

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: P242358

Luminaire Tested: S122RDRP-S290D830-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242358
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-24)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122RDRP-S290D830-X4F0-XX-UDD-F-W
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

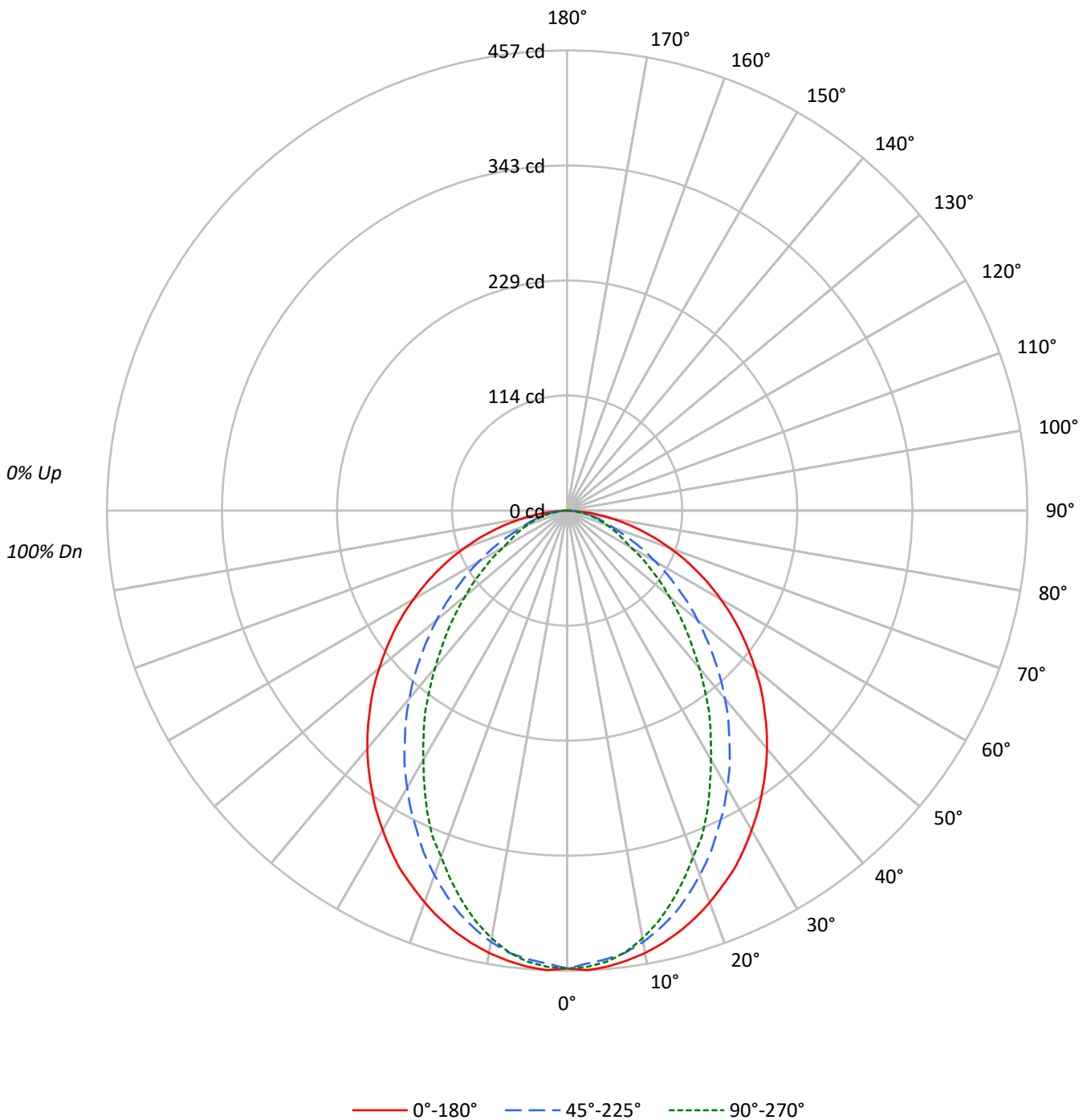
Lumens per Lamp: N/A
Luminaire Lumens: 935.2 lumens
Efficiency: N/A
Efficacy: 80.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 0.15' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 11.6
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	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	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86
2	101	94	87	82	98	92	86	81	88	83	79	85	81	78	82	79	76	74
3	93	83	76	70	90	82	75	69	79	73	68	76	71	67	74	69	66	64
4	86	75	66	60	83	73	66	60	71	64	59	69	63	58	66	62	57	55
5	79	67	59	53	77	66	58	52	64	57	52	62	56	51	60	55	51	49
6	74	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	37	49	42	37	48	42	37	47	41	37	35
9	60	47	39	34	59	47	39	34	46	39	34	44	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°	8661	8661	8661
5°	8694	8553	8600
10°	8628	8414	8342
15°	8529	8164	7929
20°	8392	7808	7417
25°	8251	7404	6919
30°	8057	6988	6282
35°	7866	6536	5723
40°	7676	6067	5075
45°	7451	5544	4490
50°	7219	5011	3915
55°	6984	4440	3361
60°	6709	3840	2792
65°	6400	3227	2542
70°	6026	2656	2339
75°	5571	2421	2178
80°	4925	2172	1985
85°	3868	1705	1705

