

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: P242727

Luminaire Tested: S124RDRP-S575D940-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242727
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-26)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124RDRP-S575D940-X4F0-XX-UDD-F-W
Description: DEFINE 4 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

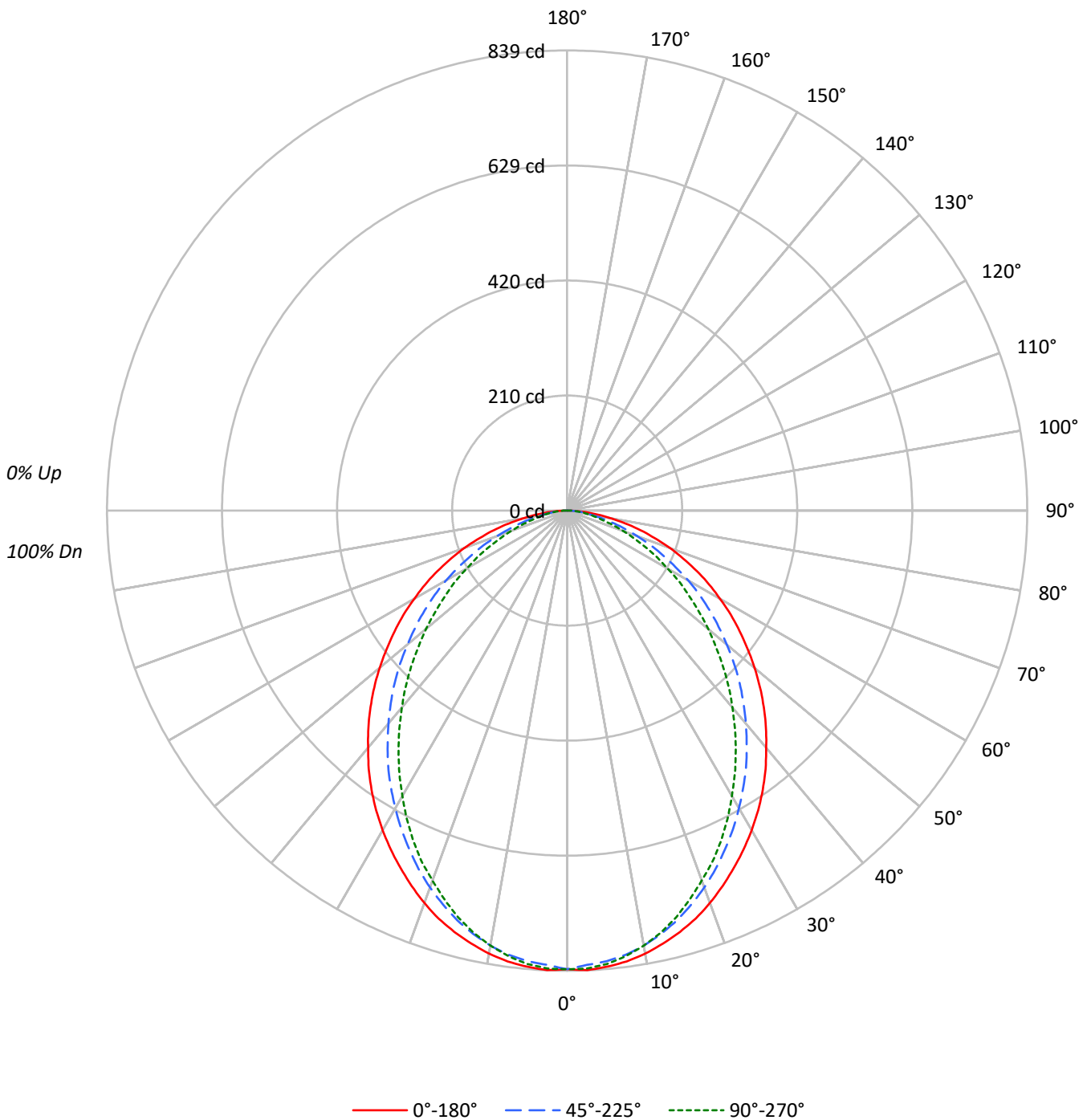
Lumens per Lamp: N/A
Luminaire Lumens: 1932.1 lumens
Efficiency: N/A
Efficacy: 102.8 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24
Luminous Opening: Rectangular (W 0.31' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 18.8
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	105	101	98	107	103	99	96	99	96	93	95	92	90	91	89	87	85
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	74	72
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62
4	84	73	65	58	82	72	64	58	69	62	57	67	61	56	65	60	56	54
5	78	66	57	51	76	65	56	50	62	55	50	61	54	49	59	53	49	47
6	72	59	51	45	70	58	50	44	57	49	44	55	49	44	53	48	43	41
7	67	54	46	40	65	53	45	40	52	45	39	50	44	39	49	43	39	37
8	63	50	41	36	61	49	41	36	48	40	35	46	40	35	45	39	35	33
9	59	46	38	32	57	45	37	32	44	37	32	43	36	32	42	36	32	30
10	55	42	35	29	54	42	34	29	41	34	29	40	33	29	39	33	29	27

