

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: P242712

Luminaire Tested: S124RDRP-S575D840-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242712
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-S575D840-X4F0-XX-UDD-F-W
Description: DEFINE 4 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

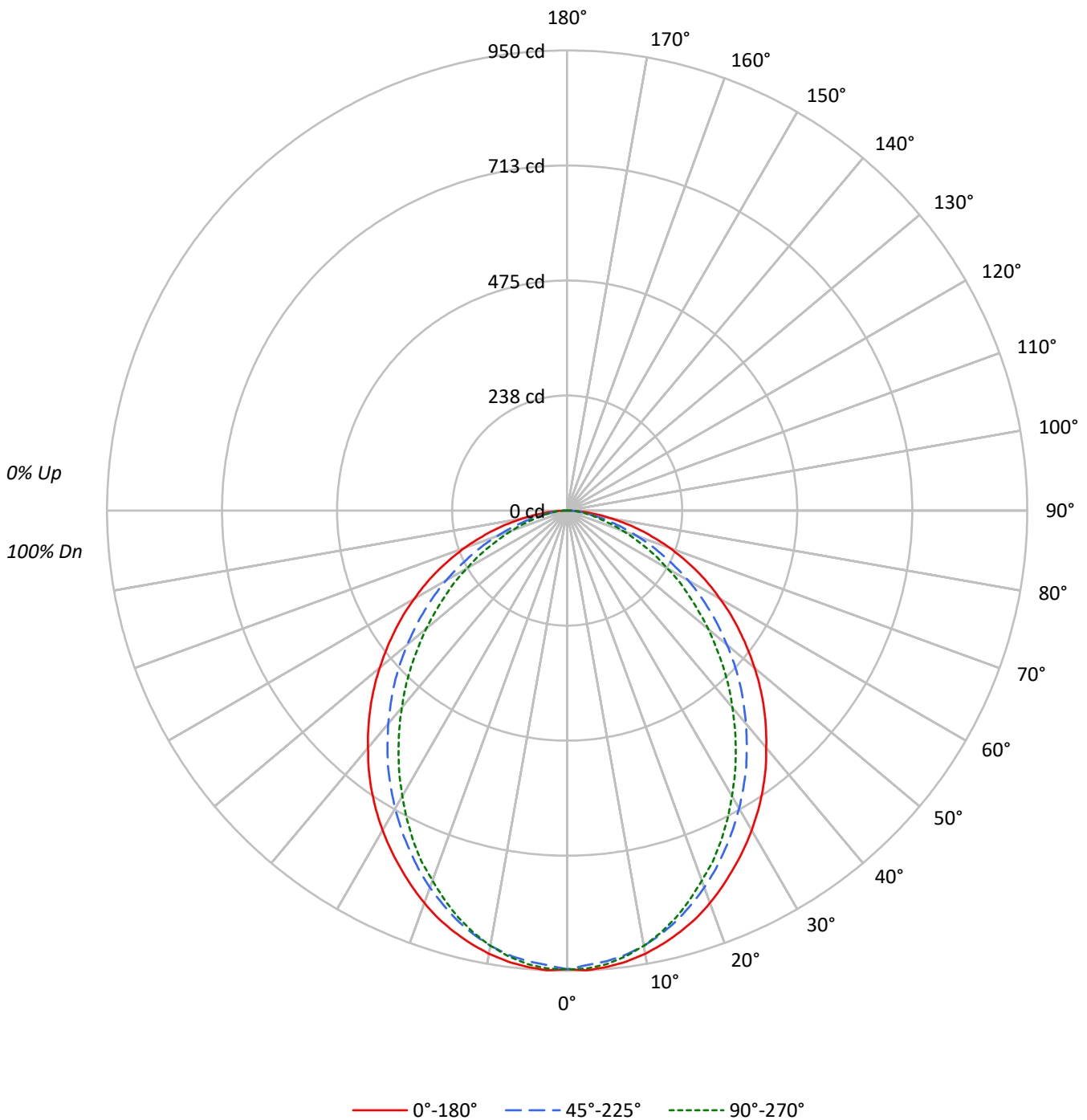
Lumens per Lamp: N/A
Luminaire Lumens: 2188.2 lumens
Efficiency: N/A
Efficacy: 116.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24
Luminous Opening: Rectangular (W 0.31' x L: 3.88' x H: 0')
CIE Type: Direct

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°	8418	8418	8418
5°	8437	8333	8385
10°	8384	8234	8234
15°	8288	8060	8001
20°	8156	7833	7689
25°	7987	7567	7375
30°	7822	7286	6982
35°	7640	6995	6586
40°	7421	6664	6159
45°	7219	6336	5725
50°	6989	5956	5265
55°	6743	5562	4764
60°	6471	5131	4254
65°	6222	4591	3752
70°	5861	3995	3184
75°	5402	3311	2590
80°	4715	2524	2375
85°	3998	2295	2142