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7451 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	42.6	4.6
10°-20°	117.0	12.5
20°-30°	164.3	17.6
30°-40°	179.1	19.1
40°-50°	164.6	17.6
50°-60°	129.2	13.8
60°-70°	84.1	9.0
70°-80°	43.3	4.6
80°-90°	11.1	1.2
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°	323.9	34.6
0°-40°	502.9	53.8
0°-60°	796.8	85.2
0°-90°	935.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	935.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	455	455	455	455	455	
5°	455	453	447	451	450	43
15°	432	428	414	406	402	122
25°	393	379	352	335	329	181
35°	338	317	281	255	246	212
45°	277	249	206	176	167	214
55°	210	178	134	109	101	188
65°	142	109	72	58	56	141
75°	76	47	33	30	30	80
85°	18	9	8	8	8	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	454.7	454.7	454.7	454.7	454.7
2.5°	456.8	454.7	450.2	454.3	453.5
5°	454.7	452.7	447.3	451.0	449.8
7.5°	451.0	448.6	442.8	444.5	442.4
10°	446.1	443.2	435.0	433.8	431.3
12.5°	439.9	436.2	425.1	422.6	418.1
15°	432.5	428.0	414.0	406.2	402.1
17.5°	423.9	417.3	400.0	391.0	384.4
20°	414.0	405.8	385.2	374.9	365.9
22.5°	403.3	393.8	370.0	356.0	349.8
25°	392.6	379.4	352.3	335.4	329.2
27.5°	379.8	365.9	335.8	316.5	307.0
30°	366.3	350.6	317.7	296.7	285.6
32.5°	353.1	334.2	300.4	275.7	265.4
35°	338.3	317.3	281.1	255.2	246.1
37.5°	323.9	301.2	263.0	234.6	224.3
40°	308.7	284.0	244.0	214.8	204.1
42.5°	293.0	266.7	225.1	194.7	184.4
45°	276.6	249.0	205.8	176.5	166.7
47.5°	260.9	231.7	187.2	158.0	149.0
50°	243.6	214.4	169.1	140.7	132.1
52.5°	226.8	195.9	151.9	124.7	116.9
55°	210.3	178.2	133.7	109.1	101.2
57.5°	193.4	160.5	117.7	94.7	88.1
60°	176.1	143.2	100.8	79.8	73.3
62.5°	159.3	126.3	86.4	66.7	63.4
65°	142.0	108.6	71.6	57.6	56.4
67.5°	125.5	92.2	57.6	50.6	49.4
70°	108.2	76.1	47.7	43.6	42.0
72.5°	91.8	61.3	39.9	36.6	35.8
75°	75.7	46.9	32.9	30.0	29.6
77.5°	59.7	33.3	25.9	24.3	23.5
80°	44.9	23.9	19.8	18.1	18.1
82.5°	31.3	16.0	13.6	12.8	12.8
85°	17.7	9.1	7.8	7.8	7.8
87.5°	6.6	3.3	3.3	2.9	2.9
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	18.74	20.26	19.10	20.57	20.89	14.70	16.22	15.06	16.53	16.85
	3H	20.50	21.87	20.88	22.19	22.55	15.96	17.33	16.34	17.66	18.02
	4H	21.17	22.45	21.57	22.80	23.17	16.46	17.74	16.86	18.09	18.47
	6H	21.66	22.84	22.07	23.21	23.60	16.85	18.03	17.26	18.39	18.79
	8H	21.82	22.95	22.25	23.34	23.74	16.97	18.10	17.40	18.49	18.89
	12H	21.93	23.00	22.36	23.39	23.81	17.05	18.13	17.48	18.51	18.94
4H	2H	18.84	20.12	19.24	20.47	20.85	15.39	16.67	15.79	17.02	17.40
	3H	20.77	21.83	21.18	22.23	22.64	16.84	17.90	17.25	18.30	18.70
	4H	21.52	22.48	21.95	22.89	23.33	17.43	18.39	17.87	18.81	19.24
	6H	22.11	22.95	22.57	23.39	23.85	17.92	18.75	18.38	19.20	19.66
	8H	22.33	23.11	22.79	23.55	24.02	18.09	18.86	18.55	19.31	19.77
	12H	22.48	23.18	22.96	23.66	24.13	18.20	18.90	18.68	19.38	19.85
8H	4H	21.55	22.32	22.01	22.77	23.23	17.79	18.56	18.25	19.01	19.48
	6H	22.18	22.83	22.68	23.32	23.80	18.37	19.02	18.87	19.51	19.99
	8H	22.43	23.01	22.95	23.52	24.01	18.60	19.17	19.11	19.68	20.17
	12H	22.64	23.15	23.15	23.64	24.21	18.78	19.29	19.29	19.78	20.34
12H	4H	21.53	22.22	22.01	22.70	23.17	17.83	18.53	18.31	19.00	19.47
	6H	22.16	22.74	22.68	23.25	23.74	18.44	19.02	18.95	19.53	20.01
	8H	22.45	22.96	22.96	23.45	24.02	18.71	19.22	19.22	19.71	20.28