

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: P242609

Luminaire Tested: S124DRP-S575D840-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242609
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-5)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124DRP-S575D840-X4F0-XX-UDD-F-W
Description: DEFINE 4 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

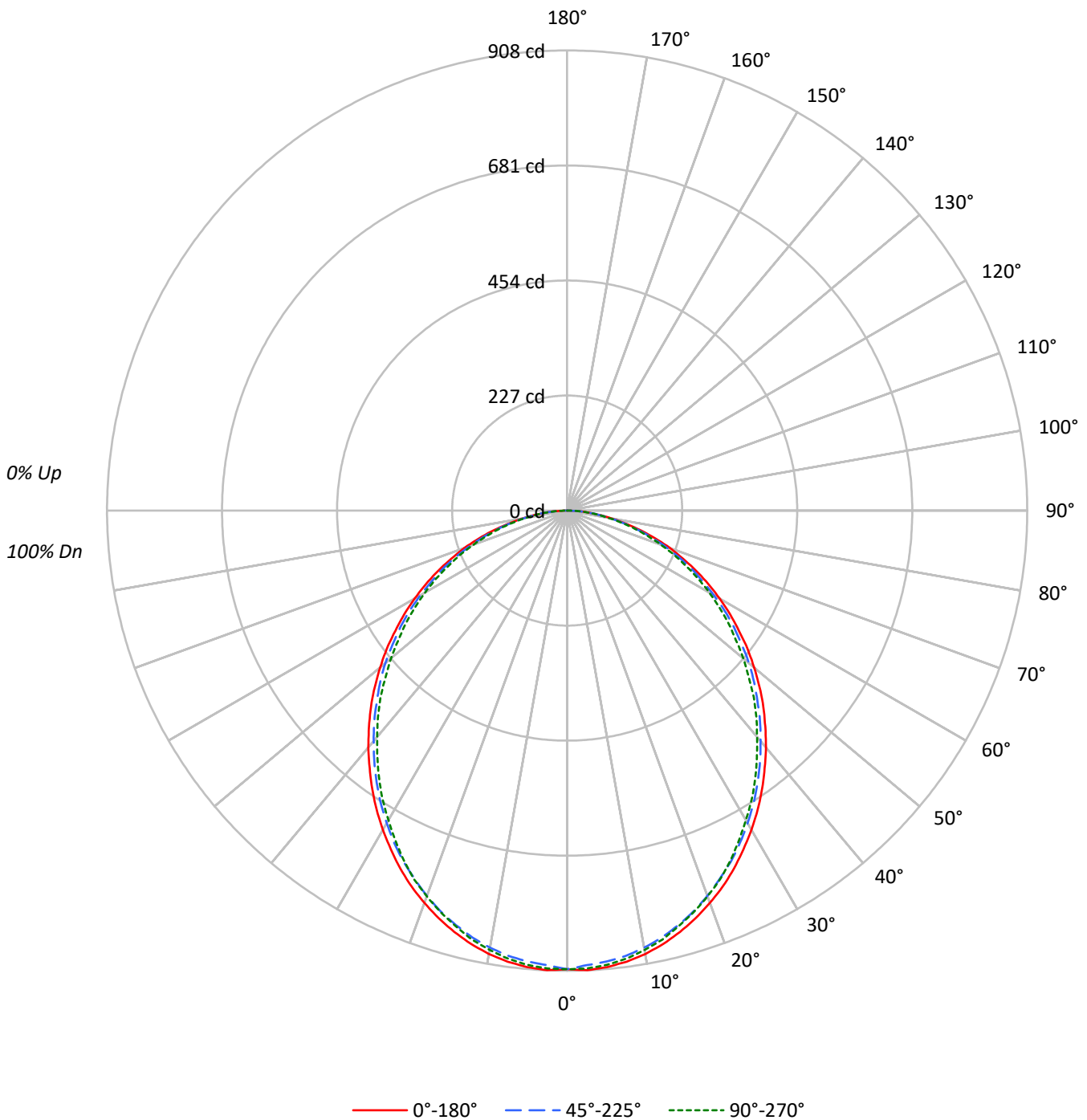
Lumens per Lamp: N/A
Luminaire Lumens: 2322.7 lumens
Efficiency: N/A
Efficacy: 123.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.29
Luminous Opening: Rectangular (W 0.31' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 18.8
Input Voltage (V): 120
Input Current (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	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100
1	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84				84
2	99	91	84	79	97	89	83	78	86	80	76	82	78	74	79	76	73	70				70
3	91	80	72	66	88	79	71	65	76	69	64	73	67	63	70	66	62	60				60
4	83	71	63	56	81	70	62	56	67	60	55	65	59	54	63	58	53	51				51
5	77	64	55	48	74	63	54	48	61	53	48	59	52	47	57	51	47	44				44
6	71	58	49	42	69	57	48	42	55	47	42	53	47	41	52	46	41	39				39
7	66	52	44	38	64	52	43	37	50	43	37	49	42	37	47	41	37	35				35
8	61	48	39	34	60	47	39	34	46	39	33	45	38	33	43	37	33	31				31
9	57	44	36	30	56	43	36	30	42	35	30	41	35	30	40	34	30	28				28
10	54	41	33	28	52	40	33	28	39	32	27	38	32	27	37	31	27	25				25