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7219 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.0	4.1
10°-20°	248.3	11.3
20°-30°	358.5	16.4
30°-40°	406.3	18.6
40°-50°	392.3	17.9
50°-60°	326.1	14.9
60°-70°	225.1	10.3
70°-80°	113.7	5.2
80°-90°	28.9	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°	695.8	31.8
0°-40°	1102.1	50.4
0°-60°	1820.4	83.2
0°-90°	2188.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2188.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	947	947	947	947	947	
5°	946	943	934	941	940	90
15°	901	894	876	874	869	254
25°	814	801	772	759	752	375
35°	704	681	645	620	607	440
45°	574	548	504	468	455	443
55°	435	406	359	321	307	389
65°	296	265	218	187	178	292
75°	157	130	96	80	75	166
85°	39	25	22	21	21	45
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	947.0	947.0	947.0	947.0	947.0
2.5°	949.9	947.0	939.0	947.0	946.3
5°	945.5	942.6	933.9	941.2	939.7
7.5°	939.0	936.1	925.2	930.3	928.1
10°	928.9	925.2	912.2	915.1	912.2
12.5°	915.8	911.5	895.5	897.0	892.6
15°	900.6	894.1	875.9	874.5	869.4
17.5°	883.2	873.8	852.7	849.1	841.9
20°	862.2	852.7	828.1	822.3	812.8
22.5°	839.0	828.1	801.2	791.8	784.6
25°	814.3	801.2	771.5	759.2	751.9
27.5°	788.9	773.0	741.8	727.3	717.1
30°	762.1	744.0	709.9	691.8	680.2
32.5°	733.8	712.8	677.3	655.5	644.6
35°	704.1	680.9	644.6	620.0	606.9
37.5°	672.9	649.0	609.1	582.3	569.2
40°	639.5	615.6	574.3	543.8	530.8
42.5°	607.6	582.3	538.8	507.6	493.8
45°	574.3	547.5	504.0	468.4	455.4
47.5°	540.2	512.7	467.7	430.7	416.2
50°	505.4	477.1	430.7	394.5	380.7
52.5°	469.9	442.3	394.5	357.5	343.0
55°	435.1	406.1	358.9	321.2	307.4
57.5°	401.0	370.5	324.1	285.7	275.5
60°	364.0	335.0	288.6	250.9	239.3
62.5°	330.6	300.2	252.3	218.3	209.6
65°	295.8	264.7	218.3	187.1	178.4
67.5°	259.6	229.9	186.4	158.8	148.6
70°	225.5	195.1	153.7	129.8	122.5
72.5°	189.3	162.4	124.0	104.4	97.9
75°	157.3	130.5	96.4	79.8	75.4
77.5°	124.0	100.8	71.8	60.2	58.7
80°	92.1	71.1	49.3	47.1	46.4
82.5°	64.5	45.7	35.5	34.1	33.4
85°	39.2	24.7	22.5	21.0	21.0
87.5°	16.7	10.9	10.2	9.4	10.2
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	20.31	19.11	20.62	20.94	16.78	18.34	17.14	18.66	18.97
	3H	20.52	21.92	20.89	22.25	22.61	18.03	19.44	18.41	19.76	20.13
	4H	21.18	22.50	21.57	22.85	23.22	18.40	19.73	18.80	20.08	20.45
	6H	21.65	22.88	22.06	23.24	23.63	18.67	19.89	19.08	20.26	20.65
	8H	21.80	22.97	22.23	23.36	23.76	18.76	19.93	19.19	20.32	20.72
	12H	21.90	23.02	22.33	23.40	23.83	18.82	19.94	19.25	20.32	20.75
4H	2H	19.08	20.40	19.48	20.75	21.13	17.47	18.79	17.87	19.14	19.52
	3H	21.05	22.15	21.46	22.55	22.95	18.90	20.01	19.31	20.40	20.81
	4H	21.83	22.82	22.26	23.24	23.67	19.36	20.35	19.79	20.77	21.20
	6H	22.43	23.29	22.88	23.73	24.19	19.71	20.57	20.16	21.01	21.47
	8H	22.62	23.43	23.08	23.87	24.34	19.83	20.64	20.30	21.08	21.55
	12H	22.76	23.48	23.24	23.96	24.43	19.93	20.65	20.41	21.13	21.60
8H	4H	21.92	22.73	22.39	23.18	23.64	19.67	20.48	20.13	20.92	21.39
	6H	22.60	23.27	23.09	23.76	24.23	20.10	20.77	20.60	21.26	21.74
	8H	22.84	23.44	23.35	23.95	24.43	20.28	20.88	20.80	21.39	21.88
	12H	23.03	23.56	23.54	24.06	24.62	20.44	20.97	20.95	21.46	22.02
12H	4H	21.91	22.64	22.40	23.12	23.59	19.71	20.43	20.19	20.91	21.38
	6H	22.59	23.19	23.10	23.69	24.18	20.16	20.76	20.67	21.27	21.75
	8H	22.87	23.40	23.38	23.89	24.45	20.39	20.92	20.89	21.41	21.97