

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions  
(formerly Eaton)

Brand: NEO-RAY

Report Number: P242192

Luminaire Tested: **S121RDR-S490D835-X4F0-XX-UDD-F-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P242192  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-23)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S121RDR-S490D835-X4F0-XX-UDD-F-W  
Description: DEFINE 1 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 3500K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1605.8 lumens  
Efficiency: N/A  
Efficacy: 85.4 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 0.92 / 1.09  
Luminous Opening: Rectangular (W 0.09' x L: 3.88' x H: 0')  
CIE Type: Direct

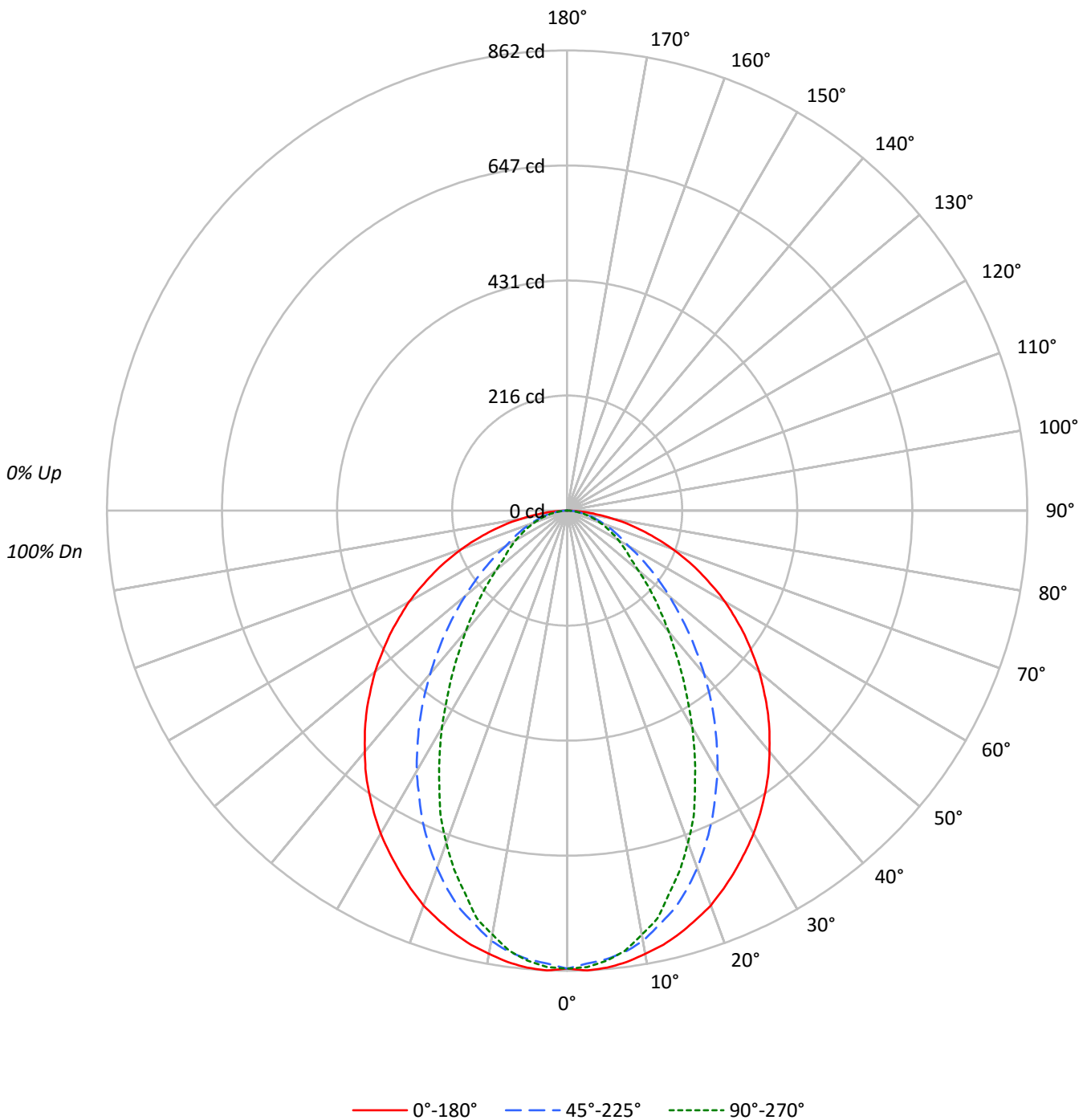
Input Watts (W): 18.8  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	110	106	102	99	108	104	100	97	100	97	94	96	93	91	92	90	89					87				
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	80	77					75				
3	94	84	77	71	91	83	76	70	80	74	69	77	72	68	75	70	67					65				
4	86	76	68	62	84	74	67	61	72	65	60	70	64	60	68	63	59					57				
5	80	68	60	54	78	67	60	54	65	59	53	63	57	53	62	56	52					50				
6	75	62	54	48	73	61	54	48	60	53	48	58	52	47	57	51	47					45				
7	70	57	49	43	68	56	49	43	55	48	43	53	47	43	52	47	42					40				
8	65	53	45	39	64	52	44	39	51	44	39	49	43	39	48	43	38					37				
9	61	49	41	36	60	48	41	36	47	40	35	46	40	35	45	39	35					33				
10	58	45	38	33	56	45	37	33	44	37	33	43	37	32	42	36	32					31				

