

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1055664

Luminaire Tested: S123R3DR-S775D840-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055664
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-4)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123R3DR-S775D840-X4F0-XX-UDD-F-W
Description: DEFINE 3, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

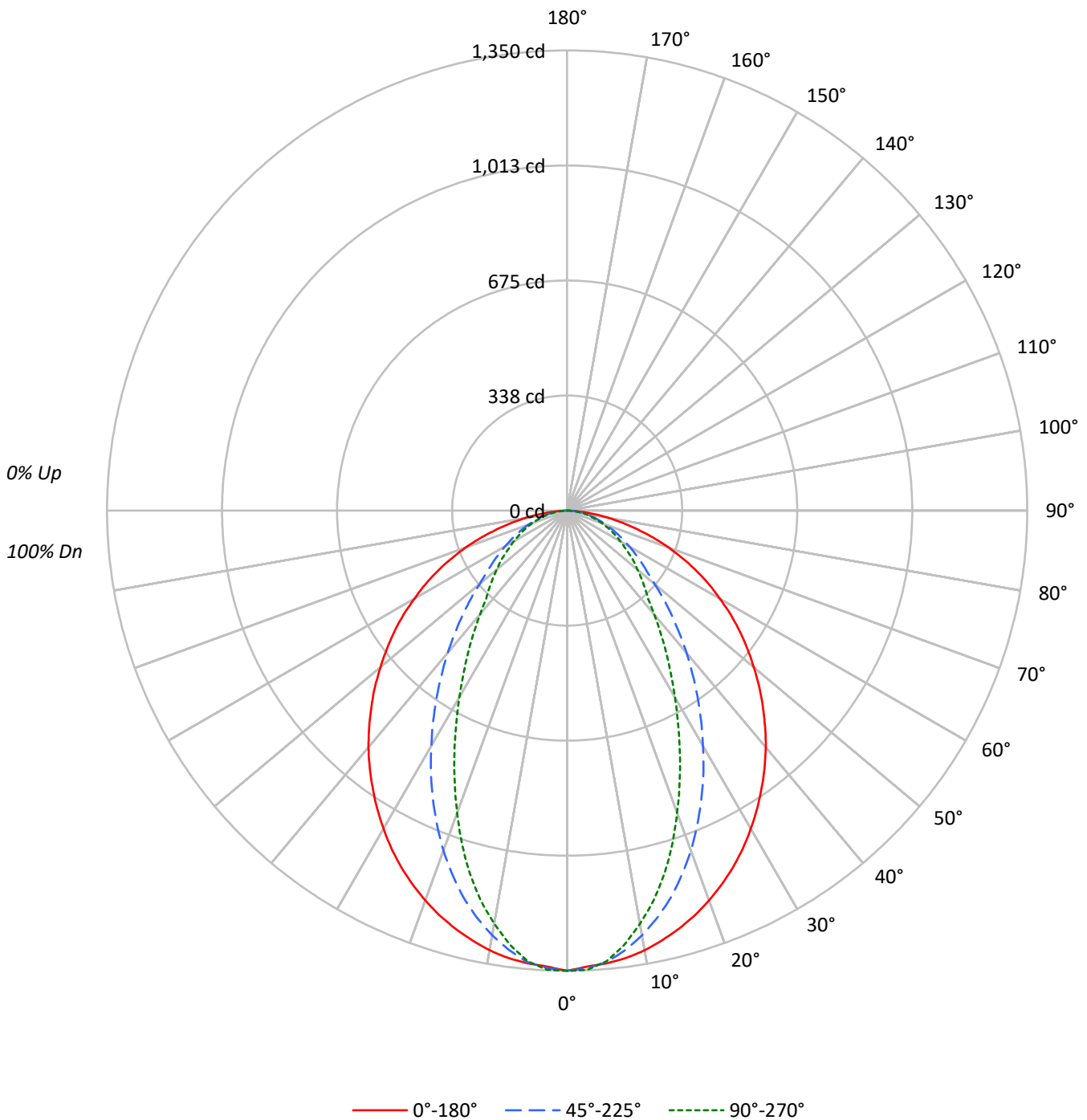
Lumens per Lamp: N/A
Luminaire Lumens: 2368.0 lumens
Efficiency: N/A
Efficacy: 89.7 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.83 / 1.02
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 26.4
Input Voltage (V): 120
Input Current (A_{in}): 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	106	102	99	107	104	100	97	99	97	94	96	93	91	92	90	88	86					86			
2	101	94	88	83	99	92	87	82	89	84	80	85	82	78	83	79	76	74					74			
3	93	84	77	71	91	82	76	70	80	74	69	77	72	68	74	70	67	65					65			
4	86	75	68	61	84	74	67	61	72	65	60	70	64	59	67	63	59	57					57			
5	80	68	60	54	78	67	60	54	65	58	53	63	57	53	62	56	52	50					50			
6	75	62	54	48	73	61	54	48	60	53	48	58	52	47	57	51	47	45					45			
7	70	57	49	43	68	56	49	43	55	48	43	53	47	43	52	47	42	40					40			
8	65	53	45	39	64	52	44	39	51	44	39	49	43	39	48	43	39	37					37			
9	61	49	41	36	60	48	41	36	47	40	36	46	40	35	45	39	35	34					34			
10	58	45	38	33	56	45	38	33	44	37	33	43	37	33	42	37	33	31					31			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	16279	16279	16279
5°	16133	16096	16060
10°	16035	15492	15070
15°	15844	14672	13765
20°	15613	13618	12101
25°	15342	12400	10411
30°	15000	11093	8801
35°	14640	9810	7431
40°	14273	8566	6247
45°	13843	7386	5511
50°	13411	6289	5057
55°	13011	5604	4671
60°	12469	5066	4360
65°	11956	4639	4091
70°	11143	4272	3846
75°	9973	3950	3624
80°	8554	3645	3367
85°	6004	3348	3209

