

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: P1056192

Luminaire Tested: S124R3DR-H575D940-X4F0-XX-UDD-FLL-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2019
Report Number: P1056192
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-7)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124R3DR-H575D940-X4F0-XX-UDD-FLL-W
Description: DEFINE 4, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

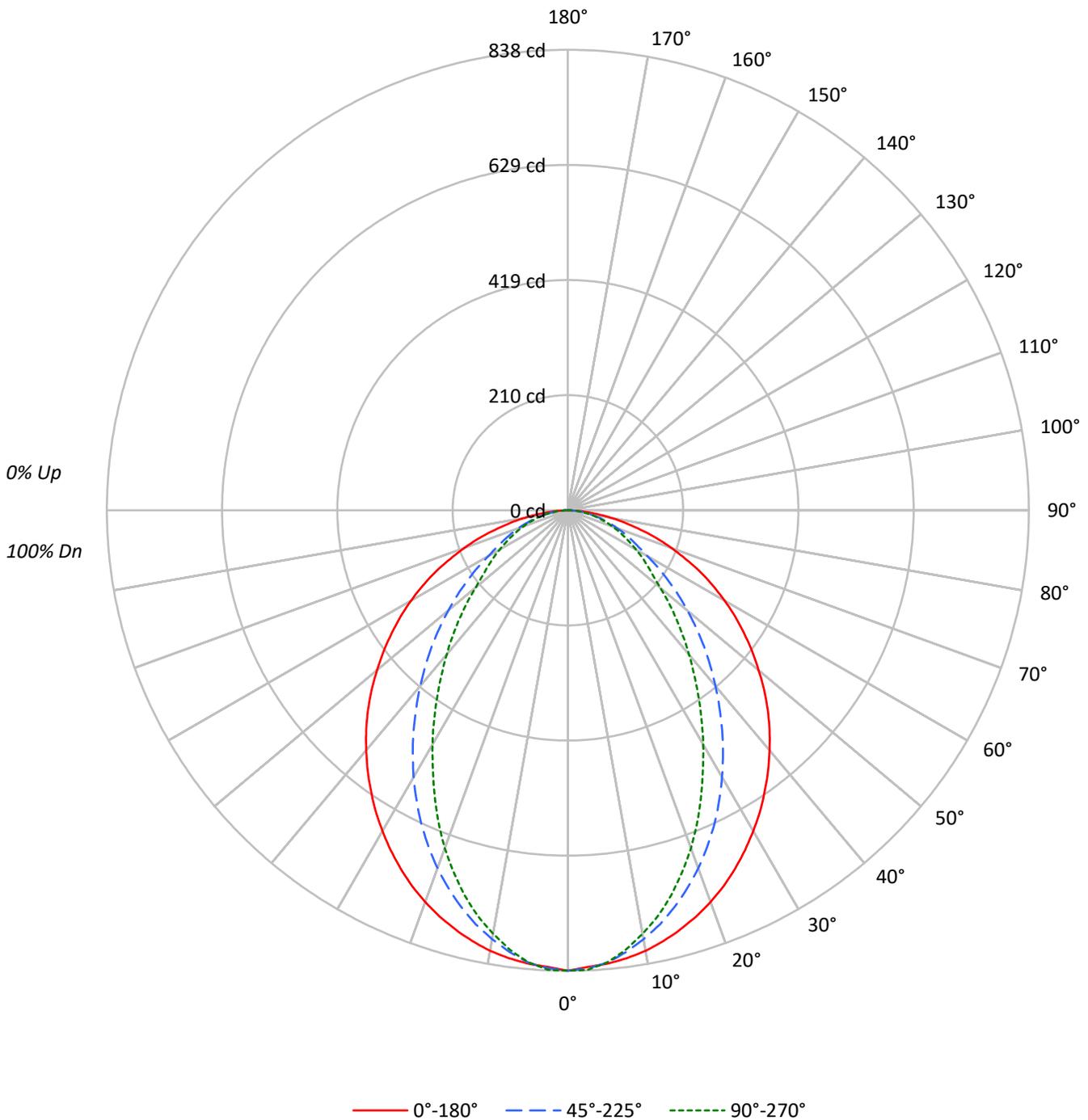
Lumens per Lamp: N/A
Luminaire Lumens: 1668.9 lumens
Efficiency: N/A
Efficacy: 96.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.95 / 1.12
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 17.3
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	50	30	10	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	110	105	102	98	107	103	100	97	99	96	93	95	93	91	92	90	88					86				
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	76					73				
3	93	83	75	69	90	81	74	69	79	73	68	76	71	67	73	69	65					63				
4	85	74	66	60	83	73	65	60	71	64	59	68	63	58	66	61	57					55				
5	79	67	59	53	77	66	58	52	64	57	52	62	56	51	60	55	51					49				
6	73	61	53	47	72	60	52	46	58	51	46	57	50	46	55	50	45					43				
7	68	56	47	42	67	55	47	42	53	46	41	52	46	41	51	45	41					39				
8	64	51	43	38	62	51	43	38	49	42	37	48	42	37	47	41	37					35				
9	60	47	39	34	59	47	39	34	46	39	34	45	38	34	44	38	34					32				
10	56	44	36	31	55	43	36	31	42	36	31	41	35	31	41	35	31					29				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7408	7408	7408
5°	7350	7333	7327
10°	7307	7113	7024
15°	7229	6846	6637
20°	7136	6520	6155
25°	7019	6147	5594
30°	6880	5722	5023
35°	6735	5277	4472
40°	6582	4817	3956
45°	6422	4371	3477
50°	6225	3901	3003
55°	6035	3431	2728
60°	5823	2944	2529
65°	5559	2669	2360
70°	5165	2471	2231
75°	4677	2275	2108
80°	4083	2103	1976
85°	3124	1938	1816

