

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: P1059804

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

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059804
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-64)
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-W
Description: DEFINE 3 WHITE 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

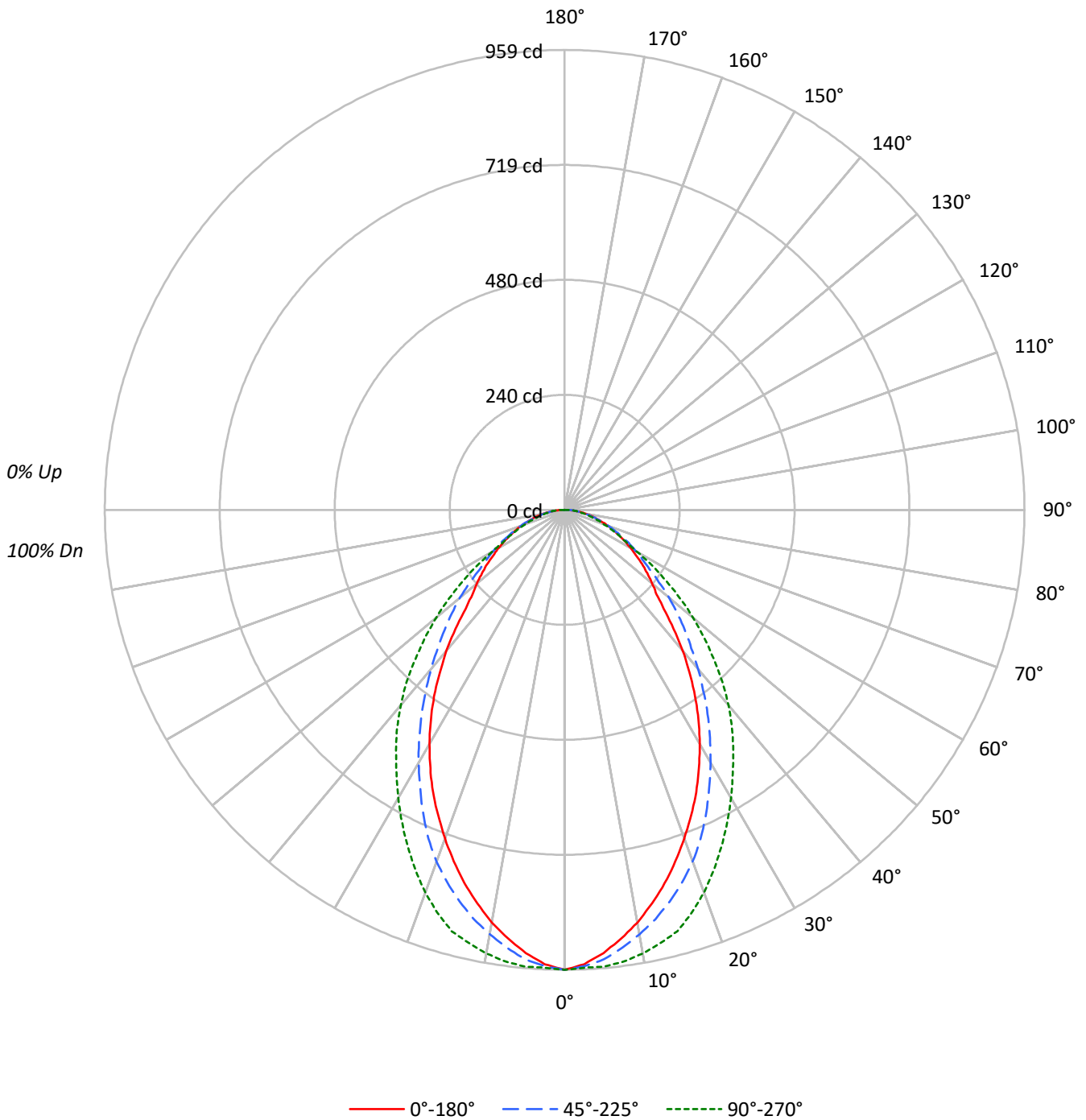
Lumens per Lamp: N/A
Luminaire Lumens: 1685.1 lumens
Efficiency: N/A
Efficacy: 71.7 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 1.1 / 1.09
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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	101	97	100	97	94	96	94	92	92	91	89	87				
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75				
3	94	85	77	72	92	83	76	71	80	75	70	78	73	69	75	71	68	66				
4	87	76	69	63	85	75	68	62	73	66	61	70	65	61	68	64	60	58				
5	81	69	61	55	79	68	61	55	66	59	54	64	58	54	62	57	53	51				
6	75	63	55	49	73	62	55	49	61	54	49	59	53	48	57	52	48	46				
7	70	58	50	44	69	57	50	44	56	49	44	54	48	44	53	48	43	41				
8	66	53	46	40	64	53	45	40	51	45	40	50	44	40	49	44	39	38				
9	62	49	42	37	60	49	42	37	48	41	36	47	41	36	46	40	36	34				
10	58	46	39	34	57	45	38	34	45	38	34	44	38	33	43	37	33	32				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11261	11261	11261
5°	10934	11089	11265
10°	10421	10716	11199
15°	9802	10283	11055
20°	9116	9756	10612
25°	8415	9046	10030
30°	7643	8257	9410
35°	6802	7453	8790
40°	5869	6642	8147
45°	4851	5879	7305
50°	4357	5186	6377
55°	4037	4426	5288
60°	3722	4032	4051
65°	3462	3645	3393
70°	3258	3317	2977
75°	3072	2958	2622
80°	2901	2678	2455
85°	2775	3004	2775

