

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: P243572

Luminaire Tested: S124RDRP-H575D840-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243572
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-65)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124RDRP-H575D840-X4F0-XX-UDD-F-W
Description: DEFINE 4 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

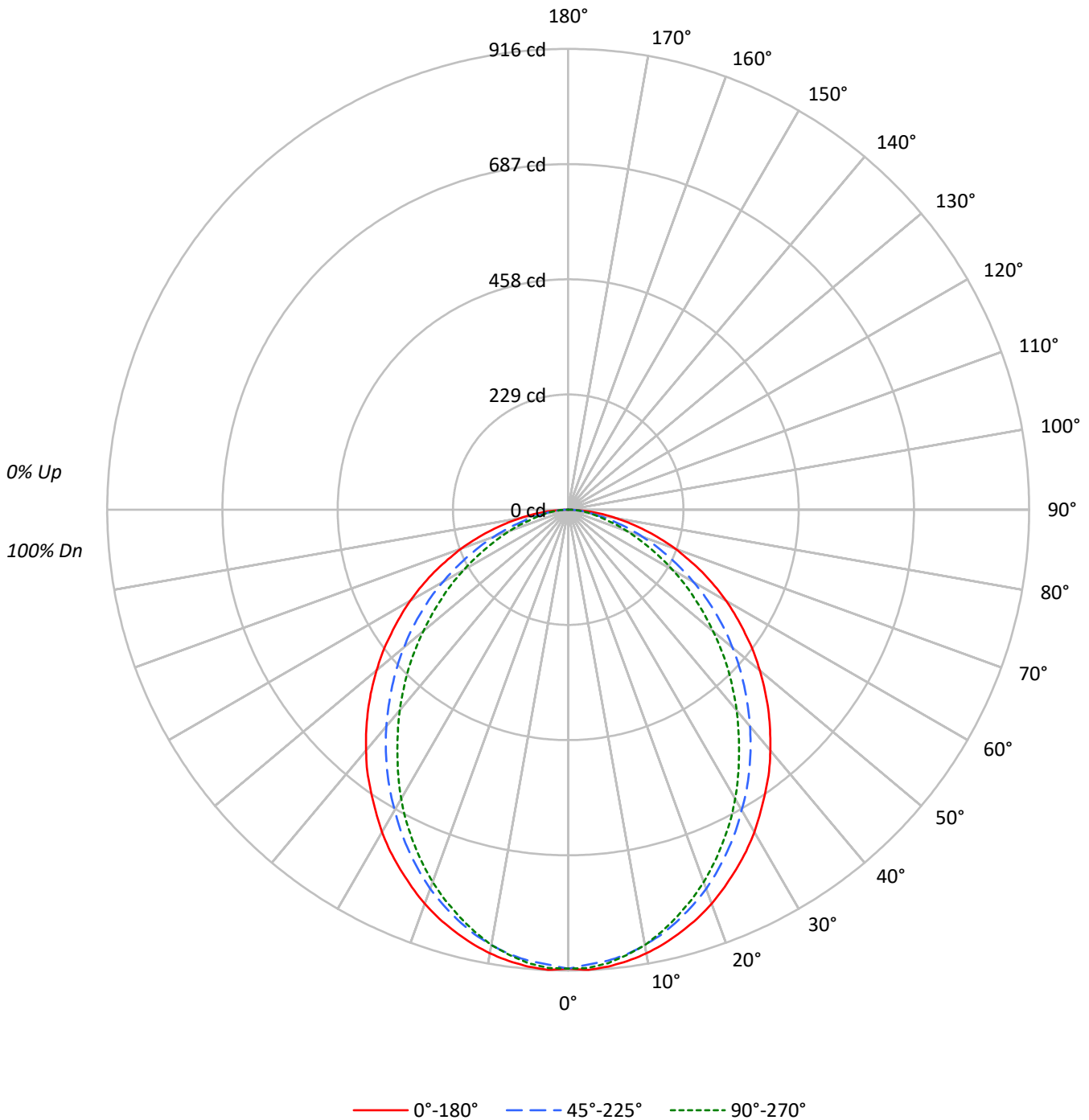
Lumens per Lamp: N/A
Luminaire Lumens: 2151.2 lumens
Efficiency: N/A
Efficacy: 125.1 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.1 / 1.25
Luminous Opening: Rectangular (W 0.31' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 17.2
Input Voltage (V): 120
Input Current (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	105	101	97	107	103	99	96	98	95	93	95	92	90	91	89	87	85				85
2	100	92	86	80	97	90	84	79	87	82	78	84	79	76	81	77	74	72				72
3	92	82	74	68	89	80	73	67	77	71	66	74	69	65	72	67	64	61				61
4	84	73	64	58	82	71	64	57	69	62	57	67	61	56	64	59	55	53				53
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46				46
6	72	59	50	44	70	58	50	44	56	49	44	55	48	43	53	47	43	41				41
7	67	54	45	39	65	53	45	39	51	44	39	50	43	39	49	43	38	36				36
8	62	49	41	35	61	49	41	35	47	40	35	46	39	35	45	39	34	33				33
9	58	45	37	32	57	45	37	32	44	37	32	42	36	31	41	36	31	30				30
10	55	42	34	29	54	41	34	29	40	34	29	39	33	29	39	33	29	27				27

