

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1059312

Luminaire Tested: S123RDRP-S560D940-X4F0-XX-UDD-BVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2024
Report Number: P1059312
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: S123RDRP-S560D940-X4F0-XX-UDD-BVL-W
Description: DEFINE 3 WHITE REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE
LOUVER WITH DIFFUSER
CORE LIGHT ENGINE
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

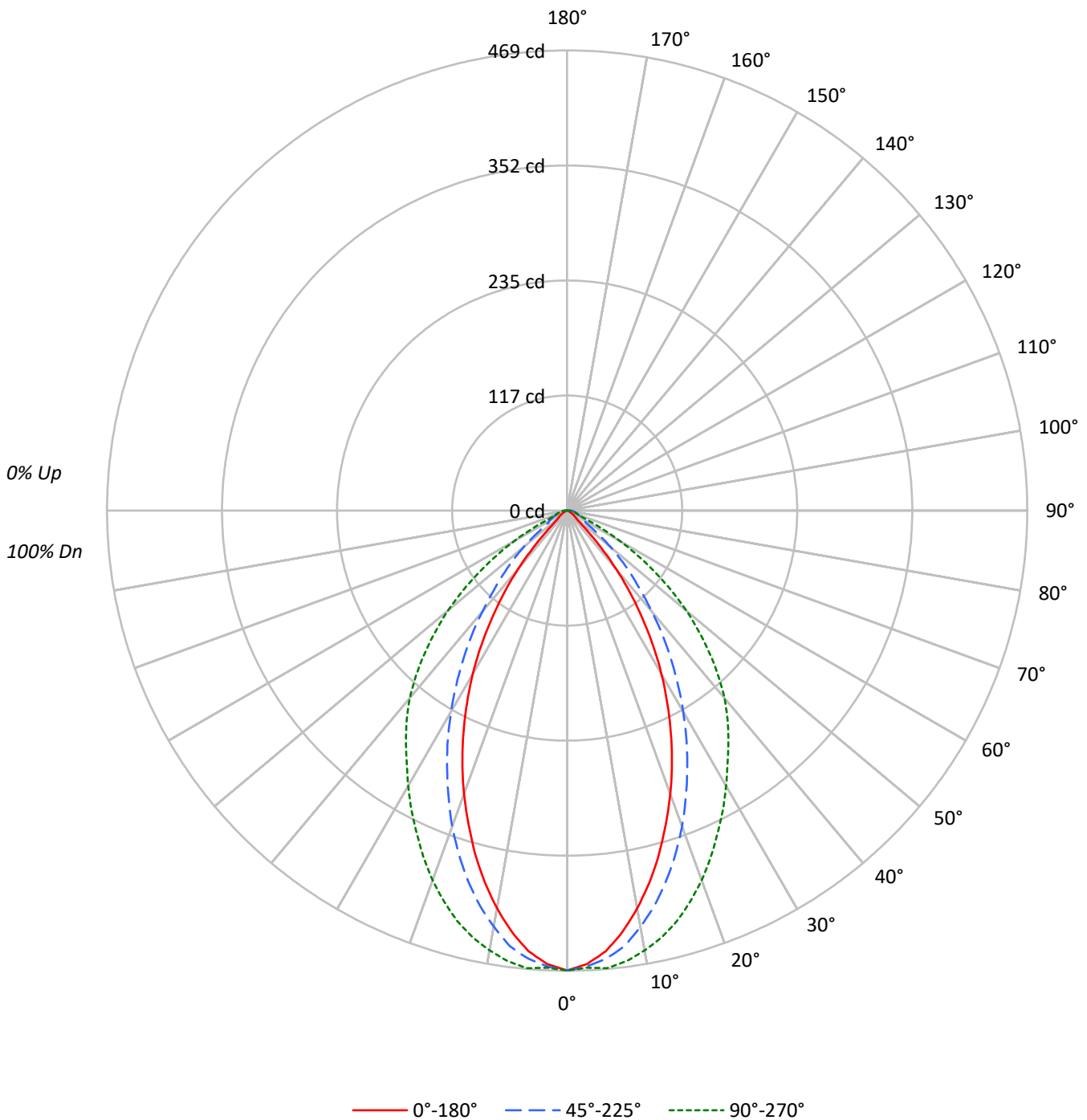
Lumens per Lamp: N/A
Luminaire Lumens: 562.8 lumens
Efficiency: N/A
Efficacy: 28.7 lumens/watt
Spacing Criteria (0/90/45): 0.79 / 1.06 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 19.6
Input Voltage (V): 120
Input Current (A_{in}): 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°	5504	5504	5504
5°	5315	5402	5518
10°	4907	5134	5428
15°	4403	4747	5264
20°	3841	4280	5011
25°	3240	3751	4701
30°	2606	3207	4393
35°	1907	2640	4106
40°	1190	2059	3825
45°	450	1534	3406
50°	214	1058	2903
55°	164	579	2244
60°	115	491	1475
65°	86	428	617
70°	86	402	402
75°	113	417	417
80°	169	500	460
85°	337	835	660

