

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: P242446

Luminaire Tested: S123DRP-S340D935-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242446
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-11)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123DRP-S340D935-X4F0-XX-UDD-F-W
Description: DEFINE 3 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

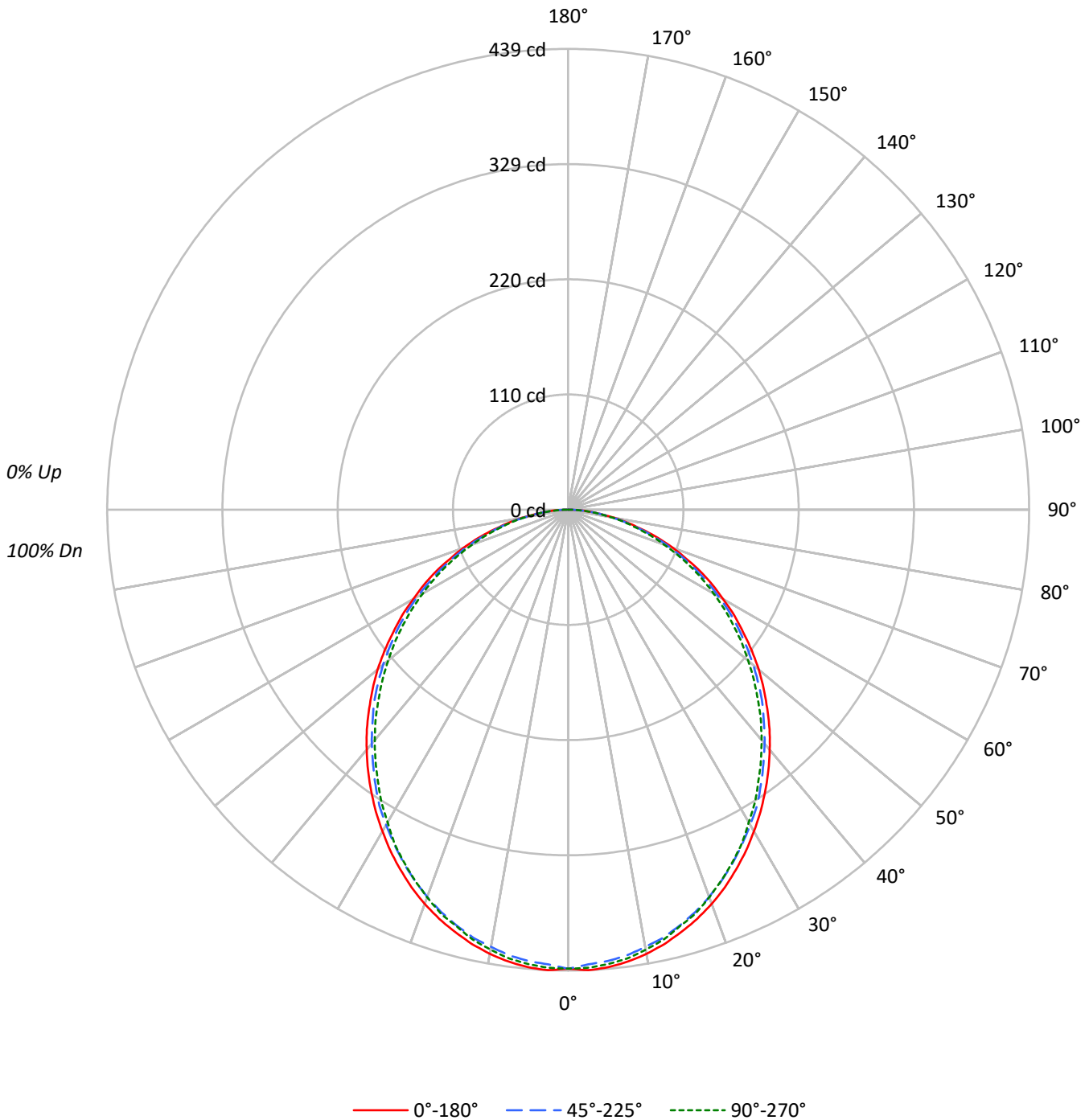
Lumens per Lamp: N/A
Luminaire Lumens: 1137.9 lumens
Efficiency: N/A
Efficacy: 98.1 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.3
Luminous Opening: Rectangular (W 0.23' x L: 3.88' x H: 0')
CIE Type: Direct

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	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	94	92	94	91	89	90	88	86	84
2	99	91	84	79	97	89	83	78	86	80	76	82	78	74	79	76	72	70
3	91	80	72	66	88	79	71	65	76	69	64	73	67	63	70	66	62	59
4	83	71	62	56	81	70	62	55	67	60	55	65	59	54	63	58	53	51
5	76	64	55	48	74	63	54	48	60	53	47	58	52	47	57	51	46	44
6	71	57	49	42	69	56	48	42	55	47	42	53	46	41	51	46	41	39
7	66	52	43	37	64	51	43	37	50	42	37	48	42	37	47	41	36	34
8	61	48	39	33	60	47	39	33	46	38	33	44	38	33	43	37	33	31
9	57	44	36	30	56	43	35	30	42	35	30	41	34	30	40	34	30	28
10	54	40	33	27	52	40	32	27	39	32	27	38	32	27	37	31	27	25

