

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: P242703

Luminaire Tested: S124RDRP-S575D830-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242703
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-S575D830-X4F0-XX-UDD-F-W
Description: DEFINE 4 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

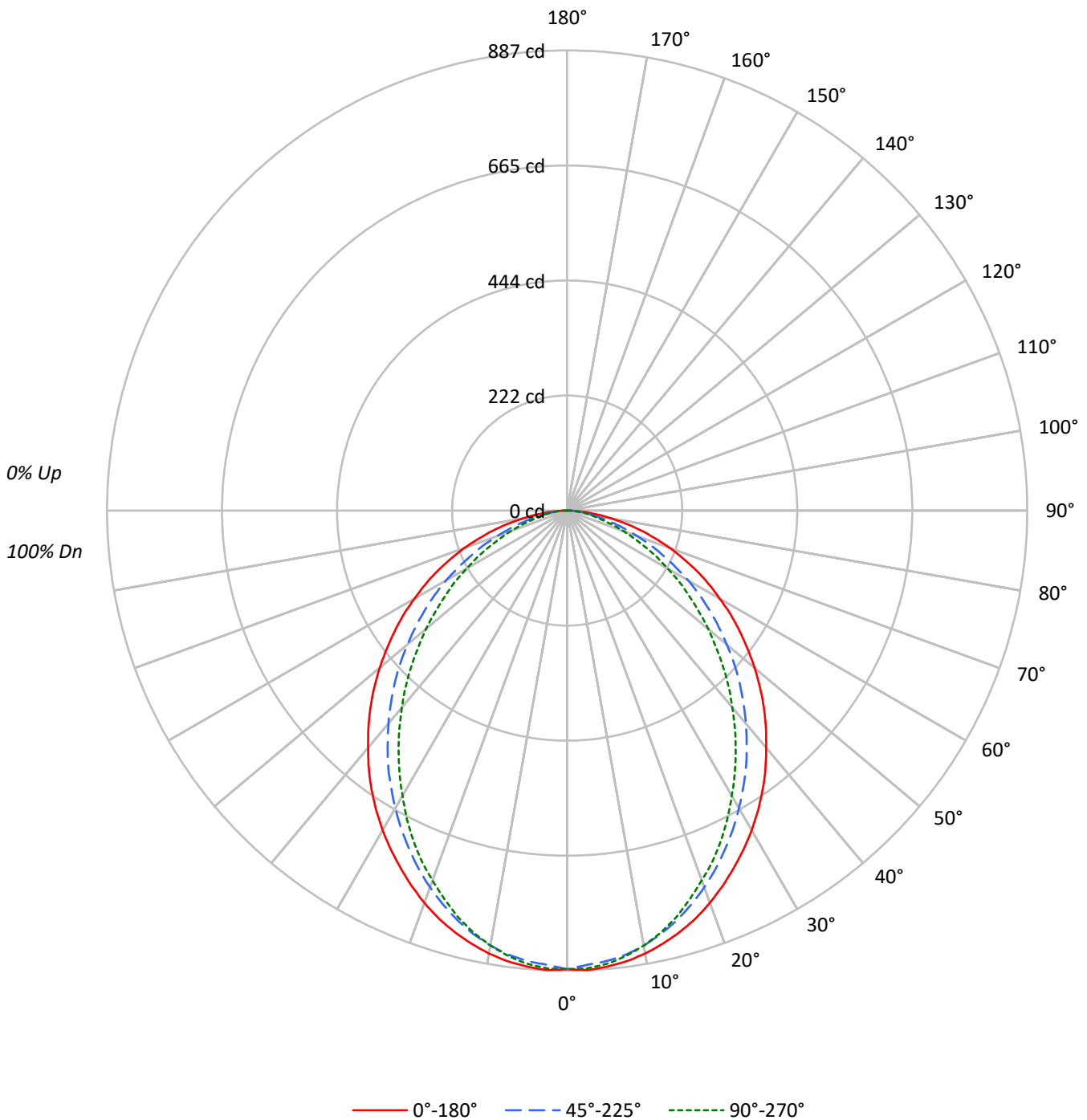
Lumens per Lamp: N/A
Luminaire Lumens: 2042.2 lumens
Efficiency: N/A
Efficacy: 108.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24
Luminous Opening: Rectangular (W 0.31' x L: 3.88' x H: 0')
CIE Type: Direct

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°	7857	7857	7857
5°	7874	7778	7826
10°	7825	7685	7685
15°	7735	7523	7467
20°	7612	7311	7177
25°	7454	7063	6883
30°	7301	6801	6516
35°	7130	6528	6147
40°	6926	6220	5748
45°	6738	5913	5343
50°	6523	5559	4913
55°	6293	5192	4448
60°	6039	4789	3970
65°	5807	4284	3502
70°	5471	3729	2973
75°	5045	3091	2418
80°	4397	2355	2216
85°	3723	2142	1999

