

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: P1059803

Luminaire Tested: S123RDR-H775D940-X4F0-XX-UDD-WVL-S

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059803
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-H775D940-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

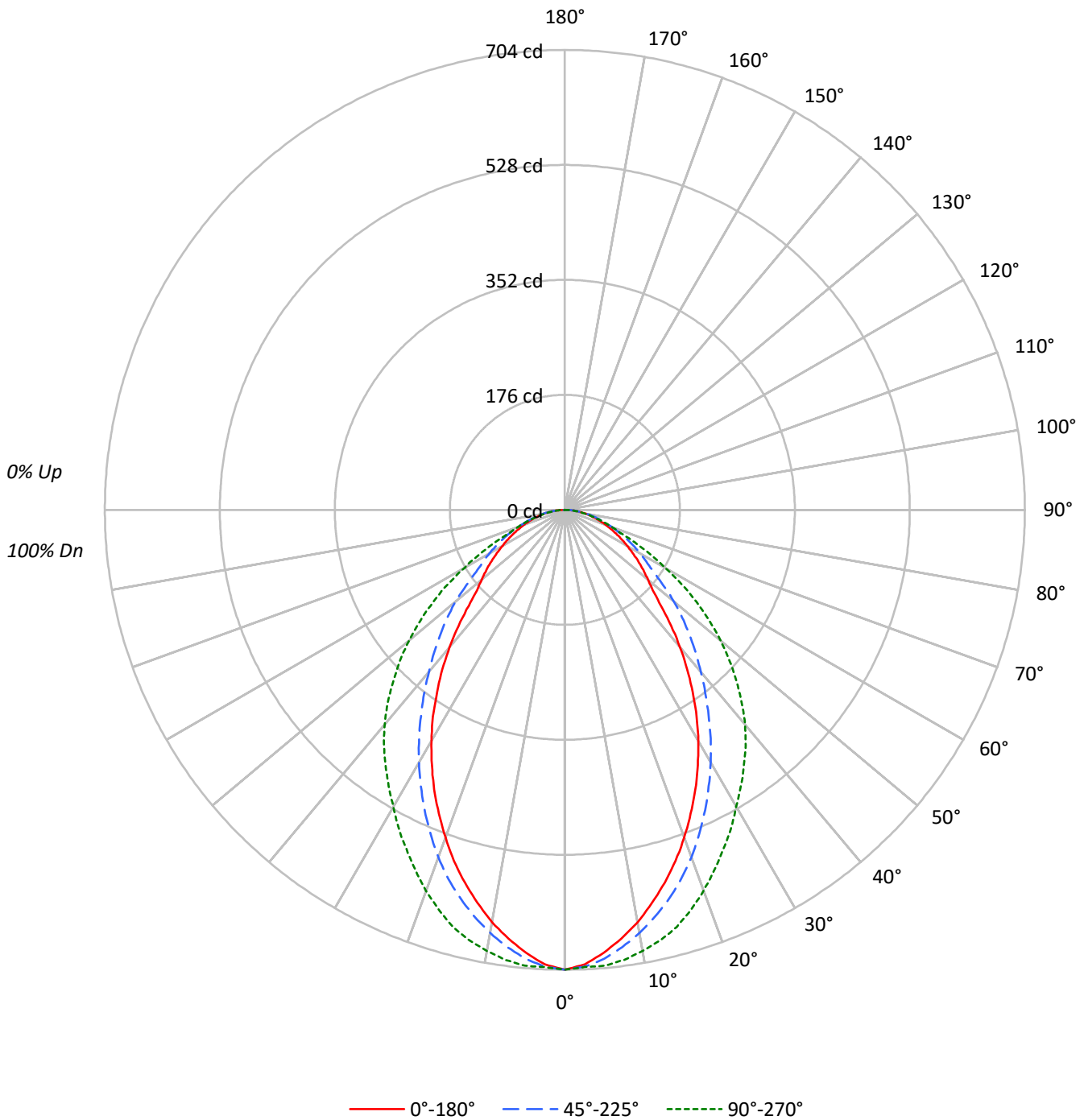
Lumens per Lamp: N/A
Luminaire Lumens: 1271.5 lumens
Efficiency: N/A
Efficacy: 54.1 lumens/watt
Spacing Criteria (0/90/45): 0.93 / 1.12 / 1.1
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 23.5
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	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	65	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°	8266	8266	8266
5°	8025	8132	8258
10°	7645	7842	8176
15°	7182	7493	8036
20°	6672	7074	7755
25°	6126	6575	7430
30°	5539	6053	7116
35°	4885	5500	6849
40°	4200	4959	6578
45°	3454	4467	6166
50°	3031	3981	5683
55°	2805	3396	5034
60°	2579	3121	4166
65°	2406	2867	3279
70°	2266	2606	2606
75°	2132	2395	2246
80°	2008	2177	1900
85°	1886	2115	1442

