

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P931246

Luminaire Tested: DFN2DS-TR2F0-030DS830-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931246
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P333882)
Test Lab: INNOVATION CENTER
Issue Date: 11/20/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DS-TR2F0-030DS830-RLL
Description: 2 foot, Triangle Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

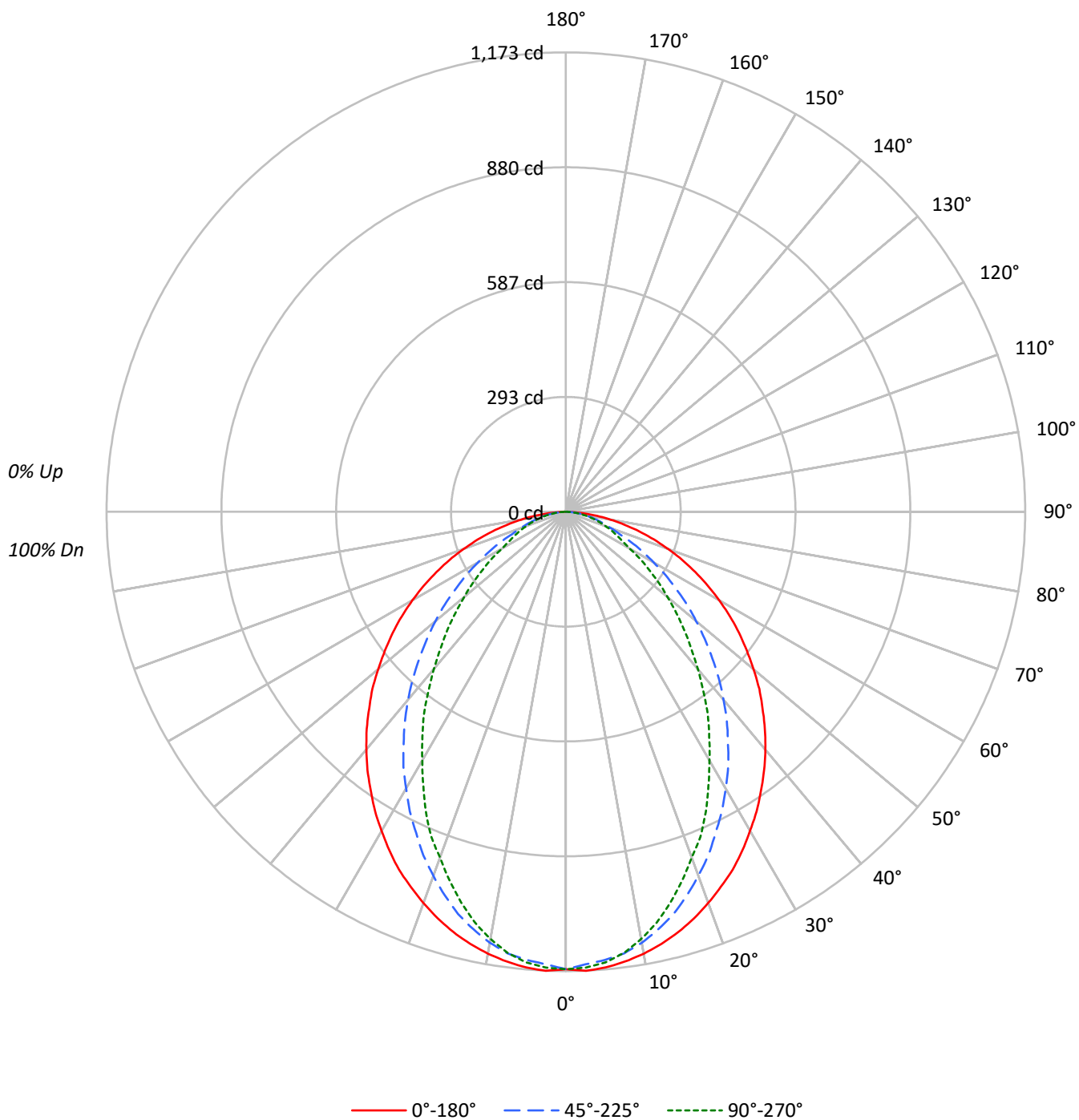
Lumens per Lamp: N/A
Luminaire Lumens: 2402.1 lumens
Efficiency: N/A
Efficacy: 87.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 2.36' x L: 2.04' x H: 0')
CIE Type: Direct

Input Watts (W): 27.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9951
Total Harmonic Distortion (THDi): 0.07
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
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		50
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102
1	110	106	102	98	107	103	100	97	99	96	94		95	93	91		92
2	101	94	87	82	98	92	86	81	88	83	79		85	81	78		82
3	93	83	76	70	90	82	75	69	79	73	68		76	71	67		74
4	86	75	66	60	83	73	66	60	71	64	59		69	63	58		66
5	79	67	59	53	77	66	58	52	64	57	52		62	56	51		60
6	74	61	53	47	72	60	52	46	58	51	46		57	50	46		55
7	68	56	47	42	67	55	47	42	53	46	41		52	46	41		51
8	64	51	43	38	62	51	43	37	49	42	37		48	42	37		47
9	60	47	39	34	59	47	39	34	46	39	34		44	38	34		44
10	56	44	36	31	55	43	36	31	42	36	31		41	35	31		41

