

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: P1059518

Luminaire Tested: S123RDR-H1165D850-X4F0-XX-UDD-BVL-S

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059518
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-69)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDR-H1165D850-X4F0-XX-UDD-BVL-S
Description: DEFINE 3 SILVER REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

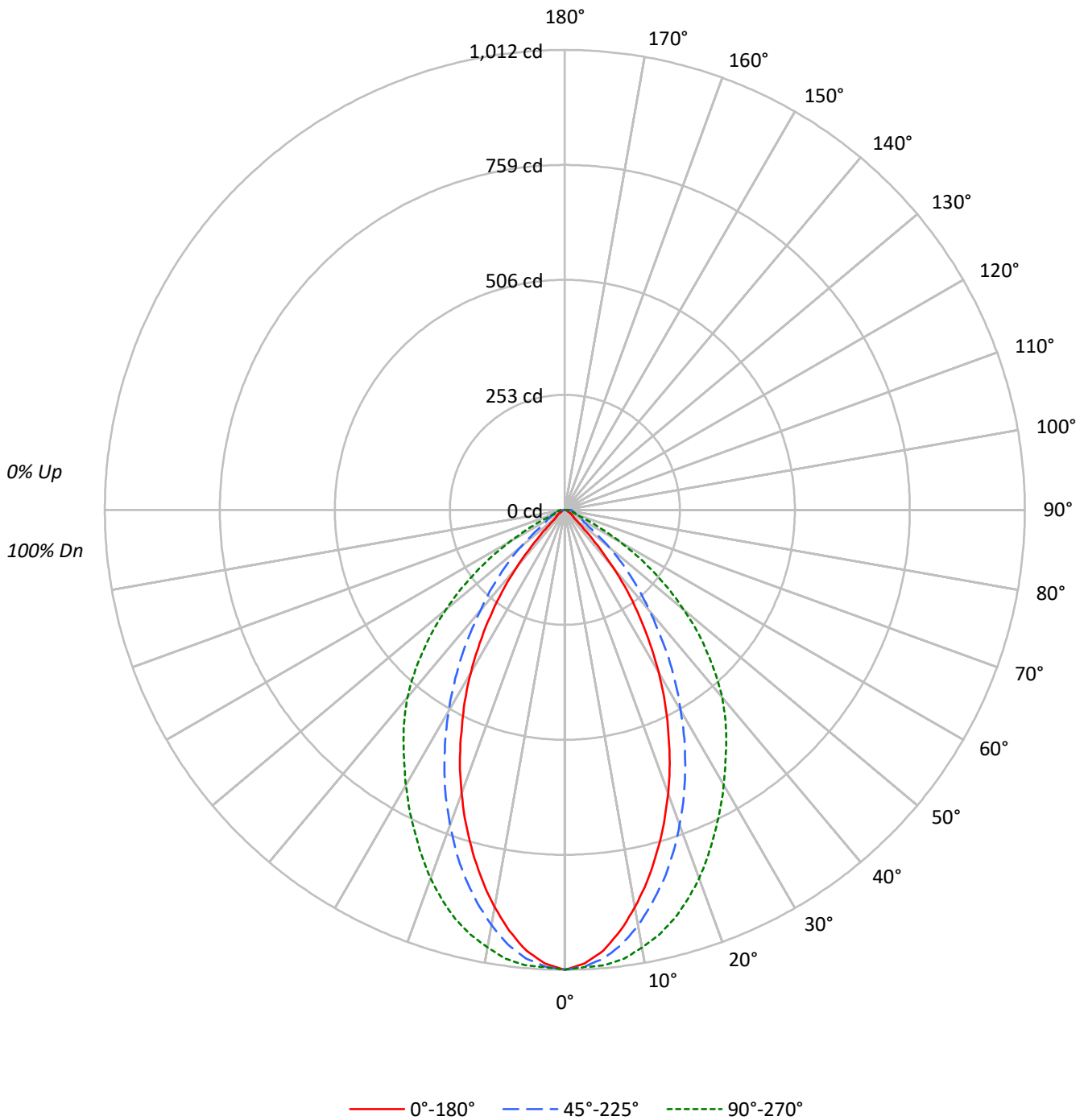
Lumens per Lamp: N/A
Luminaire Lumens: 1215.4 lumens
Efficiency: N/A
Efficacy: 33.3 lumens/watt
Spacing Criteria (0/90/45): 0.79 / 1.06 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 36.5
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	90	87	85	88	85	83	81
3	98	90	84	79	96	89	83	78	86	81	77	83	79	76	81	78	75	73
4	92	83	76	71	90	81	75	70	79	74	69	77	72	69	75	71	68	66
5	86	76	69	64	84	75	68	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	64	58	53	63	57	53	62	56	52	61	56	52	50
8	72	61	54	49	70	60	53	49	59	53	48	58	52	48	57	52	48	46
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	41	40

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11881	11881	11881
5°	11471	11672	11854
10°	10589	11069	11659
15°	9498	10232	11323
20°	8294	9222	10788
25°	6976	8118	10123
30°	5601	6923	9482
35°	4103	5700	8872
40°	2537	4435	8253
45°	976	3340	7348
50°	480	2289	6218
55°	381	1267	4879
60°	254	1054	3269
65°	214	945	1461
70°	213	851	851
75°	281	912	844
80°	419	1150	940
85°	620	1873	1253

