
3	94	84	77	71	91	83	76	71	80	74	69	77	72	68	75	71	67	65				
4	87	76	68	62	84	74	67	61	72	66	61	70	64	60	68	63	59	57				
5	80	69	60	54	78	68	60	54	66	59	54	64	58	53	62	57	53	51				
6	75	63	54	48	73	62	54	48	60	53	48	58	52	47	57	51	47	45				
7	70	57	49	44	68	56	49	43	55	48	43	54	47	43	52	47	43	41				
8	65	53	45	39	64	52	45	39	51	44	39	50	43	39	48	43	39	37				
9	61	49	41	36	60	48	41	36	47	40	36	46	40	36	45	39	35	34				
10	58	45	38	33	56	45	38	33	44	37	33	43	37	33	42	37	33	31				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3706	3706	3706
5°	3597	3646	3702
10°	3428	3516	3667
15°	3220	3360	3603
20°	2992	3171	3476
25°	2747	2948	3331
30°	2483	2715	3190
35°	2190	2466	3071
40°	1882	2223	2949
45°	1548	2003	2765
50°	1359	1785	2548
55°	1257	1523	2258
60°	1155	1400	1867
65°	1078	1284	1470
70°	1016	1167	1167
75°	957	1075	1007
80°	899	974	852
85°	849	943	647

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 2765 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	29.2	5.1
10°-20°	78.2	13.7
20°-30°	106.1	18.6
30°-40°	110.9	19.5
40°-50°	96.2	16.9
50°-60°	71.6	12.6
60°-70°	45.9	8.1
70°-80°	24.6	4.3
80°-90°	7.4	1.3
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°	213.5	37.5
0°-40°	324.4	56.9
0°-60°	492.1	86.3
0°-90°	570.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	570.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	316	316	316	316	316	
5°	305	310	309	312	314	29
15°	265	271	276	288	296	74
25°	212	219	228	243	257	97
35°	153	160	172	194	214	95
45°	93	100	121	146	166	73
55°	61	63	74	96	110	55
65°	39	42	46	49	53	39
75°	21	24	24	23	22	22
85°	6	8	7	6	5	7
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	315.6	315.6	315.6	315.6	315.6
2.5°	312.3	316.7	313.8	313.8	314.1
5°	305.2	310.4	309.3	311.5	314.1
7.5°	296.7	302.3	302.7	307.8	311.5
10°	287.5	293.0	294.9	302.3	307.5
12.5°	276.4	282.7	286.0	295.3	302.7
15°	264.9	271.2	276.4	287.5	296.4
17.5°	252.7	259.0	265.7	278.2	287.9
20°	239.4	246.0	253.8	266.4	278.2
22.5°	225.7	232.7	240.9	254.6	267.9
25°	212.0	218.7	227.5	242.7	257.1
27.5°	197.6	204.6	213.9	230.5	246.8
30°	183.1	190.2	200.2	217.9	235.3
32.5°	168.3	175.4	186.1	206.1	225.0
35°	152.8	160.2	172.0	193.9	214.2
37.5°	138.0	145.0	158.4	182.4	203.9
40°	122.8	130.2	145.0	170.9	192.4
42.5°	108.0	115.4	132.8	158.7	179.8
45°	93.2	100.3	120.6	146.5	166.5
47.5°	81.8	86.9	109.1	133.6	153.5
50°	74.4	76.2	97.7	121.0	139.5
52.5°	67.7	69.2	85.1	108.4	125.1
55°	61.4	62.9	74.4	95.5	110.3
57.5°	55.1	57.0	66.2	82.1	95.5
60°	49.2	51.4	59.6	70.3	79.5
62.5°	44.0	46.6	52.9	59.6	65.9
65°	38.8	42.2	46.2	49.2	52.9
67.5°	34.0	37.7	40.0	40.7	41.1
70°	29.6	33.3	34.0	34.0	34.0
72.5°	25.2	29.2	28.5	28.1	27.7
75°	21.1	24.4	23.7	22.6	22.2
77.5°	17.0	20.0	18.9	18.1	17.0
80°	13.3	15.5	14.4	13.7	12.6
82.5°	10.0	11.5	10.4	9.6	8.5
85°	6.3	7.8	7.0	5.9	4.8
87.5°	3.3	4.4	3.7	3.3	1.8
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	11.34	12.82	11.70	13.13	13.45	14.09	15.57	14.46	15.89	16.20
	3H	13.05	14.37	13.42	14.70	15.07	15.11	16.44	15.49	16.77	17.13
	4H	13.71	14.95	14.11	15.30	15.68	15.48	16.72	15.88	17.07	17.45
	6H	14.21	15.36	14.62	15.72	16.12	15.73	16.88	16.14	17.25	17.64
	8H	14.39	15.48	14.81	15.87	16.27	15.80	16.90	16.23	17.29	17.69
	12H	14.51	15.56	14.94	15.94	16.37	15.84	16.89	16.27	17.27	17.70
4H	2H	12.11	13.36	12.51	13.71	14.09	14.36	15.61	14.76	15.96	16.34
	3H	14.04	15.07	14.45	15.47	15.87	15.62	16.65	16.03	17.05	17.45
	4H	14.85	15.78	15.28	16.19	16.63	16.10	17.03	16.54	17.45	17.89
	6H	15.49	16.29	15.94	16.74	17.20	16.48	17.29	16.94	17.74	18.20
	8H	15.71	16.47	16.18	16.91	17.38	16.60	17.35	17.06	17.80	18.26
	12H	15.89	16.56	16.37	17.04	17.51	16.67	17.34	17.15	17.82	18.29
8H	4H	15.17	15.92	15.63	16.37	16.83	16.30	17.05	16.76	17.50	17.96
	6H	15.96	16.58	16.46	17.07	17.55	16.78	17.41	17.28	17.90	18.38
	8H	16.29	16.85	16.80	17.36	17.85	16.96	17.52	17.47	18.03	18.52
	12H	16.57	17.06	17.08	17.55	18.12	17.09	17.59	17.60	18.08	18.64
12H	4H	15.19	15.87	15.67	16.34	16.82	16.31	16.98	16.79	17.46	17.94
	6H	16.01	16.57	16.53	17.08	17.57	16.82	17.38	17.34	17.89	18.38
	8H	16.41	16.90	16.92	17.40	17.96	17.05	17.55	17.56	18.04	18.60