

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: P243479

Luminaire Tested: S124DRP-H575D935-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243479
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-84)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124DRP-H575D935-X4F0-XX-UDD-F-W
Description: DEFINE 4 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

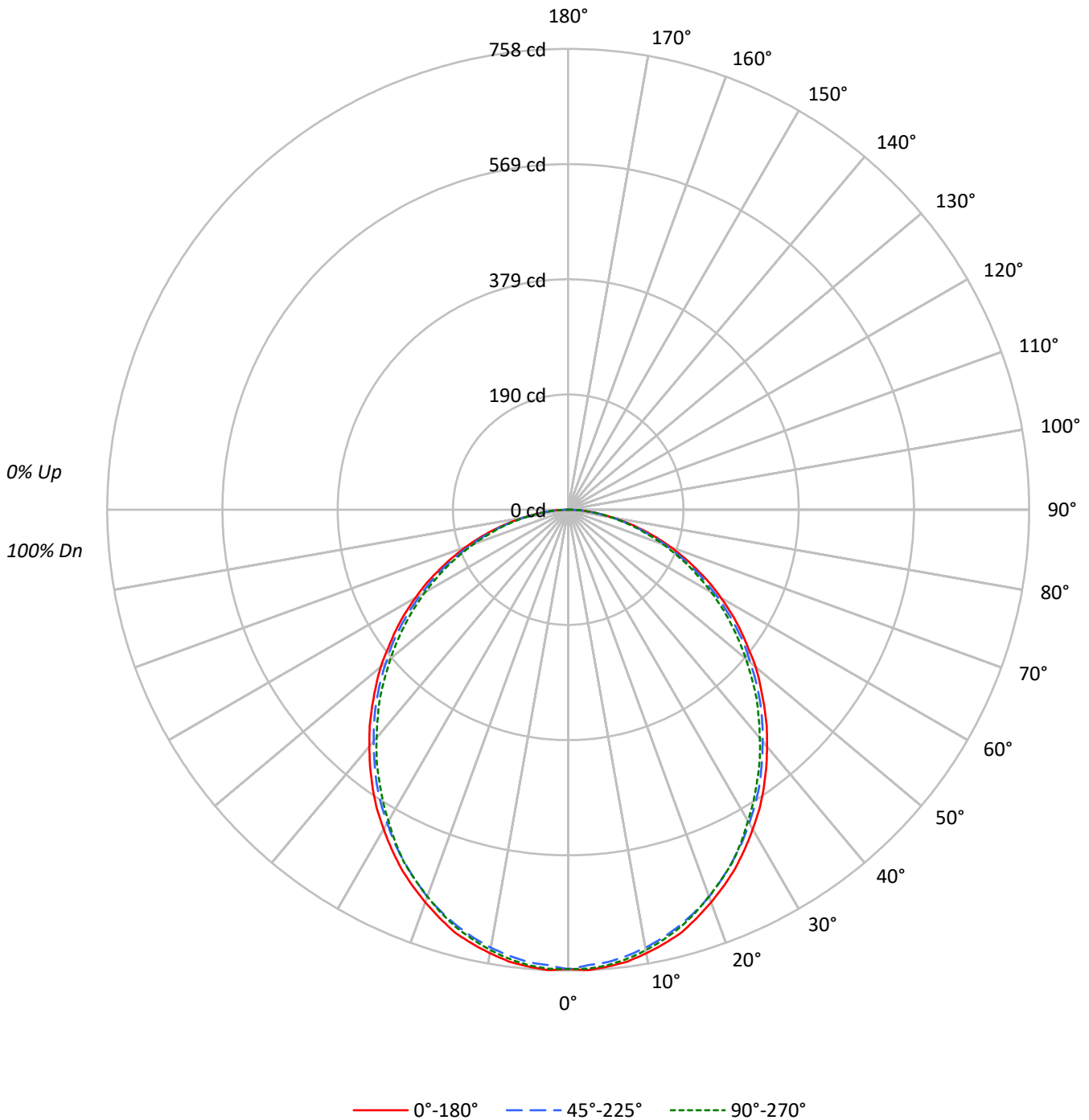
Lumens per Lamp: N/A
Luminaire Lumens: 1945.1 lumens
Efficiency: N/A
Efficacy: 113.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3
Luminous Opening: Rectangular (W 0.31' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 17.2
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	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	84	79	97	89	83	78	86	80	76	82	78	74	79	76	73	70																												
3	91	80	72	66	88	79	71	65	76	69	64	73	67	63	70	66	62	60																												
4	83	71	63	56	81	70	62	56	67	60	55	65	59	54	63	58	53	51																												
5	77	64	55	48	74	63	54	48	61	53	48	59	52	47	57	51	47	44																												
6	71	58	49	42	69	57	48	42	55	47	42	53	46	41	52	46	41	39																												
7	66	52	44	38	64	51	43	37	50	43	37	48	42	37	47	41	37	35																												
8	61	48	39	34	60	47	39	33	46	38	33	45	38	33	43	37	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	52	40	33	27	39	32	27	38	32	27	37	31	27	25																												

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6716	6716	6716
5°	6731	6665	6709
10°	6686	6603	6642
15°	6625	6517	6546
20°	6501	6409	6403
25°	6379	6265	6271
30°	6228	6108	6070
35°	6078	5957	5884
40°	5899	5772	5686
45°	5727	5610	5502
50°	5569	5407	5271
55°	5364	5221	5060
60°	5159	4983	4830
65°	4913	4745	4589
70°	4650	4442	4299
75°	4286	4118	3991
80°	3778	3711	3619
85°	3325	3325	3264