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 6166 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	65.1	5.1
10°-20°	174.5	13.7
20°-30°	236.6	18.6
30°-40°	247.3	19.5
40°-50°	214.5	16.9
50°-60°	159.6	12.6
60°-70°	102.4	8.1
70°-80°	54.9	4.3
80°-90°	16.6	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°	476.1	37.4
0°-40°	723.5	56.9
0°-60°	1097.6	86.3
0°-90°	1271.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1271.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	704	704	704	704	704	
5°	681	692	690	695	701	64
15°	591	605	616	641	661	166
25°	473	488	508	541	574	217
35°	341	357	384	432	478	213
45°	208	224	269	327	371	164
55°	137	140	166	213	246	123
65°	87	94	103	110	118	86
75°	47	54	53	50	50	50
85°	14	17	16	13	11	16
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	703.9	703.9	703.9	703.9	703.9
2.5°	696.5	706.4	699.8	699.8	700.6
5°	680.8	692.3	689.9	694.8	700.6
7.5°	661.8	674.2	675.0	686.6	694.8
10°	641.2	653.6	657.7	674.2	685.7
12.5°	616.4	630.5	637.9	658.5	675.0
15°	590.8	604.9	616.4	641.2	661.0
17.5°	563.6	577.6	592.5	620.6	642.0
20°	533.9	548.8	566.1	594.1	620.6
22.5°	503.4	519.1	537.2	567.7	597.4
25°	472.8	487.7	507.5	541.3	573.5
27.5°	440.7	456.3	477.0	514.1	550.4
30°	408.5	424.2	446.4	486.0	524.8
32.5°	375.5	391.1	415.1	459.6	501.7
35°	340.8	357.3	383.7	432.4	477.8
37.5°	307.8	323.5	353.2	406.8	454.7
40°	274.0	290.5	323.5	381.2	429.1
42.5°	241.0	257.5	296.2	354.0	401.0
45°	208.0	223.6	269.0	326.8	371.3
47.5°	182.4	193.9	243.4	297.9	342.5
50°	165.9	170.0	217.9	269.8	311.1
52.5°	151.0	154.3	189.8	241.8	278.9
55°	137.0	140.3	165.9	212.9	245.9
57.5°	123.0	127.1	147.7	183.2	212.9
60°	109.8	114.7	132.9	156.8	177.4
62.5°	98.2	104.0	118.0	132.9	146.9
65°	86.6	94.1	103.2	109.8	118.0
67.5°	75.9	84.2	89.1	90.8	91.6
70°	66.0	74.3	75.9	75.9	75.9
72.5°	56.1	65.2	63.5	62.7	61.9
75°	47.0	54.5	52.8	50.3	49.5
77.5°	38.0	44.6	42.1	40.4	38.0
80°	29.7	34.7	32.2	30.5	28.1
82.5°	22.3	25.6	23.1	21.5	19.0
85°	14.0	17.3	15.7	13.2	10.7
87.5°	7.4	9.9	8.3	7.4	4.1
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	14.13	15.61	14.49	15.92	16.24	16.88	18.36	17.25	18.68	18.99
	3H	15.84	17.16	16.21	17.49	17.85	17.90	19.23	18.28	19.56	19.92
	4H	16.50	17.74	16.90	18.09	18.47	18.27	19.51	18.67	19.86	20.24
	6H	17.00	18.15	17.41	18.51	18.91	18.52	19.67	18.93	20.04	20.43
	8H	17.18	18.27	17.60	18.66	19.06	18.59	19.69	19.02	20.08	20.48
	12H	17.30	18.35	17.73	18.73	19.16	18.63	19.67	19.06	20.06	20.49
4H	2H	14.90	16.15	15.30	16.50	16.88	17.15	18.40	17.55	18.75	19.13
	3H	16.83	17.86	17.24	18.26	18.66	18.41	19.44	18.82	19.84	20.24
	4H	17.64	18.57	18.07	18.98	19.42	18.89	19.82	19.33	20.24	20.68
	6H	18.28	19.09	18.74	19.53	19.99	19.27	20.08	19.73	20.52	20.98
	8H	18.51	19.26	18.97	19.71	20.17	19.38	20.14	19.85	20.58	21.05
	12H	18.68	19.35	19.16	19.83	20.30	19.46	20.13	19.94	20.61	21.08
8H	4H	17.96	18.71	18.42	19.16	19.62	19.08	19.84	19.55	20.28	20.75
	6H	18.75	19.37	19.25	19.87	20.34	19.57	20.20	20.07	20.69	21.17
	8H	19.08	19.64	19.59	20.15	20.64	19.75	20.31	20.26	20.82	21.31
	12H	19.35	19.85	19.86	20.34	20.91	19.88	20.38	20.39	20.87	21.43
12H	4H	17.98	18.65	18.46	19.13	19.60	19.10	19.77	19.58	20.25	20.72
	6H	18.80	19.36	19.32	19.88	20.36	19.61	20.17	20.12	20.68	21.17
	8H	19.20	19.69	19.71	20.19	20.75	19.84	20.33	20.35	20.83	21.39