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6422 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	78.0	4.7
10°-20°	211.6	12.7
20°-30°	293.0	17.6
30°-40°	314.5	18.8
40°-50°	286.0	17.1
50°-60°	225.2	13.5
60°-70°	154.1	9.2
70°-80°	83.0	5.0
80°-90°	23.5	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°	582.6	34.9
0°-40°	897.1	53.8
0°-60°	1408.3	84.4
0°-90°	1668.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1668.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	838	838	838	838	838	
5°	828	837	826	822	826	79
15°	790	781	748	728	725	223
25°	720	690	630	584	573	331
35°	624	575	489	430	414	390
45°	514	448	350	289	278	396
55°	392	317	223	179	177	350
65°	266	190	128	113	113	262
75°	137	83	67	61	62	146
85°	31	21	19	18	18	37
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	837.9	837.9	837.9	837.9	837.9
2.5°	831.8	841.6	834.2	835.5	836.7
5°	828.1	837.3	826.2	821.9	825.6
7.5°	821.9	828.1	810.8	802.8	806.5
10°	813.9	815.1	792.3	780.6	782.4
12.5°	802.8	799.7	772.0	755.3	756.5
15°	789.8	781.2	747.9	727.6	725.1
17.5°	775.0	760.9	721.4	695.5	690.6
20°	758.4	739.3	693.0	659.7	654.2
22.5°	739.9	715.2	662.2	622.7	614.7
25°	719.5	689.9	630.1	584.5	573.4
27.5°	697.3	662.8	595.6	545.7	531.5
30°	673.9	634.5	560.5	506.8	492.0
32.5°	649.9	605.5	524.7	468.0	452.6
35°	624.0	575.3	488.9	429.8	414.3
37.5°	597.5	543.8	452.6	392.8	376.7
40°	570.3	512.4	417.4	355.8	342.8
42.5°	542.6	480.3	382.9	321.2	309.5
45°	513.6	448.2	349.6	289.2	278.1
47.5°	484.0	415.6	315.7	259.0	248.5
50°	452.6	382.9	283.6	229.4	218.3
52.5°	422.4	349.6	252.8	200.4	194.8
55°	391.5	316.9	222.6	179.4	177.0
57.5°	360.7	284.2	194.8	162.8	160.3
60°	329.3	252.2	166.5	145.5	143.0
62.5°	297.8	220.7	145.5	128.9	127.6
65°	265.7	189.9	127.6	113.4	112.8
67.5°	231.8	160.3	111.6	99.9	99.3
70°	199.8	130.7	95.6	86.3	86.3
72.5°	169.6	103.6	80.8	73.4	73.4
75°	136.9	83.2	66.6	61.0	61.7
77.5°	107.9	65.4	53.6	49.9	49.9
80°	80.2	48.7	41.3	38.2	38.8
82.5°	54.3	33.9	29.6	27.7	27.7
85°	30.8	21.0	19.1	17.9	17.9
87.5°	11.1	9.9	9.2	8.0	8.6
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	18.10	19.62	18.46	19.94	20.25	13.88	15.40	14.24	15.72	16.03
	3H	19.87	21.24	20.25	21.57	21.93	15.49	16.86	15.87	17.19	17.55
	4H	20.55	21.83	20.95	22.18	22.56	16.12	17.41	16.52	17.76	18.13
	6H	21.06	22.24	21.47	22.61	23.00	16.62	17.81	17.03	18.17	18.57
	8H	21.22	22.35	21.64	22.74	23.14	16.79	17.92	17.21	18.31	18.71
	12H	21.32	22.40	21.75	22.78	23.21	16.91	17.99	17.34	18.38	18.81
4H	2H	18.19	19.48	18.59	19.83	20.21	14.60	15.88	14.99	16.23	16.61
	3H	20.14	21.21	20.55	21.61	22.01	16.40	17.47	16.81	17.87	18.27
	4H	20.89	21.86	21.33	22.27	22.71	17.14	18.10	17.57	18.52	18.96
	6H	21.53	22.37	21.99	22.81	23.27	17.76	18.59	18.21	19.04	19.50
	8H	21.75	22.53	22.21	22.98	23.45	17.97	18.76	18.43	19.20	19.67
	12H	21.90	22.61	22.39	23.08	23.55	18.14	18.84	18.62	19.32	19.79
8H	4H	20.95	21.74	21.42	22.18	22.65	17.53	18.31	17.99	18.76	19.22
	6H	21.65	22.30	22.15	22.79	23.27	18.26	18.91	18.76	19.40	19.88
	8H	21.92	22.50	22.43	23.01	23.50	18.55	19.13	19.06	19.64	20.13
	12H	22.14	22.65	22.65	23.14	23.71	18.79	19.31	19.30	19.80	20.36
12H	4H	20.94	21.65	21.43	22.12	22.59	17.58	18.29	18.07	18.76	19.23
	6H	21.64	22.23	22.16	22.74	23.23	18.34	18.93	18.85	19.43	19.92
	8H	21.95	22.47	22.46	22.96	23.52	18.69	19.21	19.20	19.70	20.26