

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: P243454

Luminaire Tested: S124DRP-H350D927-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243454
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-H350D927-X4F0-XX-UDD-F-W
Description: DEFINE 4 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

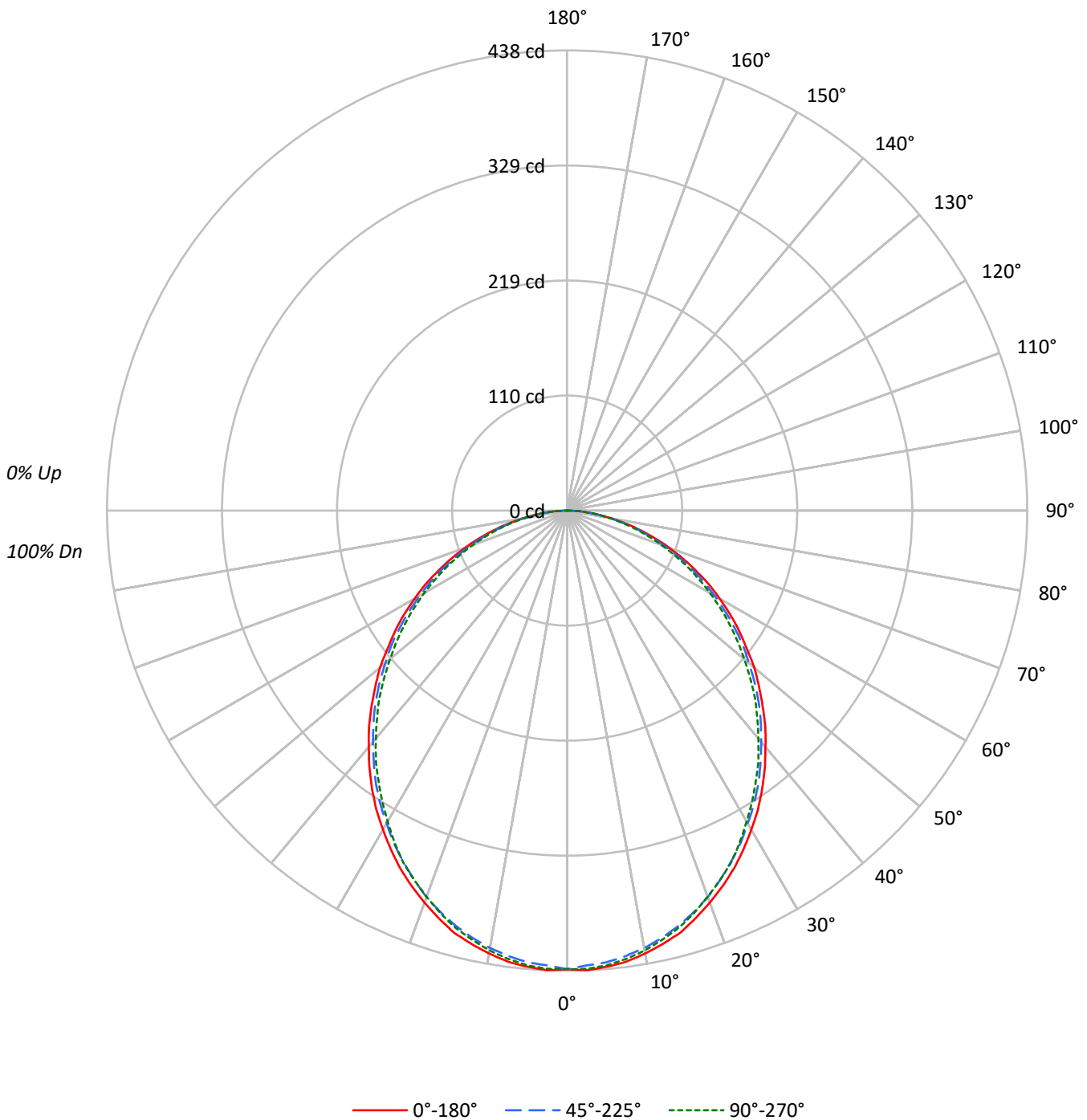
Lumens per Lamp: N/A
Luminaire Lumens: 1123.8 lumens
Efficiency: N/A
Efficacy: 100.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3
Luminous Opening: Rectangular (W 0.31' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 11.2
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	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°	3880	3880	3880
5°	3889	3851	3876
10°	3863	3815	3838
15°	3827	3766	3782
20°	3756	3702	3700
25°	3686	3619	3623
30°	3599	3529	3507
35°	3511	3442	3400
40°	3408	3334	3285
45°	3309	3242	3179
50°	3217	3124	3045
55°	3099	3016	2923
60°	2980	2880	2791
65°	2839	2743	2652
70°	2687	2565	2482
75°	2476	2380	2304
80°	2181	2145	2089
85°	1917	1917	1887