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6738 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	83.1	4.1
10°-20°	231.7	11.3
20°-30°	334.6	16.4
30°-40°	379.2	18.6
40°-50°	366.1	17.9
50°-60°	304.4	14.9
60°-70°	210.1	10.3
70°-80°	106.2	5.2
80°-90°	27.0	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°	649.4	31.8
0°-40°	1028.6	50.4
0°-60°	1699.1	83.2
0°-90°	2042.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2042.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	884	884	884	884	884	
5°	882	880	872	878	877	84
15°	840	834	818	816	811	237
25°	760	748	720	709	702	350
35°	657	636	602	579	566	411
45°	536	511	470	437	425	413
55°	406	379	335	300	287	363
65°	276	247	204	175	166	273
75°	147	122	90	74	70	155
85°	36	23	21	20	20	42
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	883.9	883.9	883.9	883.9	883.9
2.5°	886.6	883.9	876.4	883.9	883.2
5°	882.5	879.8	871.7	878.4	877.1
7.5°	876.4	873.7	863.6	868.3	866.3
10°	866.9	863.6	851.4	854.1	851.4
12.5°	854.8	850.7	835.8	837.2	833.1
15°	840.5	834.5	817.5	816.2	811.4
17.5°	824.3	815.5	795.9	792.5	785.7
20°	804.7	795.9	772.9	767.5	758.7
22.5°	783.0	772.9	747.8	739.0	732.3
25°	760.0	747.8	720.1	708.6	701.8
27.5°	736.3	721.4	692.3	678.8	669.3
30°	711.3	694.4	662.6	645.6	634.8
32.5°	684.9	665.3	632.1	611.8	601.6
35°	657.1	635.5	601.6	578.6	566.5
37.5°	628.0	605.7	568.5	543.4	531.3
40°	596.9	574.6	536.0	507.6	495.4
42.5°	567.1	543.4	502.8	473.7	460.9
45°	536.0	511.0	470.4	437.2	425.0
47.5°	504.2	478.5	436.5	402.0	388.5
50°	471.7	445.3	402.0	368.2	355.3
52.5°	438.5	412.8	368.2	333.6	320.1
55°	406.1	379.0	335.0	299.8	287.0
57.5°	374.3	345.8	302.5	266.6	257.2
60°	339.7	312.7	269.4	234.2	223.3
62.5°	308.6	280.2	235.5	203.7	195.6
65°	276.1	247.0	203.7	174.6	166.5
67.5°	242.3	214.5	173.9	148.2	138.7
70°	210.5	182.1	143.5	121.1	114.4
72.5°	176.6	151.6	115.7	97.5	91.4
75°	146.9	121.8	90.0	74.4	70.4
77.5°	115.7	94.1	67.0	56.2	54.8
80°	85.9	66.3	46.0	44.0	43.3
82.5°	60.2	42.6	33.2	31.8	31.1
85°	36.5	23.0	21.0	19.6	19.6
87.5°	15.6	10.2	9.5	8.8	9.5
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	18.50	20.07	18.87	20.38	20.70	16.53	18.10	16.90	18.41	18.73
	3H	20.28	21.68	20.65	22.01	22.37	17.79	19.20	18.17	19.52	19.89
	4H	20.94	22.26	21.33	22.61	22.98	18.16	19.49	18.56	19.84	20.21
	6H	21.41	22.64	21.82	23.00	23.39	18.43	19.65	18.84	20.02	20.41
	8H	21.56	22.73	21.99	23.12	23.52	18.52	19.69	18.95	20.08	20.48
	12H	21.66	22.78	22.09	23.16	23.59	18.58	19.70	19.01	20.08	20.51
4H	2H	18.84	20.16	19.24	20.51	20.89	17.23	18.55	17.63	18.90	19.28
	3H	20.81	21.91	21.22	22.31	22.71	18.66	19.77	19.07	20.16	20.57
	4H	21.59	22.58	22.02	23.00	23.43	19.12	20.11	19.55	20.53	20.96
	6H	22.19	23.05	22.64	23.49	23.95	19.47	20.33	19.92	20.77	21.23
	8H	22.38	23.19	22.84	23.63	24.10	19.59	20.40	20.05	20.84	21.31
	12H	22.52	23.24	23.00	23.72	24.19	19.69	20.41	20.17	20.89	21.36
8H	4H	21.68	22.49	22.15	22.94	23.40	19.43	20.24	19.89	20.68	21.15
	6H	22.36	23.03	22.85	23.52	23.99	19.86	20.53	20.36	21.02	21.50
	8H	22.60	23.20	23.11	23.71	24.19	20.04	20.64	20.56	21.15	21.64
	12H	22.79	23.32	23.30	23.82	24.38	20.20	20.73	20.71	21.22	21.78
12H	4H	21.68	22.40	22.16	22.88	23.35	19.47	20.19	19.95	20.67	21.14
	6H	22.35	22.95	22.86	23.45	23.94	19.92	20.52	20.43	21.03	21.51
	8H	22.63	23.16	23.14	23.65	24.21	20.15	20.68	20.65	21.17	21.73