

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: P242274

Luminaire Tested: S122DRP-S290D935-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242274
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-10)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122DRP-S290D935-X4F0-XX-UDD-F-W
Description: DEFINE 2 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

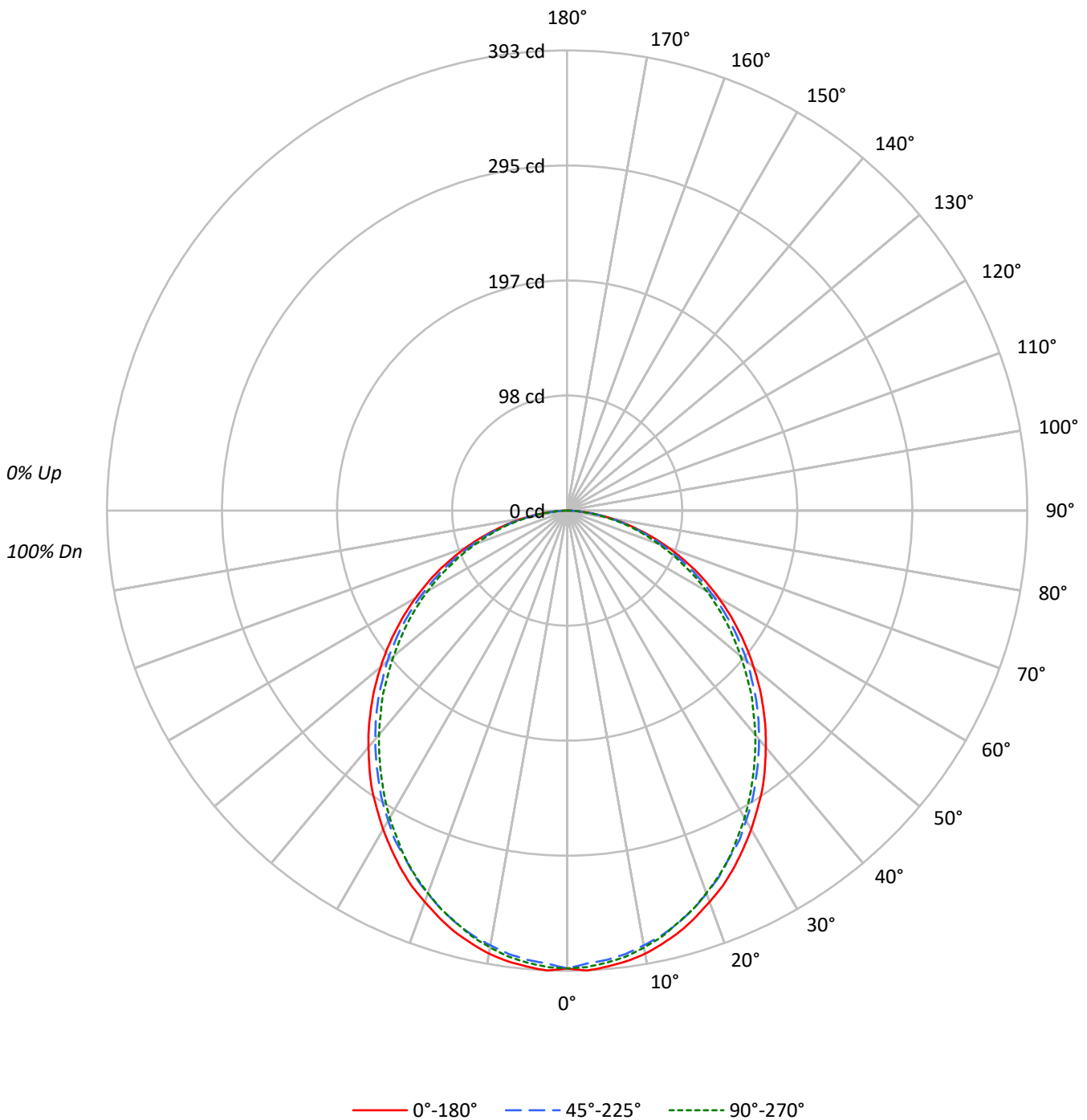
Lumens per Lamp: N/A
Luminaire Lumens: 994.7 lumens
Efficiency: N/A
Efficacy: 85.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 0.15' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 11.6
Input Voltage (V): 120
Input Current (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	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	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84																												
2	99	91	85	79	97	89	83	78	86	81	76	83	78	74	80	76	73	71																												
3	91	80	72	66	88	79	71	65	76	69	64	73	68	63	71	66	62	60																												
4	83	71	63	56	81	70	62	56	68	61	55	65	59	54	63	58	54	51																												
5	77	64	55	49	75	63	55	48	61	53	48	59	52	47	57	51	47	45																												
6	71	58	49	43	69	57	48	42	55	48	42	53	47	42	52	46	41	39																												
7	66	52	44	38	64	52	43	38	50	43	37	49	42	37	47	41	37	35																												
8	61	48	40	34	60	47	39	34	46	39	33	45	38	33	44	38	33	31																												
9	57	44	36	30	56	43	36	30	42	35	30	41	35	30	40	34	30	28																												
10	54	41	33	28	53	40	33	28	39	32	27	38	32	27	37	32	27	26																												

