

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: P1059639

Luminaire Tested: S123RDR-H340D940-X4F0-XX-UDD-SVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059639
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-65)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDR-H340D940-X4F0-XX-UDD-SVL-W
Description: DEFINE 3 WHITE REGRESSED DIRECT RECESSED HOUSING WITH SILVER STRAIGHT BLADE
LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

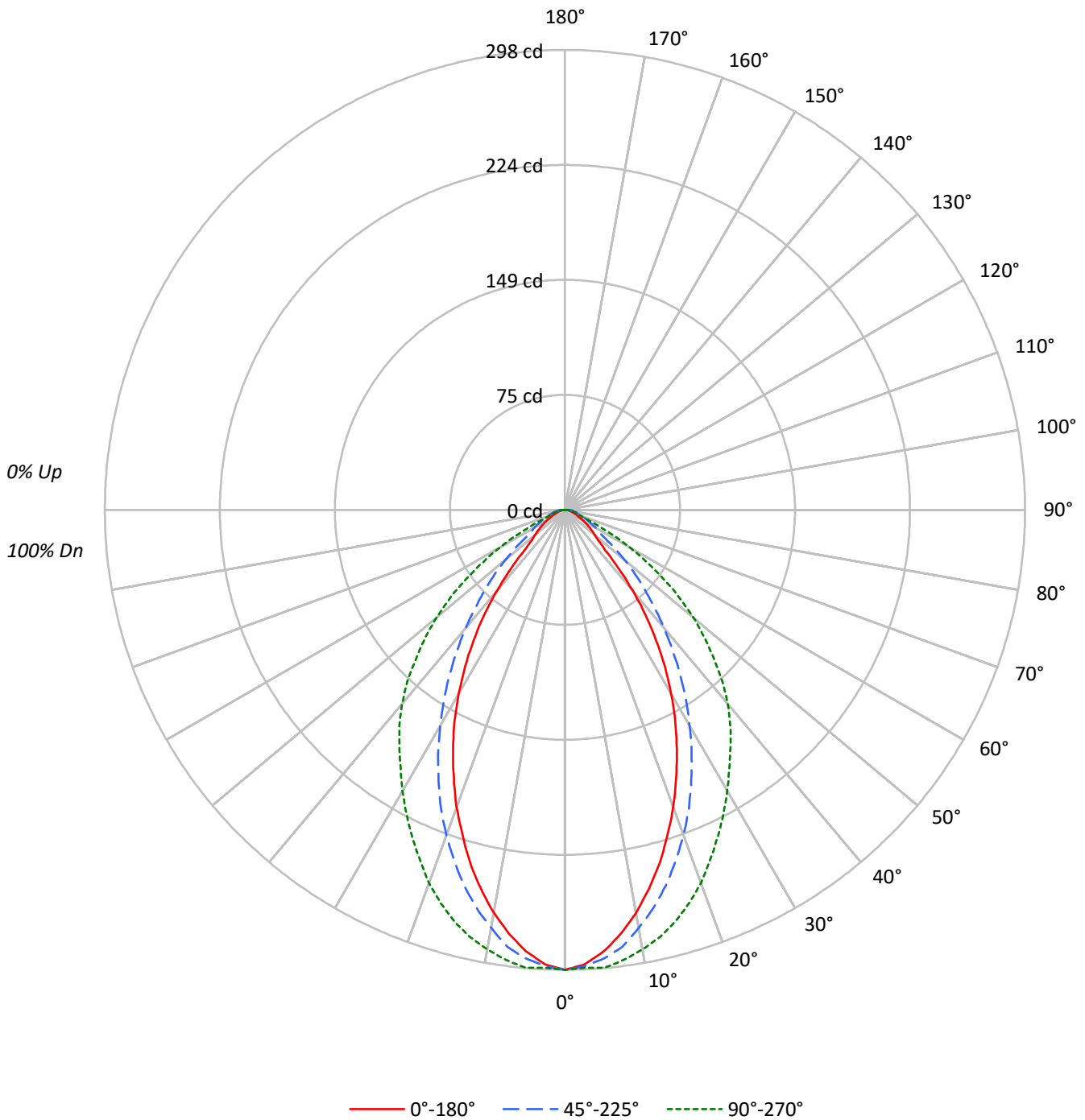
Lumens per Lamp: N/A
Luminaire Lumens: 400.1 lumens
Efficiency: N/A
Efficacy: 34.2 lumens/watt
Spacing Criteria (0/90/45): 0.82 / 1.08 / 0.98
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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	111	108	105	102	109	106	103	100	102	99	97	98	96	94	94	93	91	89				
2	104	98	92	88	102	96	91	87	92	88	85	89	86	83	86	84	81	79				
3	97	89	82	77	95	87	81	77	84	79	75	82	78	74	79	76	73	71				
4	90	81	74	68	88	80	73	68	77	72	67	75	70	66	73	69	66	64				
5	85	74	67	61	83	73	66	61	71	65	60	69	64	60	68	63	59	58				
6	79	68	61	55	78	67	60	55	66	59	55	64	59	54	63	58	54	52				
7	74	63	56	51	73	62	55	50	61	55	50	60	54	50	58	53	49	48				
8	70	58	51	46	69	58	51	46	57	50	46	55	50	46	54	49	45	44				
9	66	54	47	43	65	54	47	43	53	47	42	52	46	42	51	46	42	40				
10	62	51	44	39	61	50	44	39	49	43	39	49	43	39	48	43	39	37				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3500	3500	3500
5°	3386	3440	3509
10°	3161	3280	3448
15°	2881	3065	3358
20°	2563	2804	3215
25°	2221	2508	3032
30°	1863	2188	2851
35°	1475	1864	2681
40°	1044	1533	2514
45°	614	1211	2263
50°	460	921	1982
55°	387	622	1593
60°	312	531	1130
65°	247	453	597
70°	216	395	367
75°	200	367	354
80°	203	399	352
85°	256	593	445