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 3406 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	43.0	7.6
10°-20°	110.3	19.6
20°-30°	136.6	24.3
30°-40°	122.4	21.8
40°-50°	80.3	14.3
50°-60°	40.2	7.1
60°-70°	15.7	2.8
70°-80°	8.8	1.6
80°-90°	5.5	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°	289.9	51.5
0°-40°	412.4	73.3
0°-60°	532.8	94.7
0°-90°	562.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	562.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	469	469	469	469	469	
5°	451	458	458	463	468	42
15°	362	377	390	416	433	101
25°	250	266	290	331	363	114
35°	133	151	184	240	286	83
45°	27	44	92	158	205	26
55°	8	10	28	78	110	7
65°	3	9	15	20	22	3
75°	2	9	9	9	9	3
85°	2	6	6	6	5	2
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	468.7	468.7	468.7	468.7	468.7
2.5°	462.6	469.4	465.1	465.7	466.3
5°	450.9	458.3	458.3	463.2	468.1
7.5°	433.0	441.6	447.8	456.4	463.2
10°	411.5	421.9	430.6	446.0	455.2
12.5°	388.1	401.0	412.1	432.4	445.3
15°	362.2	377.0	390.5	416.4	433.0
17.5°	334.5	349.3	367.1	397.3	417.6
20°	307.4	322.1	342.5	376.4	401.0
22.5°	279.0	294.4	316.0	353.6	382.5
25°	250.1	265.5	289.5	330.8	362.8
27.5°	221.1	236.5	263.6	308.6	343.7
30°	192.2	207.6	236.5	284.6	324.0
32.5°	163.2	179.9	210.0	262.4	304.3
35°	133.0	150.9	184.2	239.6	286.4
37.5°	105.3	122.0	159.5	219.9	268.6
40°	77.6	95.5	134.3	200.8	249.5
42.5°	50.5	69.6	111.5	179.9	227.9
45°	27.1	43.7	92.4	158.3	205.1
47.5°	14.8	24.0	74.5	135.5	181.7
50°	11.7	13.6	57.9	115.8	158.9
52.5°	9.9	11.1	41.3	97.3	133.7
55°	8.0	9.9	28.3	77.6	109.6
57.5°	6.8	8.6	22.2	60.4	85.6
60°	4.9	7.4	20.9	44.3	62.8
62.5°	3.7	8.0	18.5	30.8	41.3
65°	3.1	9.2	15.4	20.3	22.2
67.5°	2.5	9.9	13.6	12.9	12.9
70°	2.5	9.2	11.7	11.1	11.7
72.5°	2.5	9.9	10.5	9.9	10.5
75°	2.5	9.2	9.2	9.2	9.2
77.5°	2.5	8.6	8.6	8.0	8.0
80°	2.5	7.4	7.4	7.4	6.8
82.5°	2.5	6.8	6.8	6.8	5.5
85°	2.5	6.2	6.2	6.2	4.9
87.5°	1.8	5.5	6.2	5.5	3.7
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	0.15	12.53	13.79	12.90	14.10	14.42
	3H	0.62	1.73	1.00	2.06	2.43	12.61	13.72	12.99	14.05	14.42
	4H	1.73	2.76	2.13	3.12	3.50	12.69	13.72	13.09	14.07	14.46
	6H	2.73	3.68	3.14	4.05	4.44	12.79	13.74	13.21	14.11	14.51
	8H	3.22	4.12	3.65	4.51	4.91	12.85	13.75	13.28	14.14	14.55
	12H	3.78	4.64	4.22	5.03	5.46	12.93	13.79	13.36	14.17	14.60
4H	2H	1.53	2.56	1.93	2.91	3.30	12.39	13.42	12.79	13.77	14.16
	3H	3.85	4.70	4.27	5.10	5.51	12.56	13.41	12.98	13.81	14.22
	4H	5.22	5.97	5.65	6.39	6.84	12.71	13.47	13.15	13.89	14.33
	6H	6.31	6.96	6.77	7.41	7.88	12.94	13.59	13.40	14.04	14.51
	8H	6.77	7.38	7.24	7.83	8.30	13.06	13.67	13.53	14.12	14.59
	12H	7.28	7.81	7.76	8.30	8.77	13.23	13.77	13.72	14.26	14.73
8H	4H	6.19	6.80	6.66	7.25	7.72	12.71	13.32	13.18	13.77	14.24
	6H	7.72	8.22	8.22	8.71	9.20	13.05	13.55	13.55	14.04	14.53
	8H	8.50	8.95	9.02	9.46	9.96	13.28	13.73	13.80	14.25	14.74
	12H	9.31	9.71	9.83	10.21	10.78	13.61	14.01	14.13	14.51	15.08
12H	4H	6.37	6.90	6.85	7.39	7.86	12.69	13.23	13.18	13.72	14.19
	6H	8.03	8.48	8.56	9.00	9.49	13.07	13.52	13.59	14.03	14.53
	8H	9.00	9.40	9.51	9.89	10.46	13.38	13.78	13.89	14.27	14.84