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8044	8044	8044
5°	8068	7971	8030
10°	8018	7906	7946
15°	7921	7794	7814
20°	7792	7655	7661
25°	7645	7496	7475
30°	7465	7309	7241
35°	7278	7113	7019
40°	7084	6891	6765
45°	6883	6673	6544
50°	6659	6477	6277
55°	6416	6225	6024
60°	6174	5943	5762
65°	5902	5673	5445
70°	5598	5315	5107
75°	5131	4880	4757
80°	4566	4382	4269
85°	3998	3845	3774

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6883 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	85.3	3.7
10°-20°	240.3	10.3
20°-30°	353.7	15.2
30°-40°	411.1	17.7
40°-50°	411.1	17.7
50°-60°	359.5	15.5
60°-70°	266.9	11.5
70°-80°	151.5	6.5
80°-90°	43.4	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°	679.2	29.2
0°-40°	1090.4	46.9
0°-60°	1860.9	80.1
0°-90°	2322.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2322.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	905	905	905	905	905	
5°	904	901	893	901	900	86
15°	861	858	847	851	849	243
25°	780	774	764	765	762	359
35°	671	666	656	650	647	419
45°	548	542	531	523	521	422
55°	414	412	402	393	389	371
65°	281	277	270	262	259	278
75°	149	146	142	139	138	159
85°	39	39	38	38	37	45
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	904.9	904.9	904.9	904.9	904.9
2.5°	907.8	905.7	897.7	904.9	904.2
5°	904.2	901.3	893.3	901.3	899.9
7.5°	897.7	894.8	886.1	892.6	891.9
10°	888.3	885.4	875.9	881.7	880.3
12.5°	875.9	873.0	862.9	869.4	867.2
15°	860.7	857.8	846.9	851.3	849.1
17.5°	843.3	839.7	829.5	832.4	831.0
20°	823.7	820.1	809.2	811.4	809.9
22.5°	802.7	797.6	786.7	791.1	788.2
25°	779.5	774.4	764.3	765.0	762.1
27.5°	753.4	748.3	738.9	737.4	733.8
30°	727.3	721.5	712.1	709.2	705.5
32.5°	699.7	694.7	684.5	680.9	677.3
35°	670.7	665.7	655.5	650.4	646.8
37.5°	640.3	635.9	625.0	620.0	614.9
40°	610.5	604.7	593.9	586.6	583.0
42.5°	578.6	575.7	563.4	554.7	552.5
45°	547.5	542.4	530.8	522.8	520.6
47.5°	514.8	511.2	500.3	491.6	485.8
50°	481.5	478.6	468.4	458.3	453.9
52.5°	448.8	445.2	434.3	425.6	419.8
55°	414.0	411.9	401.7	393.0	388.7
57.5°	381.4	379.2	369.1	360.4	356.0
60°	347.3	343.7	334.3	327.7	324.1
62.5°	314.0	311.1	300.9	295.1	291.5
65°	280.6	277.0	269.7	262.5	258.9
67.5°	246.5	243.6	236.4	229.1	228.4
70°	215.4	210.3	204.5	198.7	196.5
72.5°	182.0	176.9	172.6	168.2	166.1
75°	149.4	145.7	142.1	139.2	138.5
77.5°	117.5	116.0	112.4	111.7	109.5
80°	89.2	87.0	85.6	84.1	83.4
82.5°	61.6	60.9	60.9	60.2	59.5
85°	39.2	39.2	37.7	37.7	37.0
87.5°	18.9	18.1	17.4	17.4	17.4
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	18.54	20.16	18.91	20.47	20.78	18.17	19.78	18.53	20.10	20.41
	3H	20.30	21.76	20.68	22.09	22.45	19.88	21.34	20.26	21.66	22.02
	4H	20.96	22.33	21.36	22.68	23.05	20.52	21.90	20.92	22.24	22.62
	6H	21.43	22.70	21.84	23.07	23.46	21.00	22.27	21.41	22.64	23.03
	8H	21.58	22.80	22.01	23.19	23.58	21.16	22.37	21.58	22.76	23.16
	12H	21.69	22.85	22.12	23.23	23.66	21.27	22.43	21.70	22.81	23.24
4H	2H	19.11	20.49	19.51	20.83	21.21	18.82	20.19	19.21	20.54	20.91
	3H	21.09	22.24	21.50	22.64	23.04	20.74	21.89	21.15	22.29	22.69
	4H	21.87	22.91	22.31	23.33	23.76	21.51	22.55	21.94	22.97	23.40
	6H	22.48	23.39	22.93	23.83	24.28	22.11	23.02	22.57	23.46	23.92
	8H	22.68	23.53	23.14	23.97	24.44	22.32	23.17	22.78	23.61	24.08
	12H	22.83	23.59	23.31	24.07	24.54	22.47	23.24	22.95	23.71	24.18
8H	4H	22.15	23.00	22.61	23.44	23.91	21.83	22.68	22.29	23.12	23.59
	6H	22.87	23.58	23.37	24.07	24.54	22.55	23.26	23.05	23.75	24.23
	8H	23.14	23.78	23.65	24.29	24.77	22.84	23.47	23.35	23.98	24.46
	12H	23.37	23.93	23.88	24.43	24.99	23.07	23.63	23.57	24.12	24.68
12H	4H	22.18	22.94	22.66	23.42	23.89	21.87	22.63	22.35	23.11	23.57
	6H	22.92	23.56	23.43	24.06	24.55	22.61	23.25	23.12	23.76	24.24
	8H	23.25	23.81	23.76	24.30	24.86	22.95	23.52	23.46	24.01	24.57