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 13843 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	125.2	5.3
10°-20°	331.1	14.0
20°-30°	436.2	18.4
30°-40°	442.7	18.7
40°-50°	384.8	16.3
50°-60°	301.5	12.7
60°-70°	204.9	8.7
70°-80°	111.0	4.7
80°-90°	30.6	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°	892.5	37.7
0°-40°	1335.2	56.4
0°-60°	2021.6	85.4
0°-90°	2368.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2368.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1350	1350	1350	1350	1350	
5°	1333	1349	1330	1318	1327	127
15°	1269	1251	1176	1118	1103	358
25°	1153	1084	932	816	783	531
35°	995	877	666	539	505	622
45°	812	651	433	334	323	627
55°	619	430	267	227	222	553
65°	419	232	163	145	143	414
75°	214	107	85	79	78	229
85°	43	26	24	22	23	55
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1350.2	1350.2	1350.2	1350.2	1350.2
2.5°	1339.1	1356.2	1343.1	1344.1	1348.2
5°	1333.0	1349.2	1330.0	1317.9	1327.0
7.5°	1323.9	1336.1	1300.7	1281.5	1284.5
10°	1309.8	1313.8	1265.4	1235.1	1231.0
12.5°	1290.6	1283.5	1222.9	1178.5	1171.4
15°	1269.4	1251.2	1175.5	1117.9	1102.8
17.5°	1245.2	1214.9	1119.9	1049.2	1026.0
20°	1216.9	1174.5	1061.4	971.5	943.2
22.5°	1186.6	1132.1	997.7	891.7	862.4
25°	1153.3	1083.6	932.1	816.0	782.6
27.5°	1116.9	1035.1	865.5	741.2	703.9
30°	1077.5	984.6	796.8	668.5	632.2
32.5°	1037.1	931.1	731.1	600.9	565.5
35°	994.7	876.6	666.5	539.3	504.9
37.5°	951.3	821.0	603.9	480.7	448.4
40°	906.9	764.5	544.3	426.2	396.9
42.5°	859.4	707.9	486.8	374.7	352.4
45°	811.9	651.4	433.2	334.3	323.2
47.5°	764.5	593.8	382.7	306.0	295.9
50°	715.0	538.3	335.3	279.7	269.6
52.5°	666.5	483.7	295.9	254.5	247.4
55°	619.0	430.2	266.6	227.2	222.2
57.5°	569.6	377.7	237.3	206.0	200.0
60°	517.1	327.2	210.1	183.8	180.8
62.5°	469.6	279.7	185.8	164.6	161.6
65°	419.1	232.3	162.6	145.4	143.4
67.5°	367.6	192.9	141.4	127.2	126.2
70°	316.1	162.6	121.2	110.1	109.1
72.5°	265.6	134.3	102.0	94.9	92.9
75°	214.1	107.0	84.8	78.8	77.8
77.5°	167.6	82.8	67.7	63.6	62.6
80°	123.2	61.6	52.5	49.5	48.5
82.5°	80.8	42.4	37.4	35.3	35.3
85°	43.4	26.3	24.2	22.2	23.2
87.5°	15.1	11.1	11.1	10.1	11.1
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	20.25	21.74	20.62	22.06	22.37	15.40	16.89	15.77	17.21	17.52
	3H	22.14	23.48	22.52	23.80	24.17	17.03	18.37	17.41	18.69	19.06
	4H	22.89	24.15	23.29	24.50	24.88	17.66	18.92	18.06	19.27	19.65
	6H	23.46	24.62	23.87	24.99	25.38	18.15	19.31	18.57	19.68	20.07
	8H	23.63	24.74	24.06	25.13	25.53	18.32	19.43	18.75	19.82	20.22
	12H	23.73	24.79	24.16	25.17	25.60	18.45	19.51	18.88	19.89	20.32
4H	2H	20.30	21.55	20.70	21.90	22.28	16.13	17.38	16.53	17.73	18.11
	3H	22.31	23.36	22.73	23.76	24.16	17.95	18.99	18.36	19.39	19.79
	4H	23.13	24.07	23.56	24.49	24.93	18.70	19.64	19.13	20.05	20.49
	6H	23.81	24.63	24.27	25.07	25.53	19.30	20.12	19.76	20.57	21.03
	8H	24.04	24.81	24.51	25.25	25.72	19.52	20.28	19.98	20.73	21.19
	12H	24.20	24.88	24.68	25.36	25.83	19.69	20.37	20.17	20.85	21.32
8H	4H	23.16	23.92	23.62	24.36	24.83	19.08	19.84	19.54	20.29	20.75
	6H	23.88	24.52	24.38	25.01	25.48	19.81	20.44	20.31	20.93	21.41
	8H	24.15	24.72	24.67	25.23	25.72	20.09	20.66	20.61	21.17	21.66
	12H	24.36	24.86	24.87	25.36	25.92	20.34	20.84	20.85	21.33	21.90
12H	4H	23.14	23.82	23.62	24.30	24.77	19.13	19.82	19.62	20.29	20.77
	6H	23.87	24.44	24.38	24.95	25.43	19.89	20.46	20.40	20.97	21.46
	8H	24.17	24.67	24.68	25.17	25.73	20.24	20.74	20.75	21.23	21.79