

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: P242255

Luminaire Tested: S122DRP-S290D830-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242255
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-S290D830-X4F0-XX-UDD-F-W
Description: DEFINE 2 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

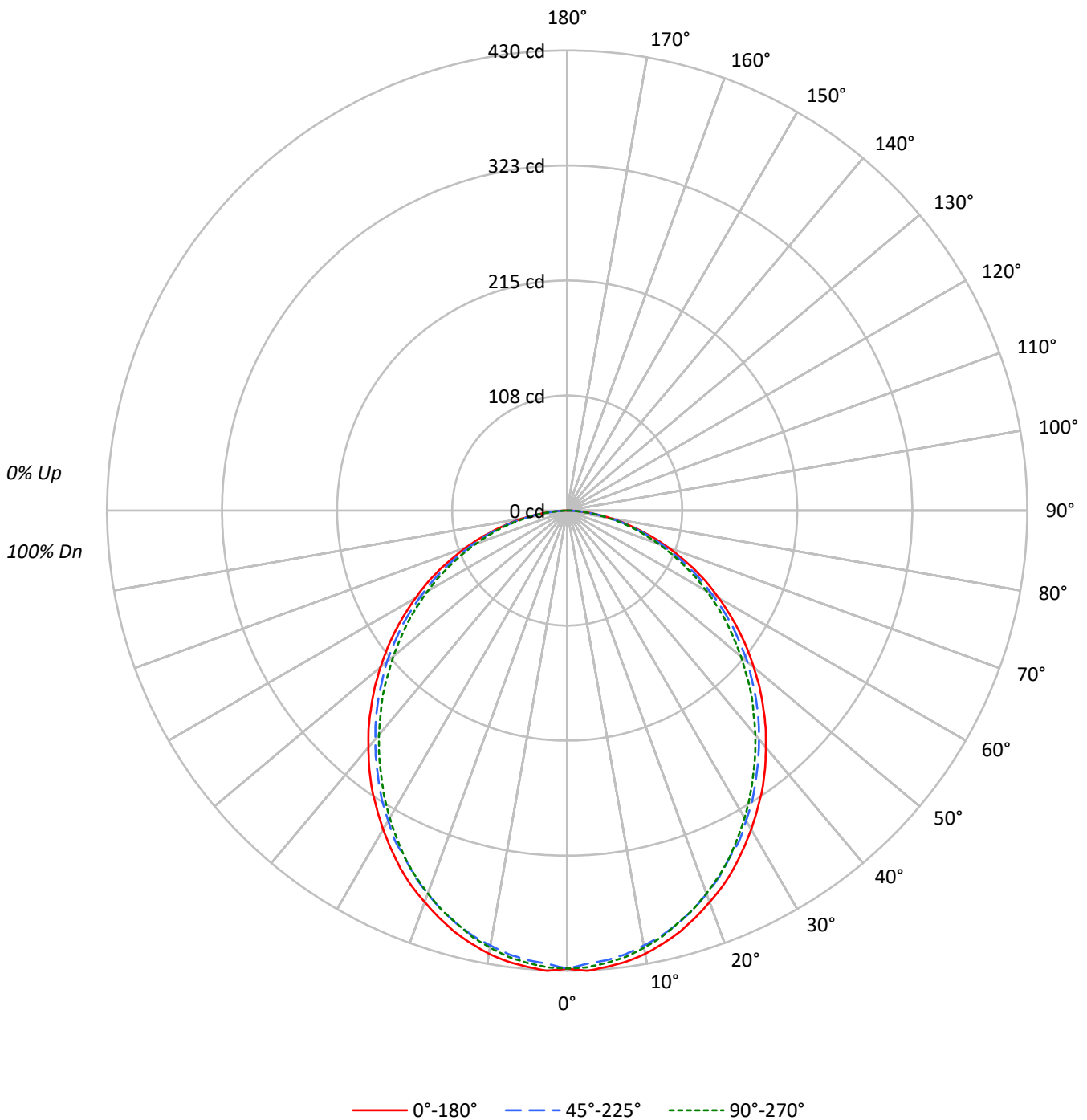
Lumens per Lamp: N/A
Luminaire Lumens: 1088.9 lumens
Efficiency: N/A
Efficacy: 93.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 0.15' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 11.6
Input Voltage (V): 120
Input Current (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	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°	8152	8152	8152
5°	8184	8065	8113
10°	8135	7984	8023
15°	8034	7880	7872
20°	7891	7725	7717
25°	7749	7532	7532
30°	7566	7359	7296
35°	7397	7148	7043
40°	7184	6937	6806
45°	6974	6729	6562
50°	6744	6513	6279
55°	6506	6260	6027
60°	6240	5958	5737
65°	5954	5656	5399
70°	5591	5296	5040
75°	5085	4879	4754
80°	4519	4377	4157
85°	3693	3497	3147