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 2263 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	27.4	6.9
10°-20°	71.3	17.8
20°-30°	90.8	22.7
30°-40°	85.4	21.3
40°-50°	61.5	15.4
50°-60°	35.5	8.9
60°-70°	16.2	4.1
70°-80°	8.1	2.0
80°-90°	3.8	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°	189.5	47.4
0°-40°	274.9	68.7
0°-60°	371.9	93.0
0°-90°	400.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	400.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	298	298	298	298	298	
5°	287	292	292	295	298	27
15°	237	246	252	266	276	66
25°	171	180	194	215	234	78
35°	103	112	130	160	187	64
45°	37	46	73	110	136	31
55°	19	20	30	58	78	17
65°	9	13	16	18	22	9
75°	4	8	8	8	8	5
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°	298.1	298.1	298.1	298.1	298.1
2.5°	294.7	298.4	295.8	296.2	297.0
5°	287.3	292.1	291.8	294.7	297.7
7.5°	277.0	282.5	285.5	289.9	294.0
10°	265.1	271.4	275.1	283.3	289.2
12.5°	251.4	259.6	264.4	275.1	283.6
15°	237.0	245.5	252.1	266.2	276.2
17.5°	220.7	229.9	238.4	255.1	267.3
20°	205.1	214.0	224.4	242.5	257.3
22.5°	188.1	197.7	209.6	228.8	245.5
25°	171.4	180.3	193.6	215.1	234.0
27.5°	154.8	163.7	177.7	201.4	222.2
30°	137.4	146.6	161.4	187.7	210.3
32.5°	120.3	129.2	145.9	174.4	198.1
35°	102.9	111.8	130.0	160.0	187.0
37.5°	85.9	95.2	114.4	148.1	175.9
40°	68.1	78.1	100.0	135.9	164.0
42.5°	51.5	62.2	85.5	123.3	151.1
45°	37.0	46.3	72.9	109.6	136.3
47.5°	28.9	33.7	61.5	95.5	122.6
50°	25.2	25.9	50.4	82.6	108.5
52.5°	21.8	22.6	39.6	70.3	93.7
55°	18.9	19.6	30.4	57.8	77.8
57.5°	15.9	17.0	25.2	45.9	62.6
60°	13.3	14.8	22.6	35.2	48.1
62.5°	10.7	13.3	19.3	25.9	34.4
65°	8.9	12.6	16.3	18.1	21.5
67.5°	7.4	11.5	13.7	13.0	12.6
70°	6.3	10.4	11.5	10.4	10.7
72.5°	5.2	9.6	9.6	8.9	8.9
75°	4.4	8.5	8.1	7.8	7.8
77.5°	3.7	7.4	7.0	6.7	6.3
80°	3.0	5.9	5.9	5.6	5.2
82.5°	2.6	4.8	4.8	4.8	4.1
85°	1.9	4.1	4.4	4.1	3.3
87.5°	1.5	3.7	3.7	3.3	2.2
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	4.31	5.63	4.68	5.94	6.26	11.69	13.00	12.05	13.32	13.63
	3H	5.71	6.88	6.09	7.21	7.57	11.92	13.09	12.30	13.42	13.78
	4H	6.26	7.35	6.66	7.70	8.08	12.03	13.12	12.44	13.47	13.86
	6H	6.69	7.70	7.11	8.07	8.46	12.15	13.15	12.56	13.52	13.91
	8H	6.87	7.82	7.30	8.21	8.62	12.20	13.15	12.63	13.54	13.95
	12H	7.03	7.94	7.47	8.32	8.75	12.26	13.17	12.69	13.55	13.98
4H	2H	5.42	6.51	5.82	6.86	7.24	11.64	12.73	12.05	13.08	13.47
	3H	7.08	7.98	7.50	8.38	8.78	12.01	12.90	12.42	13.30	13.71
	4H	7.89	8.69	8.33	9.11	9.55	12.20	13.00	12.64	13.42	13.87
	6H	8.53	9.22	8.99	9.66	10.13	12.43	13.12	12.90	13.57	14.04
	8H	8.76	9.41	9.23	9.86	10.33	12.54	13.18	13.01	13.63	14.10
	12H	8.98	9.55	9.47	10.04	10.51	12.67	13.24	13.15	13.72	14.19
8H	4H	8.33	8.98	8.80	9.42	9.89	12.24	12.89	12.71	13.33	13.80
	6H	9.24	9.77	9.74	10.27	10.75	12.57	13.10	13.07	13.60	14.08
	8H	9.66	10.14	10.18	10.65	11.14	12.76	13.24	13.28	13.75	14.25
	12H	10.09	10.51	10.60	11.00	11.57	13.01	13.43	13.53	13.93	14.50
12H	4H	8.39	8.96	8.87	9.44	9.92	12.23	12.80	12.72	13.28	13.76
	6H	9.37	9.85	9.90	10.37	10.86	12.59	13.06	13.11	13.58	14.07
	8H	9.91	10.34	10.43	10.83	11.40	12.84	13.27	13.36	13.76	14.33