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	25422	25422	25422
5°	25564	25094	25180
10°	25363	24626	24259
15°	25132	23721	22730
20°	24815	22460	20874
25°	24343	20963	18520
30°	23902	19283	16043
35°	23374	17402	13582
40°	22801	15414	11441
45°	22263	13451	9659
50°	21647	11519	7975
55°	20958	9717	7124
60°	20255	7870	6596
65°	19280	7095	6093
70°	18167	6411	5596
75°	16691	5838	5175
80°	14572	5153	4658
85°	11967	4386	3910



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	80.3	5.0
10°-20°	218.5	13.6
20°-30°	298.2	18.6
30°-40°	309.9	19.3
40°-50°	270.8	16.9
50°-60°	204.7	12.7
60°-70°	135.2	8.4
70°-80°	69.7	4.3
80°-90°	18.5	1.2
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°	597.0	37.2
0°-40°	906.9	56.5
0°-60°	1382.4	86.1
0°-90°	1605.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1605.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	858	858	858	858	858	
5°	860	854	844	850	847	81
15°	819	807	773	753	741	231
25°	745	715	641	588	566	343
35°	646	589	481	402	376	404
45°	531	452	321	249	230	409
55°	406	308	188	143	138	362
65°	275	172	101	89	87	272
75°	146	68	51	47	45	155
85°	35	14	13	12	12	41
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	858.0	858.0	858.0	858.0	858.0
2.5°	862.3	858.0	849.4	857.3	855.9
5°	859.5	854.5	843.7	850.1	846.6
7.5°	853.0	847.3	833.6	835.8	831.5
10°	843.0	836.5	818.5	815.0	806.3
12.5°	832.9	822.9	794.9	787.7	782.6
15°	819.3	807.1	773.3	753.2	741.0
17.5°	803.5	787.0	744.6	717.3	704.4
20°	787.0	765.4	712.3	674.9	662.0
22.5°	766.1	741.0	677.1	632.6	619.7
25°	744.6	715.2	641.2	588.1	566.5
27.5°	721.6	685.7	601.0	541.4	517.7
30°	698.6	654.8	563.6	491.8	468.9
32.5°	672.8	624.0	522.0	446.6	419.3
35°	646.2	588.8	481.1	402.1	375.5
37.5°	619.7	556.5	440.1	360.4	332.4
40°	589.5	522.7	398.5	316.6	295.8
42.5°	560.8	487.5	359.0	282.9	260.6
45°	531.3	451.6	321.0	249.2	230.5
47.5°	499.7	416.5	283.6	219.7	201.0
50°	469.6	379.1	249.9	191.0	173.0
52.5°	436.6	343.9	218.3	161.6	151.5
55°	405.7	308.0	188.1	142.9	137.9
57.5°	372.7	273.6	160.1	129.2	123.5
60°	341.8	239.1	132.8	114.9	111.3
62.5°	307.3	206.1	115.6	102.0	98.4
65°	275.0	171.6	101.2	89.0	86.9
67.5°	242.7	142.2	87.6	77.5	75.4
70°	209.7	112.7	74.0	66.8	64.6
72.5°	177.4	86.2	61.8	56.0	54.6
75°	145.8	67.5	51.0	46.7	45.2
77.5°	117.8	51.7	40.2	36.6	35.9
80°	85.4	38.1	30.2	28.0	27.3
82.5°	58.2	25.8	21.5	20.1	18.7
85°	35.2	14.4	12.9	12.2	11.5
87.5°	14.4	6.5	5.7	5.0	5.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)