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6974 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	40.3	3.7
10°-20°	113.3	10.4
20°-30°	166.6	15.3
30°-40°	193.4	17.8
40°-50°	193.2	17.7
50°-60°	168.5	15.5
60°-70°	124.5	11.4
70°-80°	70.5	6.5
80°-90°	18.6	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°	320.2	29.4
0°-40°	513.6	47.2
0°-60°	875.3	80.4
0°-90°	1088.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1088.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	428	428	428	428	428	
5°	428	426	422	425	424	41
15°	407	405	400	401	399	115
25°	369	365	358	359	358	170
35°	318	314	307	305	303	199
45°	259	256	250	245	244	200
55°	196	193	188	184	182	175
65°	132	130	126	122	120	131
75°	69	68	66	64	65	74
85°	17	16	16	15	14	20
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	428.0	428.0	428.0	428.0	428.0
2.5°	430.5	428.4	423.9	428.0	427.2
5°	428.0	426.4	421.8	425.1	424.3
7.5°	425.1	422.6	418.1	421.4	420.6
10°	420.6	417.7	412.8	416.1	414.8
12.5°	414.4	411.9	407.0	409.1	408.2
15°	407.4	405.0	399.6	401.2	399.2
17.5°	398.8	396.3	391.0	393.0	391.0
20°	389.3	386.8	381.1	382.3	380.7
22.5°	379.8	376.1	370.8	370.8	370.0
25°	368.7	365.4	358.4	359.3	358.4
27.5°	356.4	353.5	348.2	346.9	344.9
30°	344.0	340.8	334.6	333.3	331.7
32.5°	330.9	328.4	321.8	319.4	317.7
35°	318.1	314.0	307.4	304.9	302.9
37.5°	303.7	300.0	293.4	290.5	288.5
40°	288.9	285.6	279.0	275.3	273.7
42.5°	274.5	271.2	264.6	260.5	258.0
45°	258.9	256.0	249.8	245.3	243.6
47.5°	243.6	240.7	234.2	229.6	227.2
50°	227.6	225.5	219.8	214.0	211.9
52.5°	211.9	209.1	203.7	199.2	196.3
55°	195.9	193.4	188.5	183.5	181.5
57.5°	179.8	177.8	172.4	167.5	165.8
60°	163.8	162.1	156.4	151.9	150.6
62.5°	148.2	145.3	141.2	137.0	135.4
65°	132.1	129.6	125.5	121.8	119.8
67.5°	115.6	113.6	109.9	107.0	105.4
70°	100.4	98.8	95.1	92.2	90.5
72.5°	84.8	83.1	81.1	78.2	77.0
75°	69.1	68.3	66.3	63.8	64.6
77.5°	55.1	53.5	52.7	51.4	50.2
80°	41.2	40.7	39.9	38.7	37.9
82.5°	28.0	28.0	27.6	25.9	25.9
85°	16.9	16.5	16.0	14.8	14.4
87.5°	7.4	6.6	5.8	4.5	4.1
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	18.57	20.18	18.94	20.50	20.81	18.13	19.74	18.49	20.05	20.37
	3H	20.32	21.78	20.70	22.10	22.46	19.83	21.29	20.21	21.61	21.97
	4H	20.97	22.34	21.37	22.69	23.06	20.47	21.84	20.87	22.19	22.57
	6H	21.44	22.71	21.85	23.07	23.46	20.94	22.21	21.35	22.57	22.96
	8H	21.58	22.79	22.01	23.18	23.58	21.08	22.29	21.50	22.68	23.08
	12H	21.67	22.83	22.10	23.21	23.64	21.16	22.32	21.59	22.70	23.13
4H	2H	19.13	20.50	19.53	20.85	21.23	18.78	20.15	19.18	20.50	20.87
	3H	21.11	22.25	21.52	22.65	23.05	20.70	21.85	21.11	22.25	22.65
	4H	21.88	22.92	22.32	23.33	23.77	21.46	22.50	21.89	22.91	23.35
	6H	22.48	23.39	22.93	23.83	24.28	22.05	22.95	22.50	23.39	23.85
	8H	22.67	23.52	23.13	23.96	24.42	22.23	23.08	22.69	23.52	23.99
	12H	22.80	23.56	23.28	24.04	24.51	22.35	23.11	22.83	23.59	24.06
8H	4H	22.16	23.00	22.62	23.45	23.91	21.78	22.63	22.25	23.07	23.54
	6H	22.87	23.58	23.37	24.06	24.54	22.49	23.19	22.99	23.68	24.16
	8H	23.13	23.76	23.64	24.27	24.75	22.74	23.37	23.25	23.88	24.36
	12H	23.33	23.89	23.84	24.38	24.94	22.92	23.48	23.43	23.97	24.53
12H	4H	22.18	22.94	22.66	23.42	23.89	21.82	22.58	22.30	23.06	23.53
	6H	22.92	23.55	23.43	24.06	24.54	22.55	23.18	23.06	23.69	24.17
	8H	23.23	23.79	23.74	24.28	24.84	22.85	23.41	23.36	23.90	24.46