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7433	7433	7433
5°	7450	7359	7404
10°	7403	7270	7270
15°	7318	7117	7065
20°	7201	6917	6789
25°	7052	6681	6512
30°	6907	6433	6165
35°	6746	6177	5815
40°	6553	5884	5439
45°	6375	5594	5055
50°	6172	5259	4648
55°	5954	4911	4208
60°	5714	4530	3756
65°	5494	4053	3313
70°	5174	3527	2812
75°	4770	2926	2287
80°	4162	2227	2099
85°	3529	2019	1897

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6375 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	78.6	4.1
10°-20°	219.2	11.3
20°-30°	316.5	16.4
30°-40°	358.7	18.6
40°-50°	346.4	17.9
50°-60°	288.0	14.9
60°-70°	198.7	10.3
70°-80°	100.4	5.2
80°-90°	25.5	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°	614.4	31.8
0°-40°	973.1	50.4
0°-60°	1607.4	83.2
0°-90°	1932.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1932.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	836	836	836	836	836	
5°	835	832	825	831	830	79
15°	795	790	773	772	768	224
25°	719	708	681	670	664	331
35°	622	601	569	547	536	389
45°	507	483	445	414	402	391
55°	384	359	317	284	272	344
65°	261	234	193	165	158	258
75°	139	115	85	70	67	147
85°	35	22	20	19	19	40
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	836.2	836.2	836.2	836.2	836.2
2.5°	838.8	836.2	829.2	836.2	835.6
5°	834.9	832.4	824.7	831.1	829.8
7.5°	829.2	826.6	817.0	821.5	819.5
10°	820.2	817.0	805.5	808.0	805.5
12.5°	808.7	804.8	790.7	792.0	788.2
15°	795.2	789.5	773.4	772.2	767.7
17.5°	779.9	771.5	753.0	749.8	743.4
20°	761.3	753.0	731.2	726.1	717.7
22.5°	740.8	731.2	707.5	699.2	692.8
25°	719.0	707.5	681.2	670.4	664.0
27.5°	696.6	682.5	655.0	642.2	633.2
30°	672.9	656.9	626.8	610.8	600.6
32.5°	648.0	629.4	598.0	578.8	569.2
35°	621.7	601.2	569.2	547.4	535.9
37.5°	594.2	573.0	537.8	514.1	502.6
40°	564.7	543.6	507.1	480.2	468.7
42.5°	536.5	514.1	475.7	448.2	436.0
45°	507.1	483.4	445.0	413.6	402.1
47.5°	477.0	452.7	413.0	380.3	367.5
50°	446.3	421.3	380.3	348.3	336.1
52.5°	414.9	390.6	348.3	315.7	302.8
55°	384.2	358.6	316.9	283.6	271.5
57.5°	354.1	327.2	286.2	252.3	243.3
60°	321.4	295.8	254.8	221.5	211.3
62.5°	292.0	265.1	222.8	192.7	185.0
65°	261.2	233.7	192.7	165.2	157.5
67.5°	229.2	203.0	164.5	140.2	131.3
70°	199.1	172.2	135.7	114.6	108.2
72.5°	167.1	143.4	109.5	92.2	86.4
75°	138.9	115.2	85.2	70.4	66.6
77.5°	109.5	89.0	63.4	53.1	51.9
80°	81.3	62.7	43.5	41.6	41.0
82.5°	57.0	40.3	31.4	30.1	29.5
85°	34.6	21.8	19.8	18.6	18.6
87.5°	14.7	9.6	9.0	8.3	9.0
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	18.31	19.88	18.68	20.19	20.51	16.34	17.91	16.71	18.22	18.54
	3H	20.08	21.49	20.46	21.82	22.18	17.60	19.01	17.97	19.33	19.69
	4H	20.74	22.07	21.14	22.41	22.79	17.97	19.30	18.37	19.64	20.02
	6H	21.22	22.44	21.63	22.81	23.20	18.24	19.46	18.65	19.82	20.22
	8H	21.37	22.54	21.79	22.92	23.32	18.33	19.50	18.75	19.88	20.28
	12H	21.47	22.58	21.90	22.97	23.39	18.39	19.51	18.82	19.89	20.32
4H	2H	18.65	19.97	19.05	20.32	20.70	17.04	18.36	17.44	18.71	19.09
	3H	20.62	21.72	21.03	22.12	22.52	18.47	19.57	18.88	19.97	20.37
	4H	21.40	22.39	21.83	22.80	23.24	18.93	19.92	19.36	20.33	20.77
	6H	21.99	22.86	22.45	23.30	23.76	19.28	20.14	19.73	20.58	21.04
	8H	22.19	22.99	22.65	23.44	23.90	19.40	20.21	19.86	20.65	21.12
	12H	22.33	23.05	22.81	23.53	24.00	19.50	20.22	19.98	20.70	21.17
8H	4H	21.49	22.30	21.95	22.74	23.21	19.24	20.05	19.70	20.49	20.96
	6H	22.16	22.83	22.66	23.32	23.80	19.67	20.34	20.17	20.83	21.31
	8H	22.41	23.01	22.92	23.51	24.00	19.85	20.45	20.36	20.96	21.45
	12H	22.60	23.13	23.11	23.62	24.19	20.01	20.54	20.52	21.03	21.59
12H	4H	21.48	22.21	21.96	22.68	23.15	19.28	20.00	19.76	20.48	20.95
	6H	22.15	22.75	22.66	23.26	23.75	19.72	20.32	20.24	20.83	21.32
	8H	22.43	22.96	22.94	23.46	24.02	19.95	20.48	20.46	20.98	21.54