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5727 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	71.2	3.7
10°-20°	200.8	10.3
20°-30°	295.8	15.2
30°-40°	344.1	17.7
40°-50°	344.3	17.7
50°-60°	301.1	15.5
60°-70°	223.6	11.5
70°-80°	127.4	6.5
80°-90°	36.7	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°	567.9	29.2
0°-40°	912.0	46.9
0°-60°	1557.4	80.1
0°-90°	1945.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1945.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	756	756	756	756	756	
5°	754	753	747	752	752	72
15°	720	716	708	712	711	203
25°	650	647	639	641	639	299
35°	560	555	549	544	542	350
45°	456	454	446	440	438	352
55°	346	344	337	330	326	309
65°	234	232	226	221	218	232
75°	125	122	120	117	116	132
85°	33	32	33	31	32	37
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	755.6	755.6	755.6	755.6	755.6
2.5°	758.0	756.2	750.0	756.2	755.6
5°	754.3	753.1	747.0	752.5	751.9
7.5°	749.4	747.0	740.2	745.7	745.1
10°	740.8	739.0	731.6	737.1	735.9
12.5°	731.0	729.1	721.1	725.4	724.2
15°	719.9	716.2	708.2	712.5	711.3
17.5°	703.9	701.5	693.5	697.2	695.3
20°	687.3	684.3	677.5	678.1	676.9
22.5°	669.5	666.4	658.4	660.9	658.4
25°	650.4	647.4	638.8	640.6	639.4
27.5°	628.9	625.9	617.9	618.5	616.0
30°	606.8	603.1	595.1	594.5	591.4
32.5°	584.7	581.0	573.0	570.5	567.4
35°	560.1	555.2	549.0	544.1	542.2
37.5°	534.9	532.4	523.2	520.1	517.6
40°	508.4	506.0	497.4	493.1	490.0
42.5°	483.2	480.1	472.2	466.0	463.5
45°	455.6	453.7	446.3	439.6	437.7
47.5°	428.5	427.9	418.7	411.9	408.8
50°	402.7	399.0	391.0	384.9	381.2
52.5°	372.6	371.9	365.2	357.2	354.1
55°	346.1	343.7	336.9	329.5	326.5
57.5°	318.5	317.2	308.6	302.5	299.4
60°	290.2	287.7	280.3	274.8	271.7
62.5°	263.1	260.1	253.3	247.8	244.7
65°	233.6	231.8	225.6	220.7	218.2
67.5°	206.0	203.5	197.3	193.0	190.6
70°	178.9	175.2	170.9	167.2	165.4
72.5°	151.9	148.8	145.1	142.6	140.2
75°	124.8	122.3	119.9	117.4	116.2
77.5°	99.0	96.5	95.3	94.7	93.4
80°	73.8	72.5	72.5	71.9	70.7
82.5°	52.3	51.0	51.0	51.0	50.4
85°	32.6	32.0	32.6	31.4	32.0
87.5°	15.4	15.4	16.0	15.4	16.0
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	17.91	19.53	18.28	19.84	20.16	17.57	19.18	17.93	19.50	19.81
	3H	19.67	21.13	20.04	21.45	21.81	19.28	20.74	19.66	21.06	21.43
	4H	20.32	21.70	20.72	22.05	22.42	19.93	21.30	20.33	21.65	22.02
	6H	20.80	22.07	21.21	22.44	22.83	20.42	21.69	20.83	22.05	22.45
	8H	20.95	22.17	21.38	22.56	22.96	20.58	21.79	21.00	22.18	22.58
	12H	21.06	22.22	21.49	22.60	23.03	20.69	21.86	21.12	22.24	22.67
4H	2H	18.49	19.86	18.89	20.21	20.58	18.21	19.59	18.61	19.93	20.31
	3H	20.46	21.61	20.87	22.01	22.41	20.14	21.29	20.55	21.69	22.09
	4H	21.25	22.29	21.68	22.70	23.14	20.92	21.96	21.35	22.37	22.81
	6H	21.85	22.76	22.30	23.20	23.65	21.54	22.45	21.99	22.89	23.34
	8H	22.05	22.90	22.51	23.34	23.81	21.74	22.60	22.21	23.04	23.50
	12H	22.20	22.96	22.68	23.44	23.91	21.90	22.67	22.38	23.14	23.61
8H	4H	21.53	22.38	21.99	22.82	23.29	21.24	22.09	21.70	22.53	23.00
	6H	22.25	22.96	22.74	23.44	23.92	21.98	22.69	22.47	23.18	23.65
	8H	22.52	23.16	23.03	23.66	24.15	22.27	22.90	22.77	23.41	23.89
	12H	22.75	23.31	23.25	23.80	24.36	22.50	23.06	23.01	23.55	24.11
12H	4H	21.56	22.32	22.04	22.80	23.27	21.27	22.04	21.75	22.51	22.98
	6H	22.30	22.94	22.81	23.44	23.93	22.04	22.68	22.55	23.18	23.67
	8H	22.63	23.19	23.14	23.68	24.24	22.38	22.95	22.89	23.44	24.00