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3309 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	41.2	3.7
10°-20°	116.0	10.3
20°-30°	170.9	15.2
30°-40°	198.8	17.7
40°-50°	198.9	17.7
50°-60°	174.0	15.5
60°-70°	129.2	11.5
70°-80°	73.6	6.6
80°-90°	21.2	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°	328.1	29.2
0°-40°	526.9	46.9
0°-60°	899.8	80.1
0°-90°	1123.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1123.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	436	436	436	436	436	
5°	436	435	432	435	434	41
15°	416	414	409	412	411	117
25°	376	374	369	370	369	173
35°	324	321	317	314	313	202
45°	263	262	258	254	253	203
55°	200	199	195	190	189	179
65°	135	134	130	128	126	134
75°	72	71	69	68	67	76
85°	19	18	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°	436.5	436.5	436.5	436.5	436.5
2.5°	437.9	436.9	433.3	436.9	436.5
5°	435.8	435.1	431.6	434.8	434.4
7.5°	433.0	431.6	427.6	430.8	430.5
10°	428.0	426.9	422.7	425.9	425.2
12.5°	422.3	421.3	416.6	419.1	418.4
15°	415.9	413.8	409.2	411.7	411.0
17.5°	406.7	405.3	400.7	402.8	401.7
20°	397.1	395.3	391.4	391.8	391.1
22.5°	386.8	385.0	380.4	381.8	380.4
25°	375.8	374.0	369.0	370.1	369.4
27.5°	363.4	361.6	357.0	357.3	355.9
30°	350.6	348.4	343.8	343.5	341.7
32.5°	337.8	335.7	331.0	329.6	327.8
35°	323.6	320.7	317.2	314.3	313.3
37.5°	309.0	307.6	302.3	300.5	299.1
40°	293.7	292.3	287.3	284.9	283.1
42.5°	279.2	277.4	272.8	269.2	267.8
45°	263.2	262.1	257.9	254.0	252.9
47.5°	247.6	247.2	241.9	238.0	236.2
50°	232.6	230.5	225.9	222.3	220.2
52.5°	215.2	214.9	211.0	206.4	204.6
55°	200.0	198.6	194.6	190.4	188.6
57.5°	184.0	183.3	178.3	174.8	173.0
60°	167.6	166.2	162.0	158.8	157.0
62.5°	152.0	150.2	146.3	143.1	141.4
65°	135.0	133.9	130.4	127.5	126.1
67.5°	119.0	117.6	114.0	111.5	110.1
70°	103.4	101.2	98.7	96.6	95.5
72.5°	87.7	86.0	83.8	82.4	81.0
75°	72.1	70.7	69.3	67.8	67.1
77.5°	57.2	55.8	55.1	54.7	54.0
80°	42.6	41.9	41.9	41.6	40.8
82.5°	30.2	29.5	29.5	29.5	29.1
85°	18.8	18.5	18.8	18.1	18.5
87.5°	8.9	8.9	9.2	8.9	9.2
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	16.01	17.62	16.37	17.94	18.25	15.66	17.28	16.03	17.59	17.91
	3H	17.76	19.22	18.14	19.55	19.91	17.37	18.83	17.75	19.16	19.52
	4H	18.42	19.79	18.82	20.14	20.52	18.02	19.39	18.42	19.74	20.12
	6H	18.89	20.17	19.30	20.53	20.92	18.51	19.78	18.92	20.15	20.54
	8H	19.05	20.26	19.47	20.65	21.05	18.67	19.89	19.10	20.28	20.67
	12H	19.15	20.32	19.58	20.70	21.13	18.78	19.95	19.21	20.33	20.76
4H	2H	16.58	17.96	16.98	18.30	18.68	16.31	17.68	16.71	18.03	18.40
	3H	18.56	19.71	18.97	20.10	20.50	18.24	19.39	18.65	19.79	20.19
	4H	19.34	20.38	19.77	20.80	21.23	19.01	20.05	19.44	20.47	20.90
	6H	19.94	20.85	20.40	21.29	21.75	19.63	20.54	20.08	20.98	21.44
	8H	20.14	20.99	20.60	21.44	21.90	19.84	20.69	20.30	21.13	21.60
	12H	20.29	21.06	20.77	21.53	22.00	20.00	20.76	20.48	21.24	21.71
8H	4H	19.62	20.48	20.08	20.92	21.38	19.33	20.18	19.79	20.63	21.09
	6H	20.34	21.05	20.84	21.54	22.02	20.08	20.78	20.57	21.27	21.75
	8H	20.62	21.25	21.13	21.76	22.24	20.36	21.00	20.87	21.50	21.99
	12H	20.84	21.40	21.35	21.90	22.46	20.60	21.16	21.10	21.65	22.21
12H	4H	19.65	20.42	20.13	20.89	21.36	19.37	20.13	19.85	20.61	21.08
	6H	20.39	21.03	20.90	21.54	22.02	20.13	20.77	20.64	21.28	21.76
	8H	20.72	21.29	21.23	21.78	22.34	20.48	21.04	20.99	21.53	22.09