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2605	2605	2605
5°	2615	2573	2587
10°	2595	2531	2509
15°	2565	2455	2385
20°	2524	2348	2230
25°	2482	2227	2081
30°	2423	2102	1889
35°	2366	1966	1721
40°	2308	1825	1527
45°	2241	1667	1350
50°	2171	1508	1177
55°	2100	1336	1011
60°	2018	1155	840
65°	1924	971	764
70°	1813	800	703
75°	1675	729	656
80°	1480	651	597
85°	1162	514	514

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2241 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	109.5	4.6
10°-20°	300.5	12.5
20°-30°	421.9	17.6
30°-40°	459.9	19.1
40°-50°	422.7	17.6
50°-60°	332.0	13.8
60°-70°	216.1	9.0
70°-80°	111.2	4.6
80°-90°	28.4	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°	831.9	34.6
0°-40°	1291.8	53.8
0°-60°	2046.4	85.2
0°-90°	2402.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2402.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1168	1168	1168	1168	1168	
5°	1168	1163	1149	1158	1155	111
15°	1111	1099	1063	1043	1033	313
25°	1008	974	905	862	846	464
35°	869	815	722	655	632	544
45°	710	639	529	453	428	549
55°	540	458	344	280	260	483
65°	365	279	184	148	145	362
75°	194	120	85	77	76	206
85°	45	23	20	20	20	54
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1168.0	1168.0	1168.0	1168.0	1168.0
2.5°	1173.3	1168.0	1156.3	1166.9	1164.9
5°	1168.0	1162.7	1149.0	1158.5	1155.3
7.5°	1158.5	1152.2	1137.4	1141.5	1136.2
10°	1145.8	1138.4	1117.3	1114.0	1107.8
12.5°	1129.9	1120.4	1091.9	1085.6	1073.9
15°	1110.9	1099.2	1063.3	1043.3	1032.7
17.5°	1088.7	1071.8	1027.3	1004.2	987.2
20°	1063.3	1042.1	989.3	963.0	939.6
22.5°	1035.9	1011.5	950.2	914.3	898.5
25°	1008.4	974.5	904.8	861.5	845.5
27.5°	975.6	939.6	862.5	812.9	788.5
30°	940.8	900.6	816.0	762.2	733.5
32.5°	906.9	858.3	771.7	708.2	681.7
35°	868.9	814.9	721.9	655.3	632.1
37.5°	831.9	773.7	675.4	602.4	576.1
40°	792.8	729.4	626.8	551.7	524.3
42.5°	752.6	685.0	578.2	499.9	473.5
45°	710.4	639.4	528.6	453.4	428.0
47.5°	670.1	595.2	481.0	405.8	382.6
50°	625.8	550.7	434.5	361.4	339.3
52.5°	582.3	503.1	390.1	320.3	300.2
55°	540.0	457.6	343.5	280.2	260.1
57.5°	496.8	412.2	302.4	243.1	226.2
60°	452.3	367.9	259.0	205.1	188.2
62.5°	409.1	324.5	221.9	171.3	162.9
65°	364.6	279.0	183.9	148.0	144.8
67.5°	322.4	236.7	148.0	130.0	126.8
70°	278.0	195.6	122.6	112.0	107.8
72.5°	235.7	157.4	102.5	94.1	91.9
75°	194.4	120.5	84.6	77.1	76.1
77.5°	153.3	85.5	66.6	62.4	60.2
80°	115.2	61.3	50.7	46.5	46.5
82.5°	80.3	41.3	34.9	32.8	32.8
85°	45.4	23.2	20.1	20.1	20.1
87.5°	17.0	8.4	8.4	7.4	7.4
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	14.56	16.08	14.93	16.40	16.71	10.52	12.04	10.89	12.36	12.67
	3H	16.33	17.69	16.70	18.02	18.38	11.79	13.15	12.16	13.48	13.84
	4H	16.99	18.27	17.39	18.62	19.00	12.29	13.57	12.69	13.92	14.30
	6H	17.48	18.66	17.89	19.03	19.42	12.67	13.85	13.08	14.22	14.61
	8H	17.65	18.77	18.07	19.16	19.56	12.79	13.92	13.22	14.31	14.71
	12H	17.75	18.83	18.18	19.21	19.64	12.87	13.95	13.31	14.34	14.76
4H	2H	14.66	15.95	15.06	16.29	16.67	11.22	12.50	11.62	12.85	13.22
	3H	16.60	17.66	17.01	18.06	18.46	12.66	13.72	13.07	14.12	14.52
	4H	17.35	18.30	17.78	18.72	19.16	13.26	14.22	13.69	14.63	15.07
	6H	17.94	18.77	18.40	19.21	19.67	13.75	14.58	14.20	15.02	15.48
	8H	18.15	18.93	18.62	19.38	19.84	13.91	14.69	14.37	15.13	15.60
	12H	18.31	19.00	18.79	19.48	19.95	14.03	14.72	14.51	15.20	15.67
8H	4H	17.37	18.15	17.84	18.59	19.06	13.61	14.39	14.08	14.83	15.30
	6H	18.01	18.65	18.51	19.14	19.62	14.20	14.84	14.70	15.33	15.81
	8H	18.26	18.84	18.77	19.35	19.83	14.42	15.00	14.93	15.51	16.00
	12H	18.46	18.97	18.97	19.47	20.03	14.60	15.11	15.11	15.60	16.17
12H	4H	17.36	18.05	17.84	18.53	19.00	13.66	14.35	14.14	14.83	15.30
	6H	17.99	18.57	18.50	19.08	19.57	14.26	14.84	14.78	15.35	15.84
	8H	18.27	18.78	18.78	19.28	19.84	14.54	15.05	15.05	15.54	16.10