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 7348 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	92.8	7.6
10°-20°	237.5	19.5
20°-30°	294.8	24.3
30°-40°	264.1	21.7
40°-50°	173.6	14.3
50°-60°	87.0	7.2
60°-70°	34.3	2.8
70°-80°	19.2	1.6
80°-90°	12.1	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°	625.1	51.4
0°-40°	889.2	73.2
0°-60°	1149.8	94.6
0°-90°	1215.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1215.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1012	1012	1012	1012	1012	
5°	973	989	990	996	1006	90
15°	781	806	842	899	931	218
25°	538	572	627	715	781	246
35°	286	325	398	520	619	178
45°	59	98	201	339	442	56
55°	19	22	62	167	238	17
65°	8	22	34	43	53	8
75°	6	20	20	19	19	7
85°	5	14	14	14	9	5
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1011.8	1011.8	1011.8	1011.8	1011.8
2.5°	999.5	1013.4	1005.7	1005.7	1007.2
5°	973.2	988.6	990.2	996.4	1005.7
7.5°	934.5	954.6	963.9	982.5	996.4
10°	888.1	909.7	928.3	960.8	977.8
12.5°	837.0	858.7	886.5	931.4	957.7
15°	781.3	806.1	841.7	898.9	931.4
17.5°	724.1	748.8	792.2	857.1	898.9
20°	663.7	691.6	738.0	812.3	863.3
22.5°	603.4	634.3	683.8	764.3	823.1
25°	538.4	572.5	626.6	714.8	781.3
27.5°	476.5	512.1	569.4	665.3	741.1
30°	413.1	448.7	510.6	614.2	699.3
32.5°	348.1	388.3	453.3	566.3	657.5
35°	286.2	324.9	397.6	519.8	618.9
37.5°	225.9	264.6	340.4	475.0	580.2
40°	165.5	205.8	289.3	431.7	538.4
42.5°	108.3	150.1	244.5	388.3	492.0
45°	58.8	97.5	201.1	338.8	442.5
47.5°	32.5	52.6	162.5	292.4	394.5
50°	26.3	29.4	125.3	249.1	340.4
52.5°	21.7	24.8	89.7	207.3	290.9
55°	18.6	21.7	61.9	167.1	238.3
57.5°	15.5	18.6	49.5	128.4	187.2
60°	10.8	18.6	44.9	94.4	139.2
62.5°	9.3	18.6	38.7	65.0	92.8
65°	7.7	21.7	34.0	43.3	52.6
67.5°	6.2	21.7	29.4	27.8	27.8
70°	6.2	21.7	24.8	23.2	24.8
72.5°	6.2	23.2	23.2	21.7	21.7
75°	6.2	20.1	20.1	18.6	18.6
77.5°	6.2	18.6	18.6	17.0	17.0
80°	6.2	17.0	17.0	15.5	13.9
82.5°	6.2	15.5	15.5	13.9	12.4
85°	4.6	13.9	13.9	13.9	9.3
87.5°	4.6	12.4	13.9	12.4	7.7
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	1.07	2.33	1.43	2.64	2.95	15.14	16.40	15.51	16.71	17.03
	3H	3.59	4.71	3.97	5.04	5.40	15.22	16.34	15.60	16.67	17.03
	4H	4.76	5.79	5.16	6.14	6.53	15.29	16.32	15.69	16.67	17.06
	6H	5.81	6.76	6.22	7.13	7.52	15.38	16.34	15.80	16.71	17.10
	8H	6.35	7.25	6.78	7.64	8.04	15.45	16.34	15.88	16.74	17.14
	12H	6.82	7.68	7.26	8.07	8.50	15.52	16.38	15.95	16.76	17.19
4H	2H	4.32	5.35	4.72	5.71	6.09	15.00	16.04	15.41	16.39	16.78
	3H	6.78	7.63	7.20	8.04	8.44	15.18	16.02	15.59	16.43	16.83
	4H	8.13	8.89	8.56	9.31	9.75	15.31	16.06	15.74	16.48	16.93
	6H	9.26	9.91	9.73	10.36	10.83	15.52	16.18	15.99	16.62	17.09
	8H	9.77	10.38	10.24	10.83	11.30	15.65	16.26	16.12	16.71	17.18
	12H	10.23	10.76	10.71	11.25	11.72	15.81	16.35	16.29	16.83	17.31
8H	4H	9.04	9.66	9.52	10.10	10.58	15.31	15.92	15.78	16.37	16.84
	6H	10.64	11.14	11.15	11.64	12.12	15.64	16.14	16.14	16.64	17.12
	8H	11.47	11.92	12.00	12.44	12.93	15.87	16.32	16.39	16.84	17.33
	12H	12.25	12.65	12.76	13.14	13.72	16.19	16.59	16.71	17.09	17.66
12H	4H	9.21	9.75	9.70	10.24	10.71	15.30	15.84	15.79	16.32	16.80
	6H	10.96	11.41	11.48	11.93	12.42	15.67	16.12	16.19	16.64	17.13
	8H	11.97	12.37	12.49	12.86	13.44	15.98	16.38	16.50	16.88	17.45