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8109	8109	8109
5°	8134	8031	8074
10°	8082	7930	7930
15°	7992	7775	7702
20°	7884	7585	7451
25°	7739	7343	7145
30°	7594	7076	6813
35°	7416	6816	6422
40°	7250	6524	6047
45°	7067	6212	5653
50°	6871	5894	5195
55°	6656	5529	4738
60°	6452	5111	4261
65°	6173	4617	3725
70°	5879	4078	3238
75°	5433	3400	2638
80°	4960	2652	2411
85°	4396	2540	2407

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7067 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	85.8	4.0
10°-20°	239.6	11.1
20°-30°	347.4	16.2
30°-40°	396.0	18.4
40°-50°	385.3	17.9
50°-60°	323.7	15.0
60°-70°	225.5	10.5
70°-80°	116.4	5.4
80°-90°	31.5	1.5
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°	672.8	31.3
0°-40°	1068.8	49.7
0°-60°	1777.8	82.6
0°-90°	2151.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2151.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	912	912	912	912	912	
5°	912	909	900	907	905	86
15°	868	862	845	844	837	245
25°	789	774	749	738	728	364
35°	683	662	628	605	592	428
45°	562	535	494	462	450	434
55°	430	402	357	320	306	385
65°	294	265	220	188	177	291
75°	158	134	99	83	77	168
85°	43	28	25	24	24	49
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	912.3	912.3	912.3	912.3	912.3
2.5°	915.6	912.9	904.9	912.3	911.6
5°	911.6	908.9	900.1	906.9	904.9
7.5°	904.9	901.5	891.4	896.1	892.7
10°	895.4	892.1	878.6	882.0	878.6
12.5°	883.3	878.6	863.8	864.5	859.1
15°	868.5	861.8	844.9	843.6	836.9
17.5°	852.3	843.6	824.1	820.7	813.3
20°	833.5	822.7	801.8	794.4	787.7
22.5°	811.9	799.2	776.3	767.5	758.8
25°	789.1	774.2	748.7	737.9	728.5
27.5°	765.5	748.0	720.4	706.9	697.5
30°	739.9	719.7	689.4	673.9	663.8
32.5°	711.6	691.4	659.8	640.9	628.1
35°	683.4	662.5	628.1	604.6	591.8
37.5°	655.8	632.2	595.2	570.9	556.1
40°	624.8	599.9	562.2	534.6	521.1
42.5°	593.8	568.2	527.8	498.9	484.1
45°	562.2	535.2	494.2	462.5	449.7
47.5°	529.9	502.9	460.5	427.5	412.7
50°	496.9	469.9	426.2	389.8	375.7
52.5°	464.5	436.3	392.5	355.5	340.7
55°	429.5	401.9	356.8	320.5	305.7
57.5°	395.9	366.9	323.2	286.1	274.0
60°	362.9	333.9	287.5	251.8	239.7
62.5°	327.9	298.9	253.1	218.8	208.0
65°	293.5	265.3	219.5	187.8	177.1
67.5°	258.5	232.9	188.5	158.2	149.5
70°	226.2	197.3	156.9	130.6	124.6
72.5°	191.9	166.3	127.2	105.7	101.0
75°	158.2	134.0	99.0	82.8	76.8
77.5°	127.2	103.7	74.7	61.3	61.3
80°	96.9	76.1	51.8	48.5	47.1
82.5°	68.7	49.1	38.4	35.7	35.0
85°	43.1	27.6	24.9	23.6	23.6
87.5°	20.9	12.8	12.8	12.1	12.1
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	18.72	20.30	19.09	20.61	20.93	16.82	18.40	17.19	18.71	19.03
	3H	20.54	21.96	20.92	22.28	22.64	18.09	19.51	18.47	19.83	20.20
	4H	21.22	22.55	21.62	22.90	23.28	18.49	19.82	18.88	20.17	20.54
	6H	21.74	22.97	22.15	23.33	23.73	18.76	20.00	19.17	20.36	20.75
	8H	21.91	23.08	22.33	23.47	23.87	18.86	20.04	19.29	20.43	20.83
	12H	22.02	23.15	22.45	23.53	23.96	18.94	20.07	19.37	20.45	20.88
4H	2H	19.07	20.41	19.47	20.76	21.13	17.53	18.86	17.93	19.21	19.59
	3H	21.09	22.20	21.50	22.60	23.00	18.98	20.09	19.39	20.49	20.89
	4H	21.90	22.91	22.33	23.32	23.76	19.46	20.46	19.89	20.87	21.31
	6H	22.54	23.42	23.00	23.86	24.32	19.82	20.70	20.28	21.14	21.60
	8H	22.76	23.58	23.22	24.02	24.49	19.96	20.78	20.42	21.22	21.69
	12H	22.93	23.66	23.41	24.14	24.61	20.08	20.81	20.56	21.29	21.76
8H	4H	22.01	22.83	22.47	23.27	23.74	19.79	20.61	20.25	21.05	21.52
	6H	22.73	23.41	23.23	23.90	24.38	20.24	20.92	20.74	21.41	21.88
	8H	23.01	23.61	23.52	24.12	24.61	20.44	21.04	20.95	21.55	22.04
	12H	23.24	23.77	23.74	24.26	24.83	20.62	21.16	21.13	21.65	22.21
12H	4H	22.00	22.73	22.48	23.21	23.68	19.84	20.57	20.32	21.04	21.51
	6H	22.73	23.34	23.24	23.84	24.33	20.30	20.91	20.82	21.42	21.91
	8H	23.04	23.58	23.55	24.07	24.63	20.55	21.09	21.06	21.58	22.14