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 7305 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	88.8	5.3
10°-20°	239.3	14.2
20°-30°	323.7	19.2
30°-40°	332.6	19.7
40°-50°	279.4	16.6
50°-60°	200.3	11.9
60°-70°	127.5	7.6
70°-80°	70.1	4.2
80°-90°	23.4	1.4
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°	651.8	38.7
0°-40°	984.4	58.4
0°-60°	1464.1	86.9
0°-90°	1685.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1685.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	959	959	959	959	959	
5°	928	944	941	947	956	87
15°	806	829	846	882	909	226
25°	650	674	698	736	774	298
35°	474	500	520	566	613	295
45°	292	318	354	405	440	231
55°	197	201	216	245	258	176
65°	125	132	131	124	122	124
75°	68	74	65	60	58	72
85°	21	22	22	23	21	23
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	959.0	959.0	959.0	959.0	959.0
2.5°	948.2	961.4	952.4	953.2	955.7
5°	927.6	944.1	940.8	947.4	955.7
7.5°	902.0	920.2	921.0	936.7	949.9
10°	874.0	892.9	898.7	922.6	939.2
12.5°	840.9	861.6	874.0	903.7	925.1
15°	806.3	828.6	845.9	882.2	909.4
17.5°	768.3	792.3	814.5	853.3	881.4
20°	729.5	755.1	780.7	817.0	849.2
22.5°	689.1	715.5	741.9	777.4	812.9
25°	649.5	674.2	698.2	736.1	774.1
27.5°	606.6	632.2	652.8	694.9	734.5
30°	563.7	589.2	609.0	652.8	694.0
32.5°	519.1	545.5	563.7	609.0	652.0
35°	474.5	500.1	519.9	566.1	613.2
37.5°	427.5	455.5	475.4	527.3	573.6
40°	382.9	409.3	433.3	487.7	531.5
42.5°	336.7	363.9	391.2	447.3	487.7
45°	292.1	317.7	354.0	405.2	439.9
47.5°	260.0	276.5	318.6	361.5	394.5
50°	238.5	245.1	283.9	321.9	349.1
52.5°	217.0	222.0	248.4	283.1	303.7
55°	197.2	201.4	216.2	245.1	258.3
57.5°	175.8	179.9	192.3	208.8	216.2
60°	158.5	161.8	171.7	174.1	172.5
62.5°	141.1	146.1	151.0	145.2	142.8
65°	124.6	132.0	131.2	123.8	122.1
67.5°	109.8	117.2	113.1	105.6	103.2
70°	94.9	102.3	96.6	89.1	86.7
72.5°	80.9	89.1	80.1	73.4	71.8
75°	67.7	74.3	65.2	60.2	57.8
77.5°	55.3	60.2	52.0	47.9	46.2
80°	42.9	46.2	39.6	37.1	36.3
82.5°	31.4	33.0	28.9	30.5	29.7
85°	20.6	21.5	22.3	23.1	20.6
87.5°	9.9	14.0	14.0	13.2	10.7
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	15.60	17.06	15.96	17.37	17.69	16.67	18.13	17.03	18.44	18.76
	3H	17.29	18.61	17.67	18.93	19.30	17.75	19.06	18.13	19.39	19.75
	4H	17.95	19.18	18.35	19.53	19.91	18.15	19.38	18.55	19.73	20.11
	6H	18.45	19.59	18.86	19.95	20.35	18.46	19.60	18.88	19.96	20.36
	8H	18.62	19.70	19.05	20.09	20.50	18.60	19.68	19.03	20.07	20.47
	12H	18.75	19.78	19.18	20.16	20.59	18.72	19.75	19.15	20.13	20.56
4H	2H	16.20	17.43	16.60	17.78	18.16	17.07	18.30	17.47	18.65	19.03
	3H	18.13	19.14	18.54	19.55	19.95	18.39	19.41	18.80	19.81	20.21
	4H	18.94	19.85	19.37	20.27	20.71	18.91	19.82	19.34	20.24	20.68
	6H	19.59	20.38	20.04	20.83	21.29	19.34	20.14	19.80	20.58	21.04
	8H	19.81	20.55	20.27	21.00	21.47	19.53	20.27	19.99	20.72	21.19
	12H	19.98	20.64	20.46	21.12	21.60	19.71	20.38	20.19	20.86	21.33
8H	4H	19.18	19.92	19.64	20.36	20.83	19.15	19.90	19.62	20.34	20.81
	6H	19.96	20.58	20.46	21.07	21.55	19.70	20.32	20.20	20.81	21.29
	8H	20.28	20.83	20.79	21.34	21.83	19.98	20.53	20.49	21.04	21.53
	12H	20.54	21.03	21.06	21.53	22.09	20.27	20.76	20.78	21.25	21.82
12H	4H	19.19	19.85	19.67	20.33	20.80	19.18	19.84	19.66	20.32	20.79
	6H	20.00	20.55	20.51	21.06	21.55	19.75	20.31	20.27	20.82	21.31
	8H	20.37	20.86	20.88	21.35	21.92	20.09	20.58	20.60	21.07	21.64