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5299	5299	5299
5°	5325	5252	5288
10°	5289	5205	5238
15°	5227	5146	5156
20°	5154	5063	5067
25°	5058	4962	4952
30°	4952	4851	4815
35°	4840	4734	4673
40°	4723	4605	4533
45°	4594	4484	4376
50°	4465	4339	4218
55°	4298	4186	4060
60°	4128	4010	3881
65°	3978	3817	3697
70°	3757	3597	3438
75°	3433	3311	3171
80°	3099	2967	2939
85°	2712	2615	2503

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4594 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	41.2	3.6
10°-20°	116.4	10.2
20°-30°	171.9	15.1
30°-40°	200.7	17.6
40°-50°	201.8	17.7
50°-60°	177.3	15.6
60°-70°	132.0	11.6
70°-80°	75.1	6.6
80°-90°	21.4	1.9
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°	329.5	29.0
0°-40°	530.2	46.6
0°-60°	909.3	79.9
0°-90°	1137.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1137.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	437	437	437	437	437	
5°	438	436	432	435	435	42
15°	416	415	410	413	411	117
25°	378	376	371	371	370	174
35°	327	325	320	318	316	205
45°	268	266	262	257	255	207
55°	203	203	198	194	192	182
65°	139	137	133	130	129	137
75°	73	72	71	69	68	78
85°	20	19	19	18	18	22
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	437.2	437.2	437.2	437.2	437.2
2.5°	439.1	437.6	433.5	437.2	436.8
5°	437.6	435.7	431.6	435.3	434.6
7.5°	434.2	432.3	428.2	431.6	431.2
10°	429.7	427.8	422.9	426.3	425.6
12.5°	423.7	422.2	417.7	419.9	419.5
15°	416.5	415.0	410.1	413.1	410.9
17.5°	408.6	406.8	401.9	404.1	403.4
20°	399.6	397.4	392.5	394.0	392.8
22.5°	389.5	387.2	382.3	383.5	381.9
25°	378.2	375.9	371.0	371.4	370.3
27.5°	366.5	364.3	359.0	359.4	358.3
30°	353.8	351.9	346.6	346.6	344.0
32.5°	341.0	338.3	334.6	331.9	330.8
35°	327.1	324.8	319.9	317.7	315.8
37.5°	313.2	310.1	305.3	302.6	301.5
40°	298.5	296.2	291.0	288.0	286.5
42.5°	283.8	281.2	275.9	272.9	271.4
45°	268.0	266.5	261.6	257.1	255.3
47.5°	252.6	250.4	245.9	241.3	239.8
50°	236.8	235.0	230.1	225.9	223.7
52.5°	220.3	219.2	213.9	210.5	208.3
55°	203.4	203.0	198.1	194.0	192.1
57.5°	187.6	186.1	182.3	178.6	176.3
60°	170.3	169.9	165.4	162.0	160.1
62.5°	154.9	153.8	149.2	145.9	144.7
65°	138.7	136.8	133.1	130.1	128.9
67.5°	121.4	119.9	116.9	114.3	112.8
70°	106.0	103.8	101.5	98.9	97.0
72.5°	89.8	88.3	85.7	83.5	82.7
75°	73.3	71.8	70.7	68.8	67.7
77.5°	58.6	57.9	56.4	54.9	54.9
80°	44.4	43.2	42.5	42.1	42.1
82.5°	30.5	30.5	30.5	29.7	29.3
85°	19.5	18.8	18.8	18.0	18.0
87.5°	9.8	8.6	8.3	7.9	7.9
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	17.15	18.77	17.52	19.09	19.40	16.84	18.46	17.20	18.77	19.08
	3H	18.92	20.38	19.30	20.71	21.07	18.55	20.02	18.93	20.34	20.70
	4H	19.58	20.96	19.98	21.30	21.68	19.19	20.57	19.59	20.92	21.29
	6H	20.07	21.34	20.48	21.71	22.10	19.68	20.95	20.09	21.32	21.71
	8H	20.22	21.44	20.65	21.83	22.23	19.84	21.06	20.26	21.44	21.84
	12H	20.33	21.49	20.76	21.88	22.31	19.94	21.11	20.37	21.49	21.92
4H	2H	17.73	19.11	18.13	19.46	19.83	17.48	18.86	17.88	19.21	19.58
	3H	19.72	20.88	20.13	21.28	21.68	19.42	20.57	19.83	20.97	21.37
	4H	20.51	21.55	20.94	21.97	22.40	20.18	21.22	20.61	21.64	22.07
	6H	21.13	22.04	21.58	22.48	22.93	20.79	21.71	21.25	22.15	22.60
	8H	21.33	22.18	21.79	22.62	23.09	21.00	21.85	21.46	22.30	22.76
	12H	21.48	22.25	21.96	22.72	23.19	21.15	21.92	21.63	22.39	22.86
8H	4H	20.79	21.65	21.25	22.09	22.55	20.50	21.36	20.96	21.80	22.26
	6H	21.53	22.24	22.02	22.73	23.20	21.24	21.95	21.73	22.44	22.91
	8H	21.80	22.44	22.31	22.95	23.43	21.52	22.16	22.03	22.66	23.15
	12H	22.03	22.60	22.54	23.09	23.65	21.74	22.30	22.25	22.79	23.36
12H	4H	20.82	21.59	21.30	22.06	22.53	20.54	21.31	21.02	21.78	22.25
	6H	21.58	22.22	22.09	22.73	23.21	21.30	21.94	21.81	22.44	22.93
	8H	21.91	22.48	22.42	22.97	23.53	21.64	22.20	22.15	22.69	23.25