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7448	7448	7448
5°	7476	7367	7411
10°	7431	7294	7329
15°	7340	7198	7192
20°	7208	7056	7048
25°	7078	6881	6881
30°	6913	6721	6664
35°	6757	6529	6434
40°	6562	6338	6216
45°	6371	6147	5996
50°	6161	5947	5737
55°	5941	5719	5506
60°	5699	5444	5242
65°	5440	5170	4931
70°	5107	4834	4606
75°	4651	4452	4342
80°	4124	4004	3795
85°	3366	3213	2885

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6371 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	36.8	3.7
10°-20°	103.5	10.4
20°-30°	152.1	15.3
30°-40°	176.7	17.8
40°-50°	176.5	17.7
50°-60°	153.9	15.5
60°-70°	113.8	11.4
70°-80°	64.4	6.5
80°-90°	17.0	1.7
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°	292.5	29.4
0°-40°	469.2	47.2
0°-60°	799.6	80.4
0°-90°	994.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	994.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	391	391	391	391	391	
5°	391	390	385	388	388	37
15°	372	370	365	366	365	105
25°	337	334	327	328	327	155
35°	291	287	281	279	277	181
45°	236	234	228	224	223	183
55°	179	177	172	168	166	160
65°	121	118	115	111	109	119
75°	63	62	60	58	59	67
85°	15	15	15	14	13	18
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	391.0	391.0	391.0	391.0	391.0
2.5°	393.2	391.3	387.2	391.0	390.2
5°	391.0	389.5	385.3	388.3	387.6
7.5°	388.3	386.1	381.9	385.0	384.2
10°	384.2	381.6	377.1	380.1	378.9
12.5°	378.6	376.3	371.8	373.7	372.9
15°	372.2	369.9	365.0	366.5	364.7
17.5°	364.3	362.0	357.1	359.0	357.1
20°	355.6	353.4	348.1	349.2	347.7
22.5°	347.0	343.6	338.7	338.7	338.0
25°	336.8	333.8	327.4	328.2	327.4
27.5°	325.6	322.9	318.0	316.9	315.0
30°	314.3	311.3	305.6	304.5	303.0
32.5°	302.3	300.0	294.0	291.7	290.2
35°	290.6	286.8	280.8	278.6	276.7
37.5°	277.4	274.1	268.0	265.4	263.5
40°	263.9	260.9	254.9	251.5	250.0
42.5°	250.7	247.7	241.7	238.0	235.7
45°	236.5	233.8	228.2	224.1	222.6
47.5°	222.6	219.9	213.9	209.8	207.5
50°	207.9	206.0	200.7	195.5	193.6
52.5°	193.6	191.0	186.1	182.0	179.3
55°	178.9	176.7	172.2	167.7	165.8
57.5°	164.3	162.4	157.5	153.0	151.5
60°	149.6	148.1	142.9	138.7	137.6
62.5°	135.3	132.7	128.9	125.2	123.7
65°	120.7	118.4	114.7	111.3	109.4
67.5°	105.6	103.8	100.4	97.7	96.2
70°	91.7	90.2	86.8	84.2	82.7
72.5°	77.4	75.9	74.1	71.4	70.3
75°	63.2	62.4	60.5	58.3	59.0
77.5°	50.4	48.9	48.1	47.0	45.9
80°	37.6	37.2	36.5	35.3	34.6
82.5°	25.6	25.6	25.2	23.7	23.7
85°	15.4	15.0	14.7	13.5	13.2
87.5°	6.8	6.0	5.3	4.1	3.8
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	18.26	19.87	18.62	20.18	20.50	17.81	19.42	18.18	19.74	20.05
	3H	20.01	21.46	20.38	21.79	22.15	19.52	20.97	19.89	21.30	21.66
	4H	20.65	22.02	21.05	22.37	22.75	20.16	21.53	20.56	21.88	22.25
	6H	21.12	22.39	21.53	22.76	23.15	20.62	21.89	21.03	22.26	22.65
	8H	21.27	22.48	21.69	22.87	23.27	20.76	21.97	21.19	22.36	22.76
	12H	21.36	22.52	21.79	22.90	23.33	20.85	22.01	21.27	22.39	22.82
4H	2H	18.82	20.19	19.22	20.54	20.91	18.47	19.84	18.86	20.18	20.56
	3H	20.79	21.94	21.20	22.34	22.74	20.39	21.53	20.80	21.93	22.33
	4H	21.57	22.61	22.00	23.02	23.46	21.15	22.18	21.58	22.60	23.03
	6H	22.17	23.07	22.62	23.51	23.97	21.73	22.64	22.19	23.08	23.54
	8H	22.36	23.20	22.82	23.65	24.11	21.92	22.76	22.38	23.21	23.67
	12H	22.49	23.25	22.97	23.72	24.19	22.04	22.80	22.52	23.27	23.74
8H	4H	21.84	22.69	22.30	23.13	23.60	21.47	22.32	21.93	22.76	23.22
	6H	22.56	23.26	23.05	23.75	24.23	22.18	22.88	22.67	23.37	23.84
	8H	22.82	23.45	23.33	23.96	24.44	22.43	23.06	22.94	23.56	24.05
	12H	23.02	23.58	23.52	24.07	24.63	22.60	23.16	23.11	23.65	24.21
12H	4H	21.87	22.63	22.35	23.11	23.57	21.50	22.26	21.98	22.74	23.21
	6H	22.60	23.24	23.11	23.74	24.23	22.23	22.87	22.74	23.37	23.86
	8H	22.92	23.48	23.42	23.97	24.53	22.54	23.10	23.05	23.59	24.15